Suffolk County Council

Suffolk Minerals & Waste Local Plan
Strategic Flood Risk Assessment

SEPTEMBER
2017

Contact

Graham Gunby
Senior Policy Officer: Minerals & Waste Policy
Planning & Development Section
Resource Management
Suffolk County Council
8 Russell Road
Ipswich
Suffolk IP1 2BX

Tel: 01473 264807
Email: smwlp@suffolk.gov.uk
Website: www.suffolk.gov.uk

For more information about our minerals and waste planning policy go to:
https://www.suffolk.gov.uk/planning-waste-and-environment/planning-applications/minerals-and-waste-policy/

Cover photograph acknowledgements:

1. Gt Blakenham Energy from Waste Facility, courtesy of SUEZ Recycling and Recovery UK Ltd, and;

2. Cavenham Quarry, with permission from Allen Newport Ltd.

Contents

1. Executive Summary

1.1 Before proposed sites can be included in the Suffolk Minerals & Waste Local Plan (the "Plan") a Strategic Flood Risk Assessment (SFRA) is required. The purpose of which is steer new development to areas with the lowest probability of flooding.

1.2 All of the proposed sites comply with the National Planning Policy Framework (NPPF) and Planning Policy Guidance website (PPG) in terms of flood risk.

2. Strategic Flood Risk Assessment

2.1 The NPPF states the following:

- development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding;
- the Strategic Flood Risk Assessment (SFRA) will provide the basis for applying this test;
- a sequential approach should be used in areas known to be at risk from any form of flooding, and;
- if following this sequential approach, it is not possible, consistent with wider sustainability objectives, for the development to located in zones with a lower probability of flooding, an exception test can be applied if appropriate;

2.2 For the exception test to be passed the NPPF continues:

- it must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a SFRA where one has been prepared;
- a site-specific flood risk assessment must demonstrate that the development will be safe for its lifetime taking into account the vulnerability of its users, without increasing flood risk elsewhere, and where possible, will reduce flood risk overall, and;
- both elements of the test will have to be passed for the development to be allocated or permitted.

2.3 With the wider sustainability objectives of the Plan in mind only those sites considered potentially suitable for development that have been included in the Plan have been assessed as part of the SFRA.

2.4 The PPG sets out guidance on how to carry out an SFRA. The various elements have been included in the Appendices to this SFRA.

2.5 PPG flow diagrams of the stages of the sequential and exception tests are set out in Appendix 1.

2.6 PPG definitions of Flood Zones 1, 2 and 3 are set out in Appendix 2.

2.7 Appendix 3 includes information upon the vulnerability of different types of development from PPG. Sand and gravel extraction is described as “water compatible development”. Landfill is described as “more vulnerable”.

2.8 Appendix 4 includes information upon flood risk vulnerability and flood zone compatibility from PPG.

2.9 Appendix 5 tabulates the relevant site assessment information.

2.10 Appendix 6 includes maps of each of the proposed site boundaries with Flood Zones 2 and 3 added. Flood Zone 1 is represented by the areas of the map not shown as Zones 2 and 3.

3. Conclusions

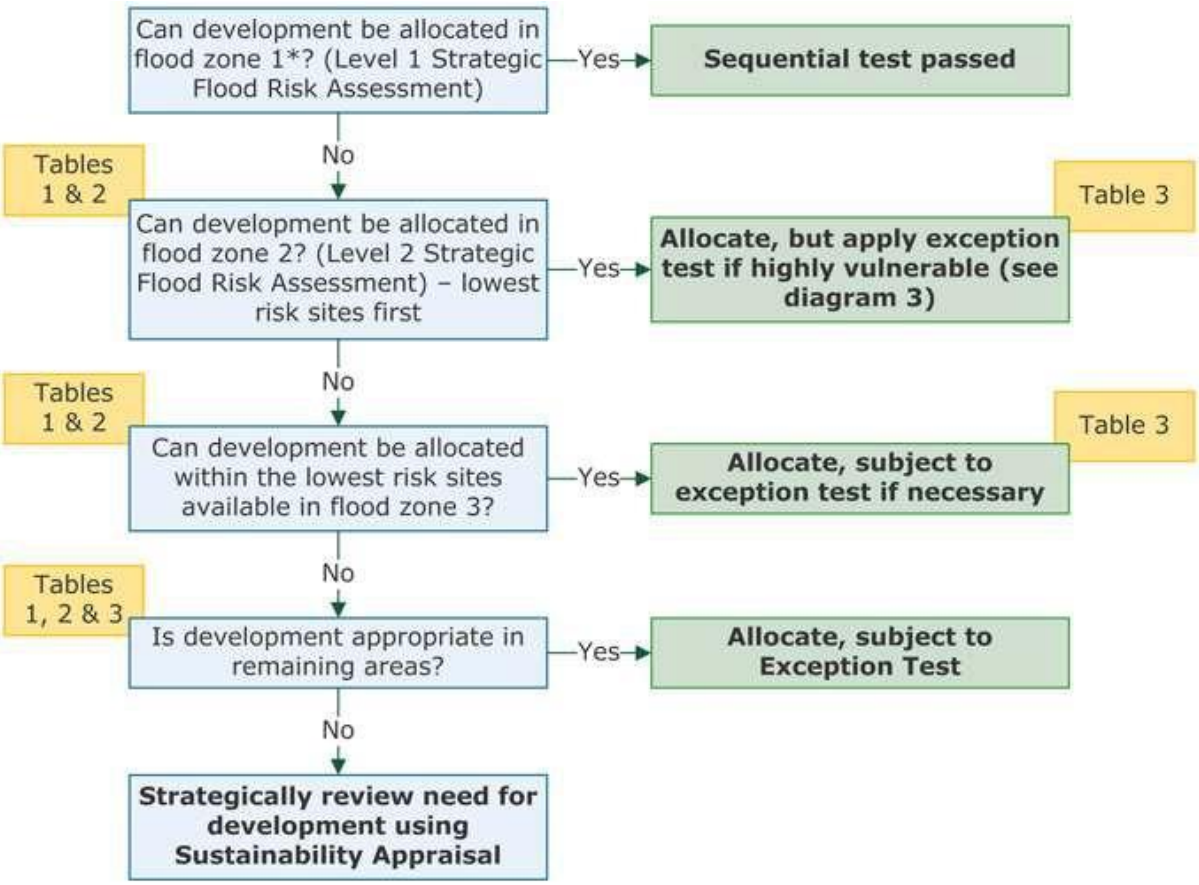
3.1 All of the proposed sites comply with the NPPF and PPG in terms of flood risk.

