

Bob Ayres  
[bob.ayres@bluefieldenergy.com](mailto:bob.ayres@bluefieldenergy.com)

**Our ref:** CCN/2013/34939 &  
**Our ref:** CCN/2013/34938

**Date:** 15 August 2013

Dear Mr. Ayres

Thank you for your request for copies of our flood hazard mapping for:

- **Flood Hazard Mapping – Fenndike Solar Farm**

**Hazard Mapping – Breaching**

Enclosed with this letter is a plan showing the location of the breaches we have modelled, together with two plans showing the maximum values of flood depth, velocity and hazard rating (danger to people) for the following scenarios:

- Year 2115 0.5% (1 in 200) chance event
- Year 2115 0.1% (1 in 1000) chance event

Your site is not affected by breaching for the present day (2006) scenarios.

**Hazard Mapping – Overtopping**

Your site is not affected by overtopping for the present day (2006) scenarios or 2115 scenarios

- **Flood Hazard Mapping – Little Eau Solar**

**Hazard Mapping – Breaching**

Enclosed with this letter is a plan showing the location of the breaches we have modelled, together with the plan showing the maximum values of flood depth, velocity and hazard rating (danger to people) for the following scenario:

- Year 2115 0.1% (1 in 1000) chance event

Your site is not affected by breaching for the present day (2006) scenarios or 2115 0.5% scenarios .

**Hazard Mapping – Overtopping**

Your site is not affected by overtopping for the present day (2006) scenarios or 2115 scenarios

It is important that you read the contextual notes on the maps.

All information is provided subject to the enclosed notice, which you should read.

If you have any queries about the hazard mapping please contact Sarah Hilton using the telephone/email details below. Please quote our CCN reference number in all correspondence where data is referenced.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Sarah Hilton', with a small horizontal line at the end.

**FOR John Ray**  
**Coastal Partnerships and Strategic Overview Team Leader**

Direct dial      01733 464373  
Direct fax      01522 785018  
Direct e-mail    sarah.hilton@environment-agency.gov.uk

Enc.  
FRA/FCA Advisory Text  
Breach Location Plan  
Breach Hazard Maps x 3  
Standard Notice

## **Use of Environment Agency Information for Flood Risk / Flood Consequence Assessments**

### **Important**

If you have requested this information to help inform a development proposal, then we recommend that you undertake a formal pre-application enquiry using the form available from our website:-

<http://www.environment-agency.gov.uk/research/planning/33580.aspx>

Depending on the enquiry, we may also provide advice on other issues related to our responsibilities including flooding, waste, land contamination, water quality, biodiversity, navigation, pollution, water resources, foul drainage or Environmental Impact Assessment.

In **England**, you should refer to the Environment Agency's Flood Risk Standing Advice, the technical guidance to the National Planning Policy Framework and the existing PPS25 Practice Guide for information about what flood risk assessment is needed for new development in the different Flood Zones. These documents can be accessed via:

<http://www.environment-agency.gov.uk/research/planning/82587.aspx>

<http://www.communities.gov.uk/publications/planningandbuilding/nppftechnicalguidance>

<http://www.communities.gov.uk/publications/planningandbuilding/pps25guideupdate>

You should also consult the Strategic Flood Risk Assessment produced by your local planning authority.

In **Wales**, you should refer to TAN15 for information about what flood consequence assessment is needed for new development in the different flood zones

<http://new.wales.gov.uk/splash;jsessionid=8yIGTfGZthmB0t2vhp6hS1GcB1LXvZzB3Ylczf20Xn7LK3zK0nMk!981825250?orig=/topics/planning/policy/tans/tan15/>

You should also consult the Strategic Flood Consequence Assessment if one has been produced by your local planning authority.

In both **England and Wales** you should note that:

1. Information supplied by the Environment Agency may be used to assist in producing a Flood Risk / Consequence Assessment (FRA / FCA) where one is required, but does not constitute such an assessment on its own.
2. This information covers flood risk from main rivers and the sea, and you will need to consider other potential sources of flooding, such as groundwater or overland runoff. The information produced by the local planning authority referred to above may assist here.
3. Where a planning application requires a FRA / FCA and this is not submitted or deficient, the Environment Agency may well raise an objection.
4. For more significant proposals in higher flood risk areas, we would be pleased to discuss details with you ahead of making any planning application, and you should also discuss the matter with your local planning authority.