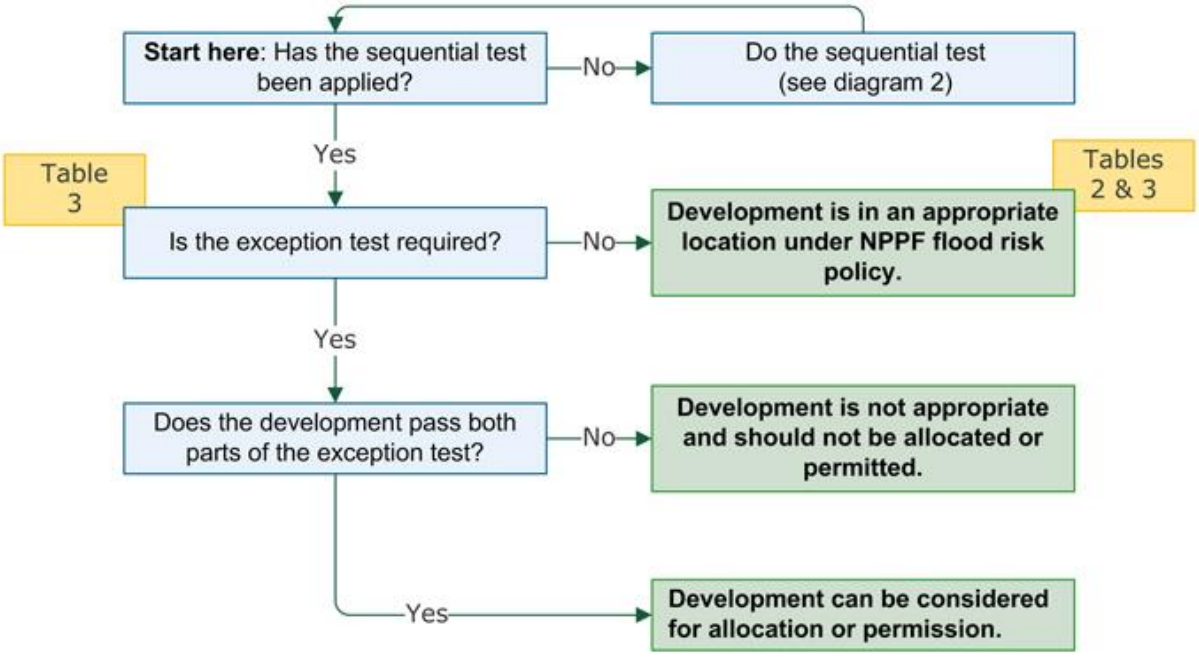
4. Recommendations

4.1 All of the proposed sites can be included under the sequential test without the need for the exceptions test.

Appendix 1

Sequential & exception tests for local plan preparation





Appendix 2

Description of flood zones

Flood Zone	Definition
Zone 1 Low Probability	• Land having a less than 1 in 1,000 annual probability of river or sea flooding. • (Shown as 'clear' on the Flood Map – all land outside Zones 2 and 3)
Zone 2 Medium probability	• Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or • Land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding. • (Land shown in light blue on the Flood Map)
Zone 3a High probability	• Land having a 1 in 100 or greater annual probability of river flooding; or • Land having a 1 in 200 or greater annual probability of sea flooding. • (Land shown in dark blue on the Flood Map)
Zone 3b Functional floodplain	• This zone comprises land where water has to flow or be stored in times of flood. Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency. • (Not separately distinguished from Zone 3a on the Flood Map)

`

Appendix 3

Flood risk vulnerability classification

Flood risk vulnerability classification	Development description
Essential infrastructure	• Essential transport infrastructure (including mass evacuation routes) which has to cross the area at risk. • Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including electricity generating power stations and grid and primary substations; and water treatment works that need to remain operational in times of flood. • Wind turbines.
Highly vulnerable	• Police and ambulance stations; fire stations and command centres; telecommunications installations required to be operational during flooding. • Emergency dispersal points. • Basement dwellings. • Caravans, mobile homes and park homes intended for permanent residential use. • Installations requiring hazardous substances consent.
More vulnerable	• Hospitals • Residential institutions such as residential care homes, children's homes, social services homes, prisons and hostels. • Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels. • Non–residential uses for health services, nurseries and educational establishments. • **Landfill and sites used for waste management facilities for hazardous waste.** • Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan.
Less vulnerable	• Police, ambulance and fire stations, which are not required to be operational during flooding. • Buildings used for shops; financial, professional and other services; restaurants, cafes and hot food takeaways; offices; general industry, storage and distribution; non-residential institutions not included in the 'More Vulnerable' class; and assembly and leisure. • Land and buildings used for agriculture and forestry.

	• Waste treatment (except landfill and hazardous waste facilities). • **Minerals** working and **processing** (except for sand and gravel working). • Water treatment works which do not need to remain operational during times of flood. • Sewage treatment works, if adequate measures to control pollution and manage sewage during flooding events are in place.
Water-compatible development	• Flood control infrastructure. • Water transmission infrastructure and pumping stations. • Sewage transmission infrastructure and pumping stations. • **Sand and gravel working.** • Docks, marinas and wharves. • Navigation facilities. • Ministry of Defence installations. • Ship building, repairing and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location. • Water-based recreation (excluding sleeping accommodation). • Lifeguard and coastguard stations. • Amenity open space, nature conservation and biodiversity, outdoor sports and recreation and essential facilities such as changing rooms. • Essential ancillary sleeping or residential accommodation for staff required by uses in this category, subject to a specific warning and evacuation plan.

Appendix 4

Flood risk vulnerability and flood zone compatibility

Flood zones	Flood risk vulnerability classification				
	Essential infrastructure	Highly vulnerable	More vulnerable	Less vulnerable	Water compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a	Exception Test required†	✗	Exception Test required	✓	✓
Zone 3b*	Exception Test required*	✗	✗	✗	✗*

Key: ✓ Development is appropriate. ✗ Development should not be permitted.

† In Flood Zone 3a essential infrastructure should be designed and constructed to remain operational and safe in times of flood.

* In Flood Zone 3b (functional floodplain) essential infrastructure that has to be there and has passed the Exception Test, and water-compatible uses, should be designed and constructed to:

- remain operational and safe for users in times of flood;
- result in no net loss of floodplain storage;
- not impede water flows and not increase flood risk elsewhere.

Appendix 5

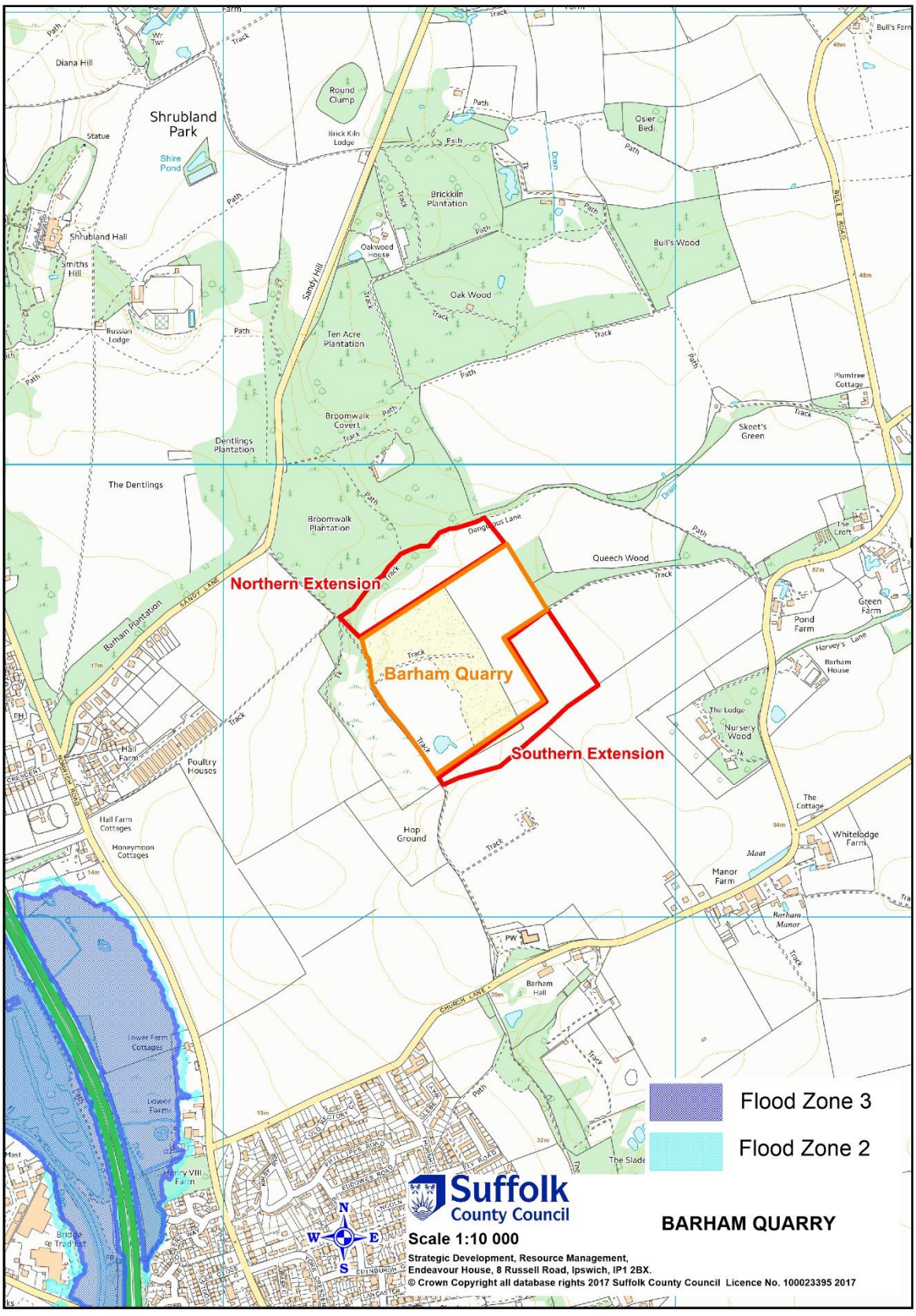
Site information table

Plan allocations	M1 Barham	M2 Barnham	M3 Belstead	M4 Cavenham	M5 Layham	M6 Tattingstone	M7 Wangford	M8 Wetherden	M9 Wherstead	M10 Worlington	W1 Sizewell
Sand and gravel	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Inert landfill	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Radioactive waste											Yes
Flood zone 1	All	All	Most	Most	All	All	All	All	All	All	All
Flood zone 2			Track only	Part							
Flood zone 3			Track only								
Surface flooding risk	No	No	No	No	No	No	No	No	No	No	Yes
Flood risk vulnerability classification	Water compatible development - sand and gravel working Water compatible development – existing track over top of culverted river Less vulnerable - mineral processing More vulnerable - landfill										More vulnerable - hazardous waste
Sequential test passed?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Exception Test required?	No	No	No	No	No	No	No	No	No	No	No
Site specific requirements	No	No	No	No	No	No	No	No	No	No	No

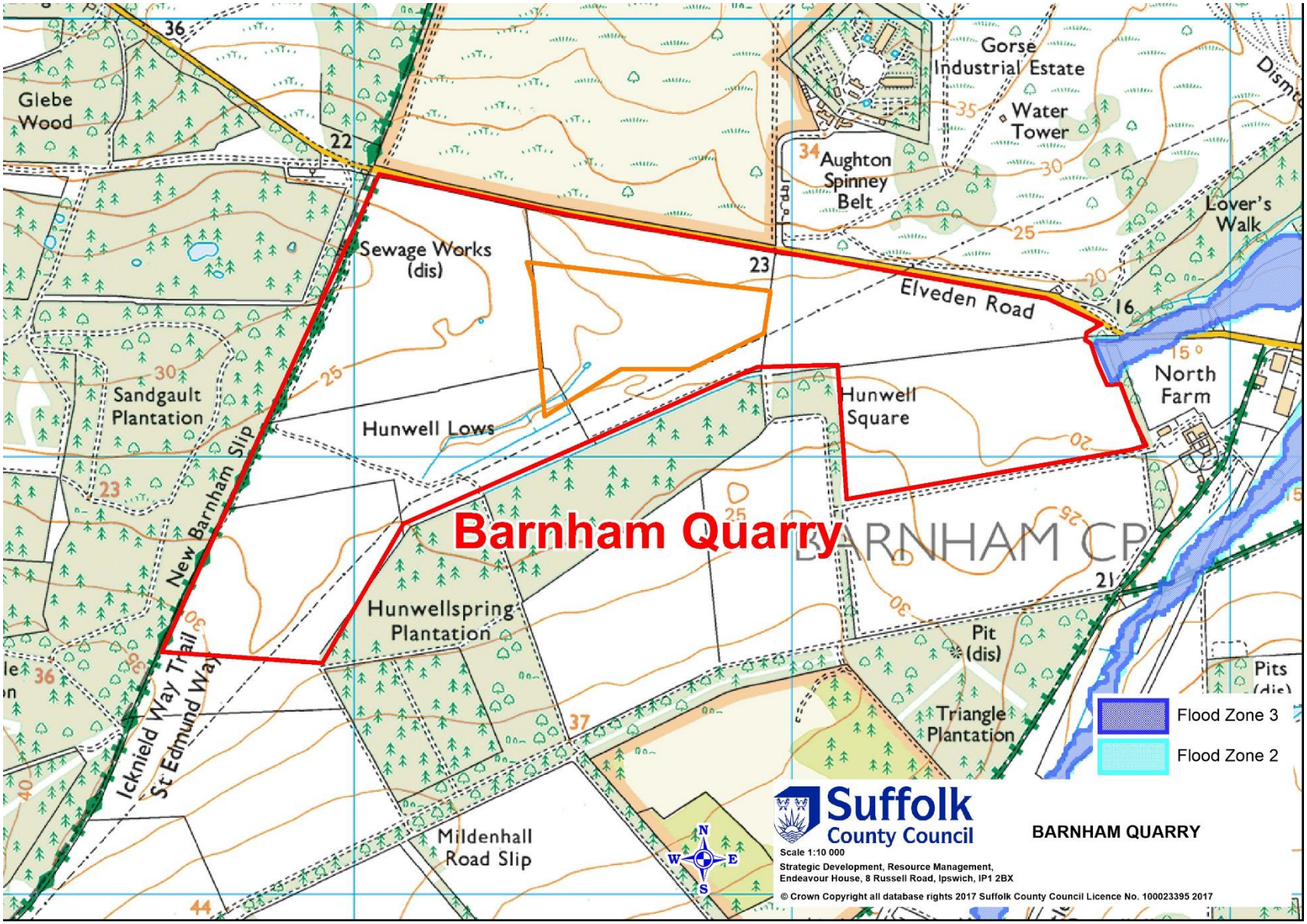
Appendix 6

Flood Maps

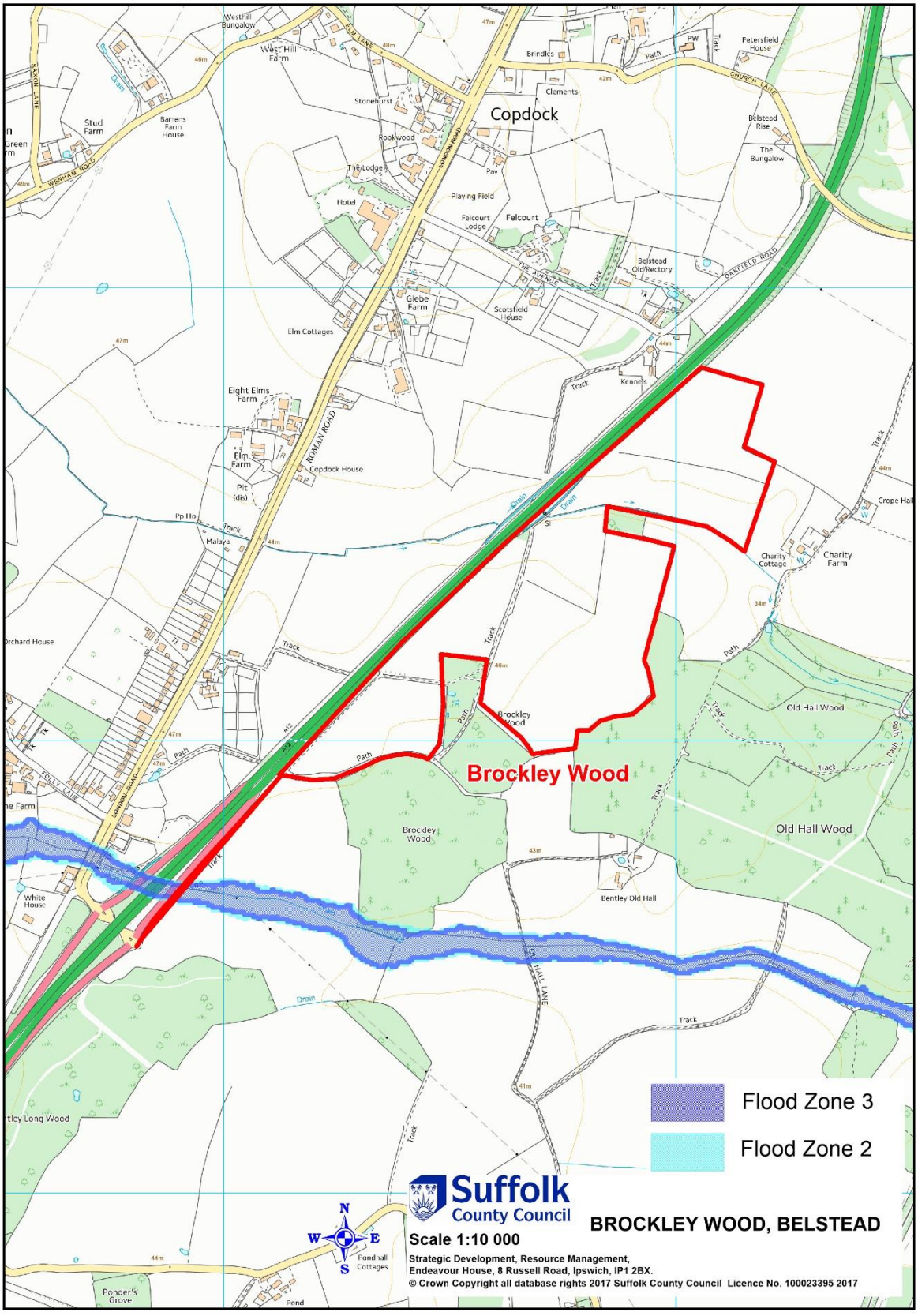
SITE M1 BARHAM



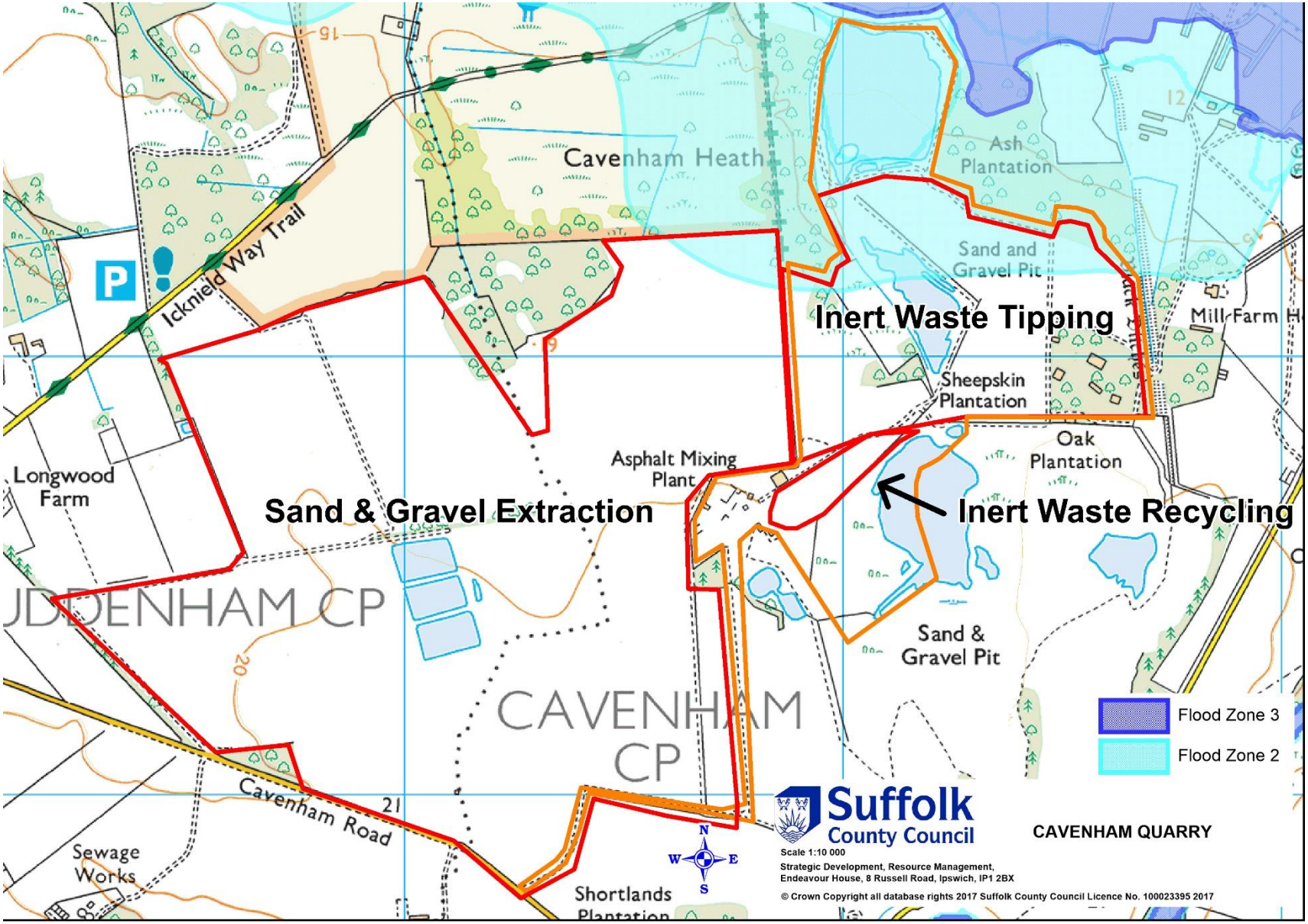
SITE M2 BARNHAM



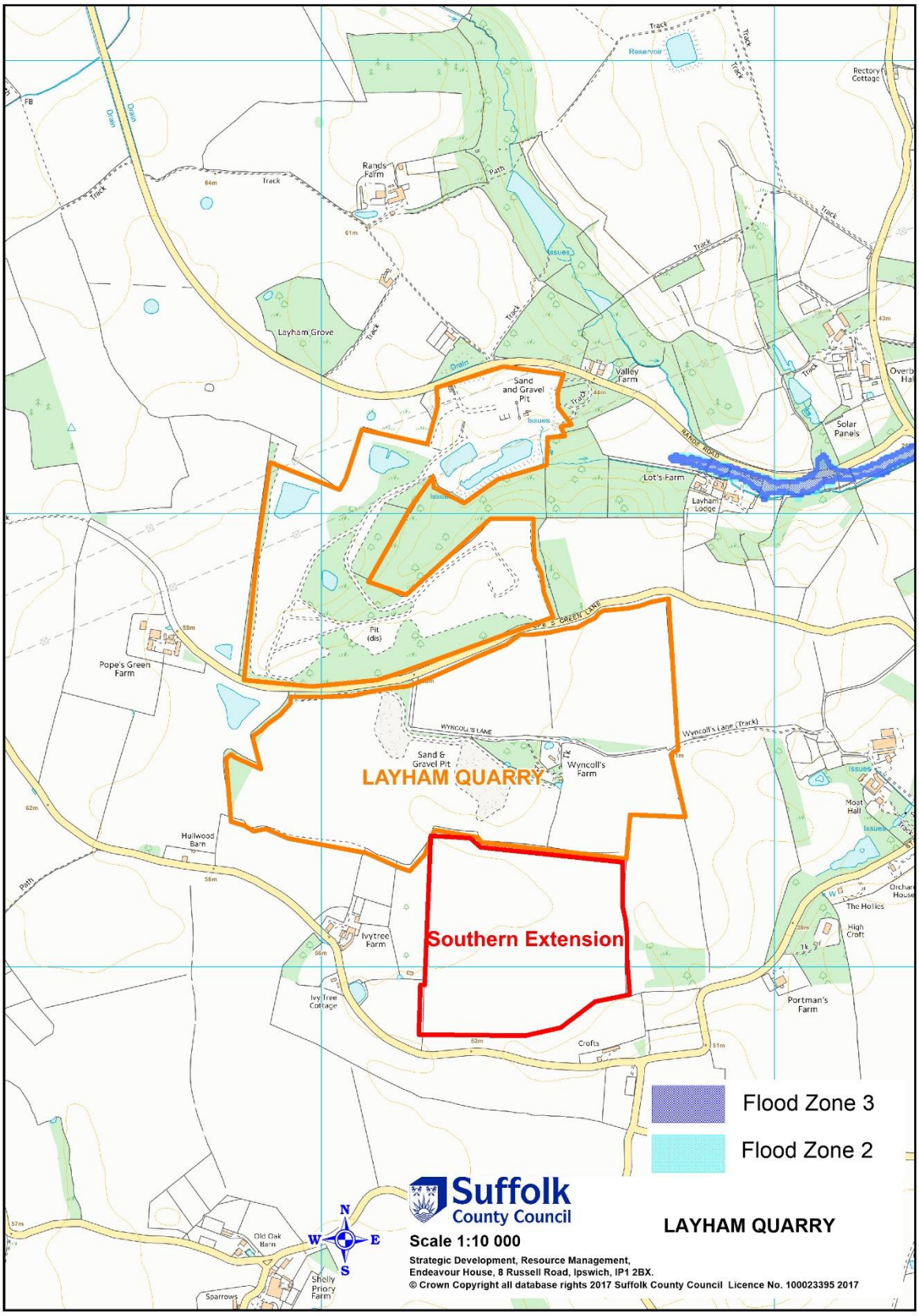
SITE M3 BELSTEAD



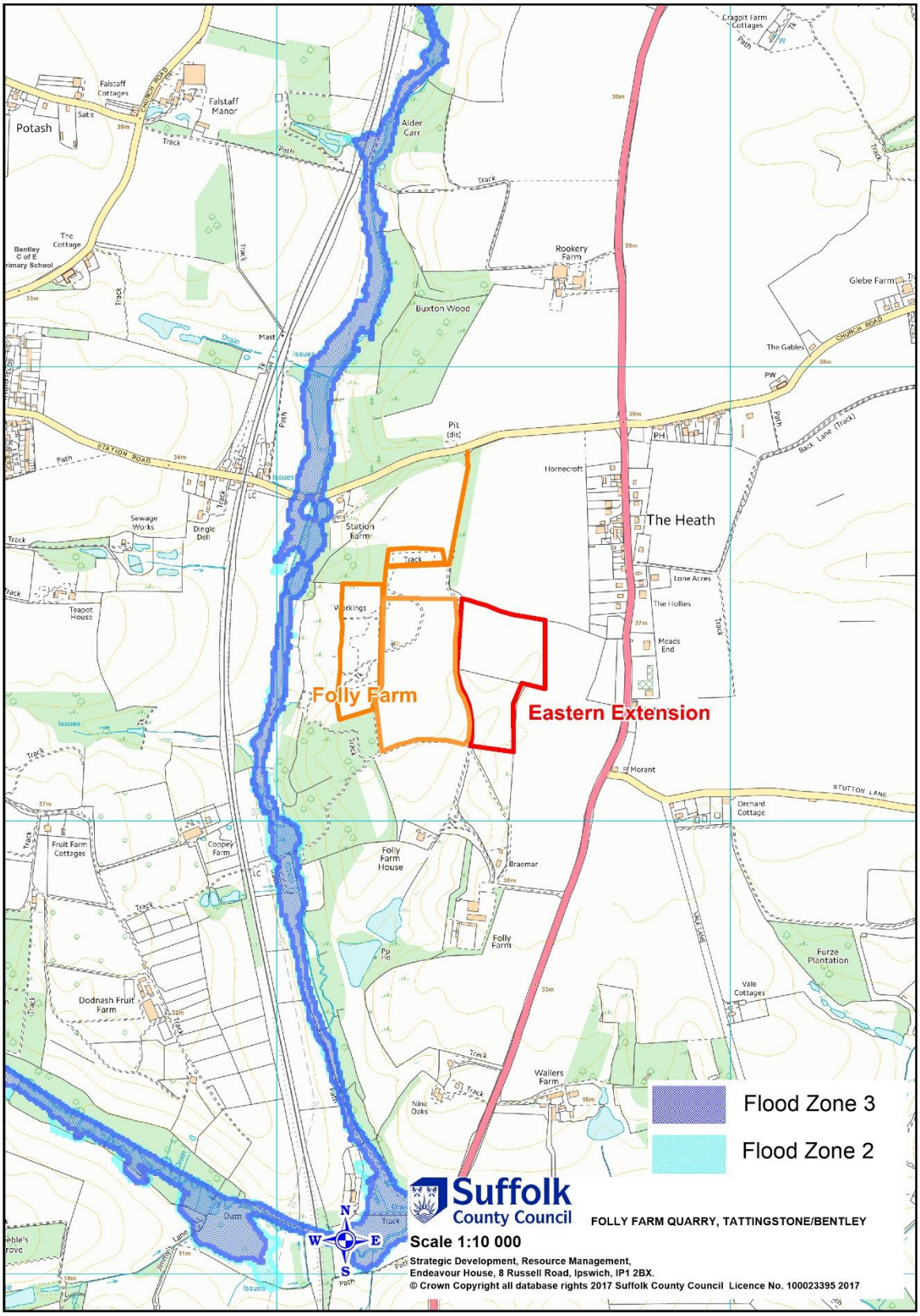
SITE M4 CAVENHAM



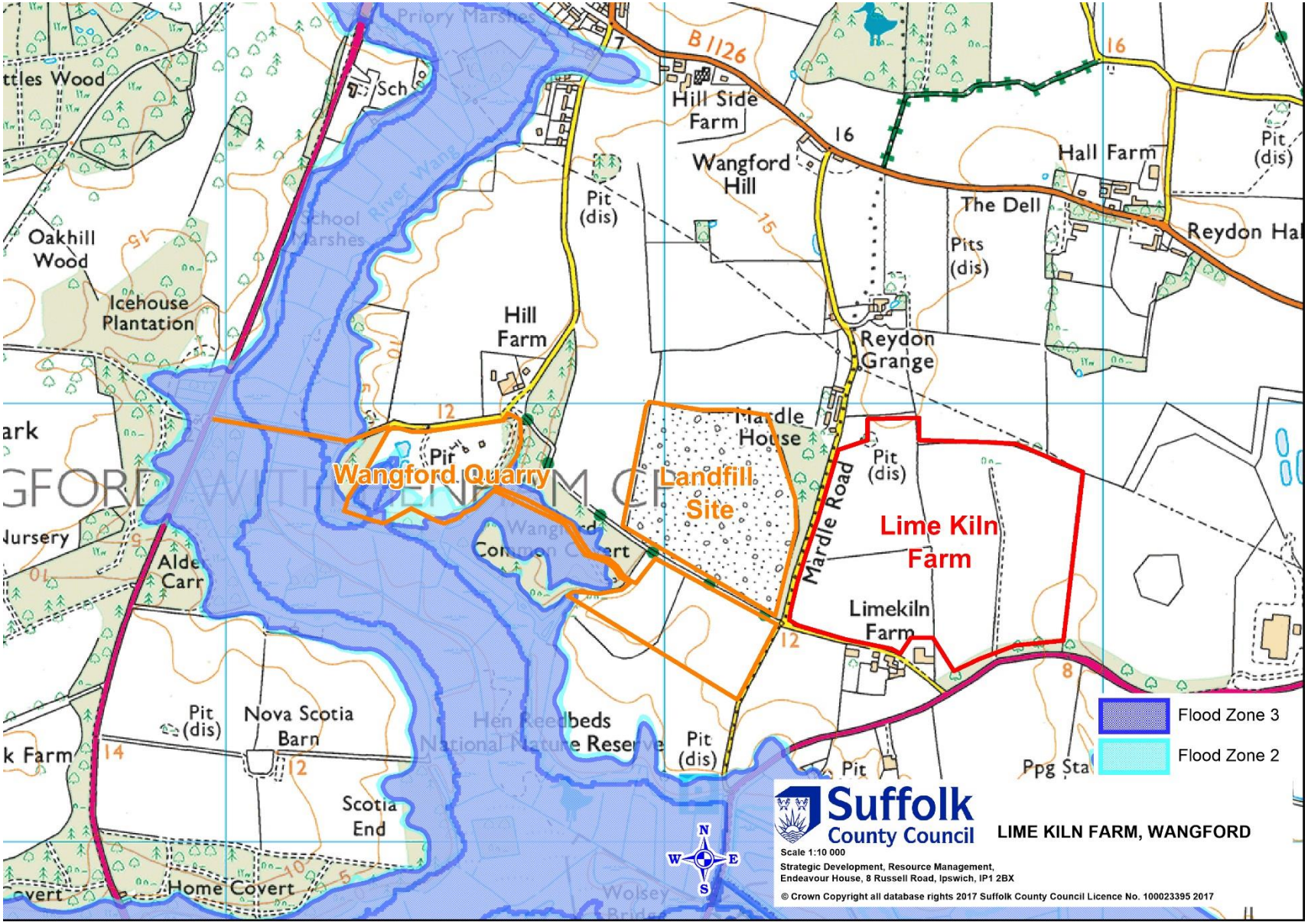
SITE M5 LAYHAM



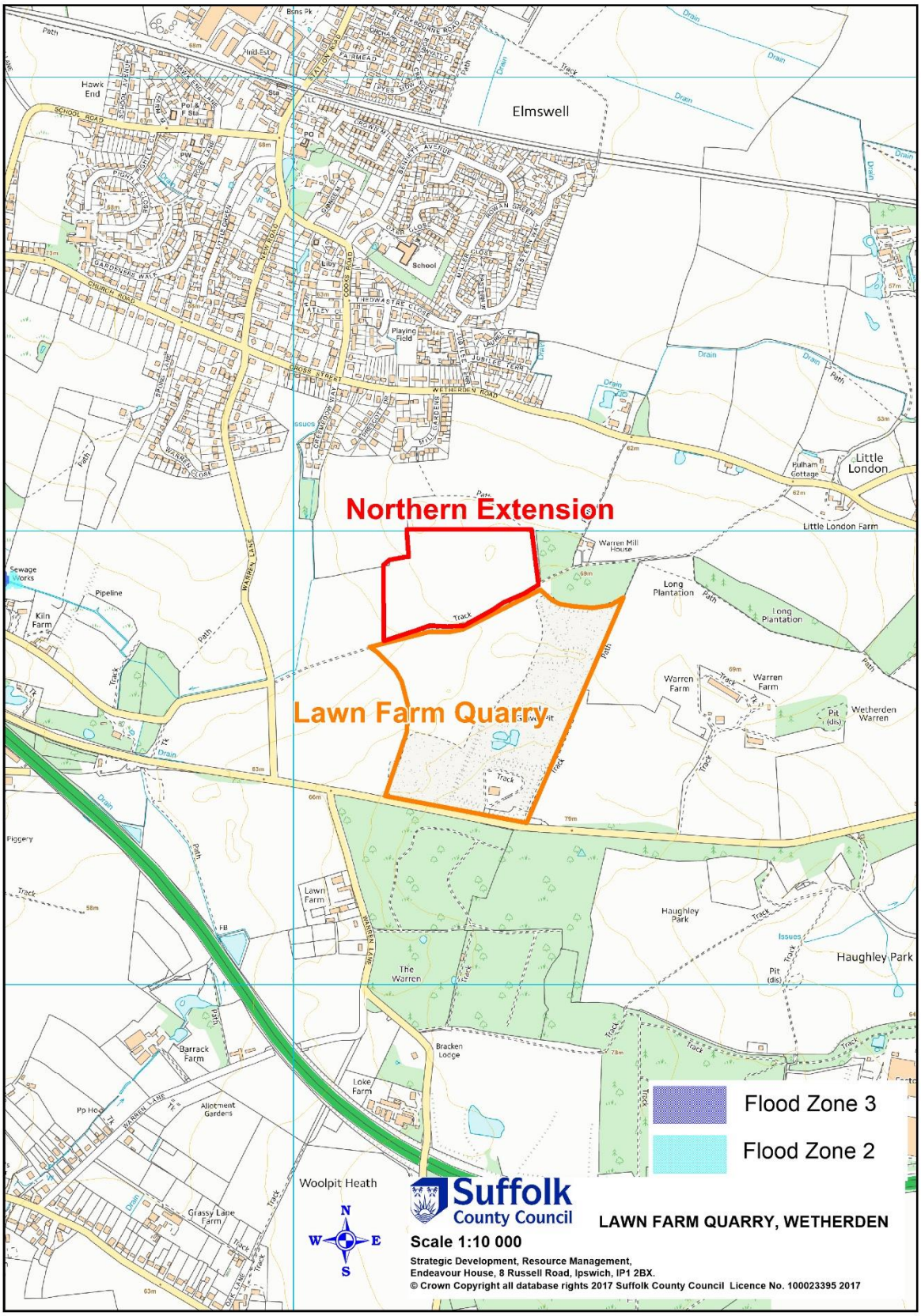
SITE M6 TATTINGSTONE



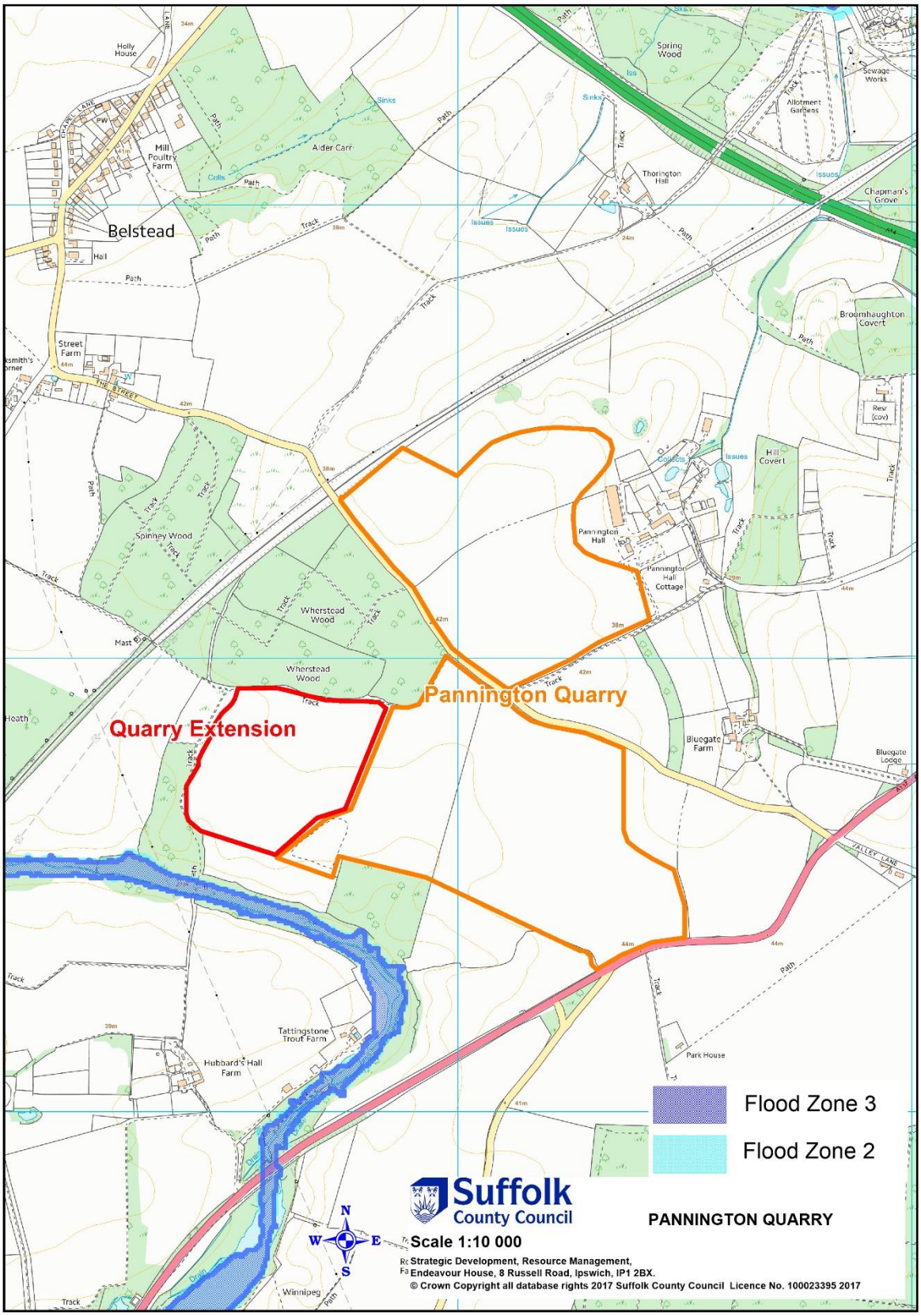
SITE M7 WANGFORD



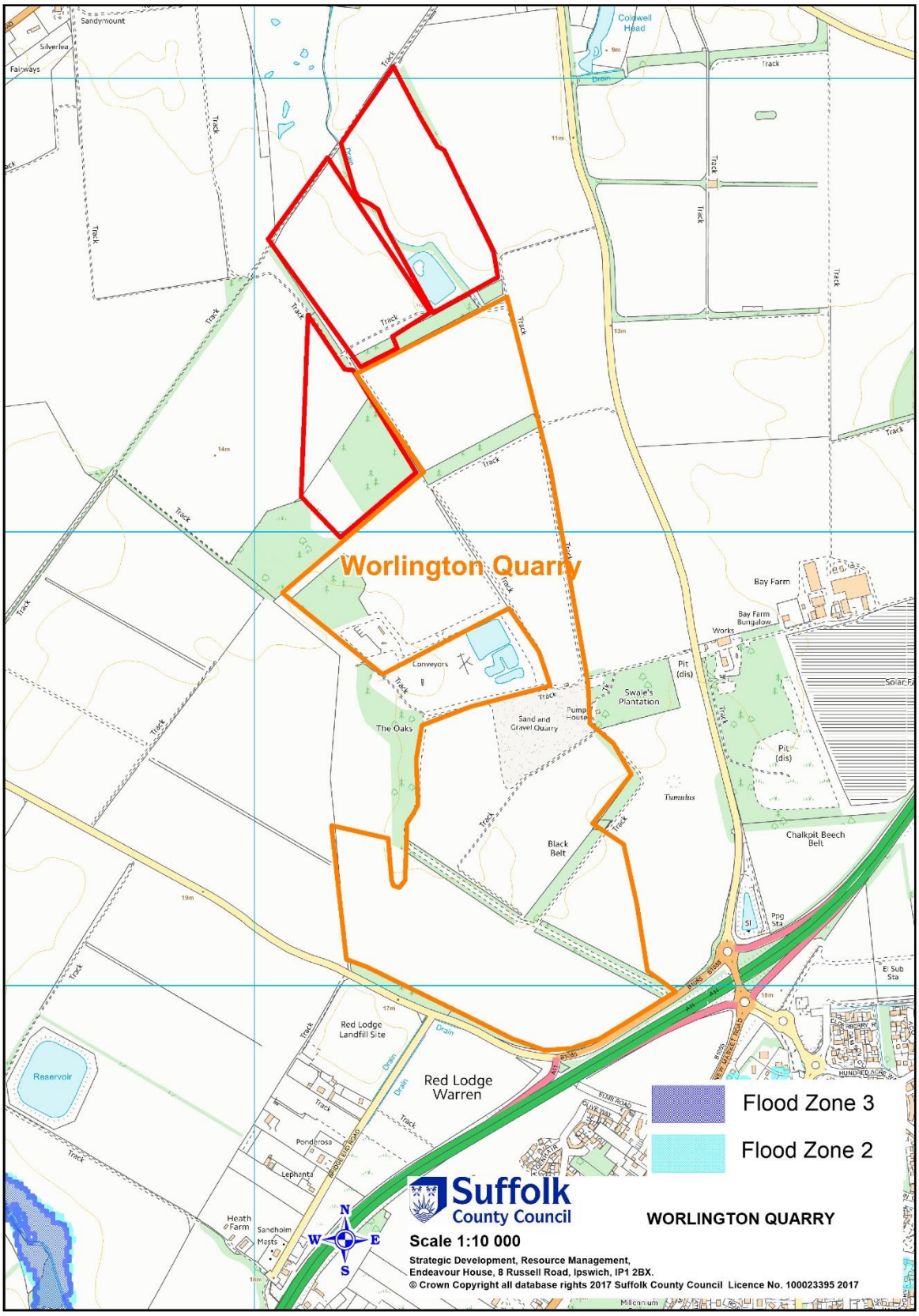
SITE M8 WETHERDEN



SITE M9 WHERSTEAD



SITE M10 WORLINGTON



Site W1 Sizewell