^ Modelled Breach Locations



This map indicates the location of where we have modelled the consequence of breaches along the coastline and tidal rivers. We have mapped the the maximum values of Hazard Rating (Danger to People), Depth and Velocity.

We have not assumed that all breaches occur at the same time, but have modelled each breach individually and overlaid the results to find the maximum values.

Our modelling only considers the consequences of a breach, it does not make any assumption about the likelihood of a breach occurring. Our defences generally provide a good standard of flood defence but a risk of breaching remains.

Please contact the Environment Agency for information on how these maps are used in the management of flood risk.

General Enquiries No: 08708 506 506.  
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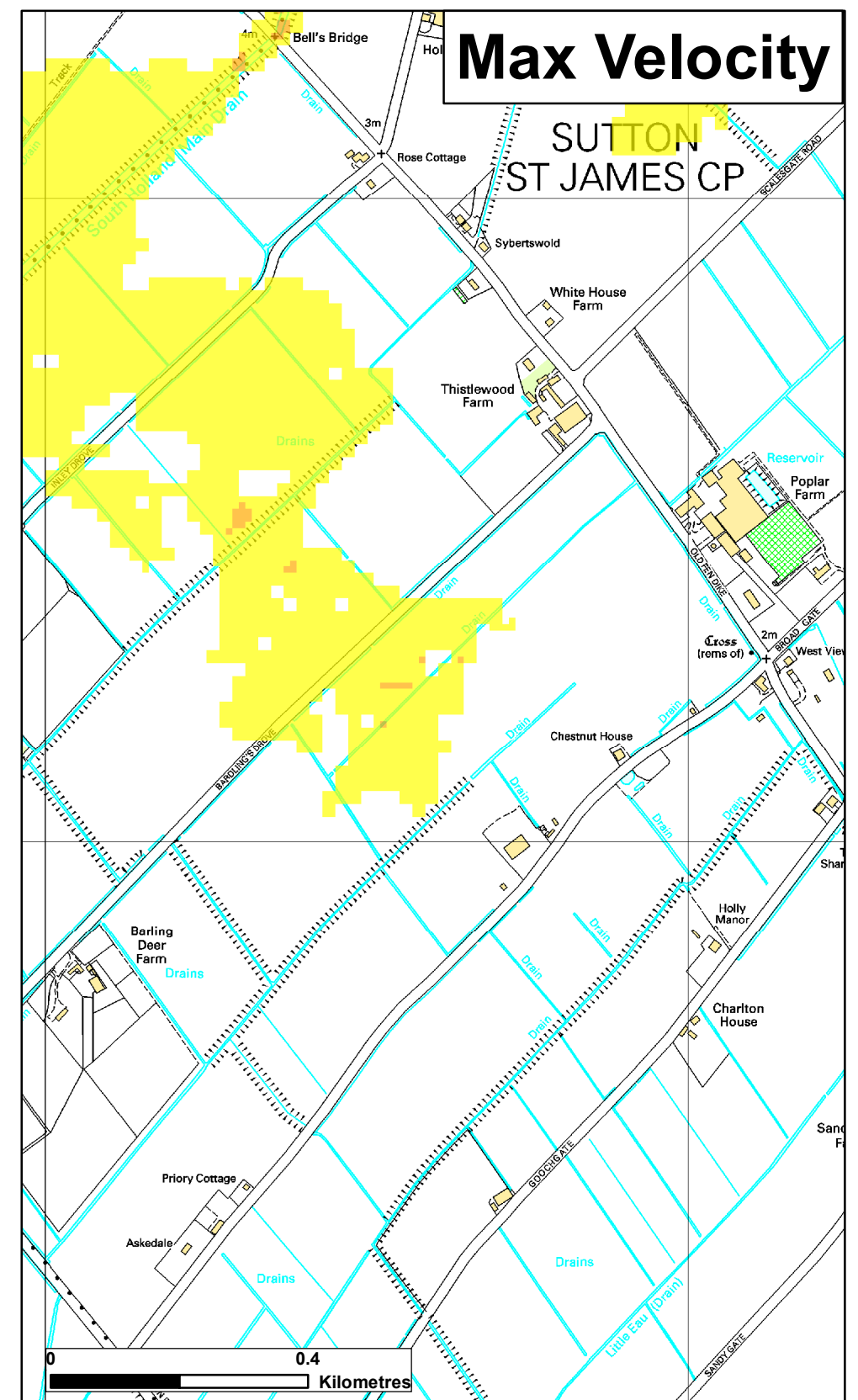
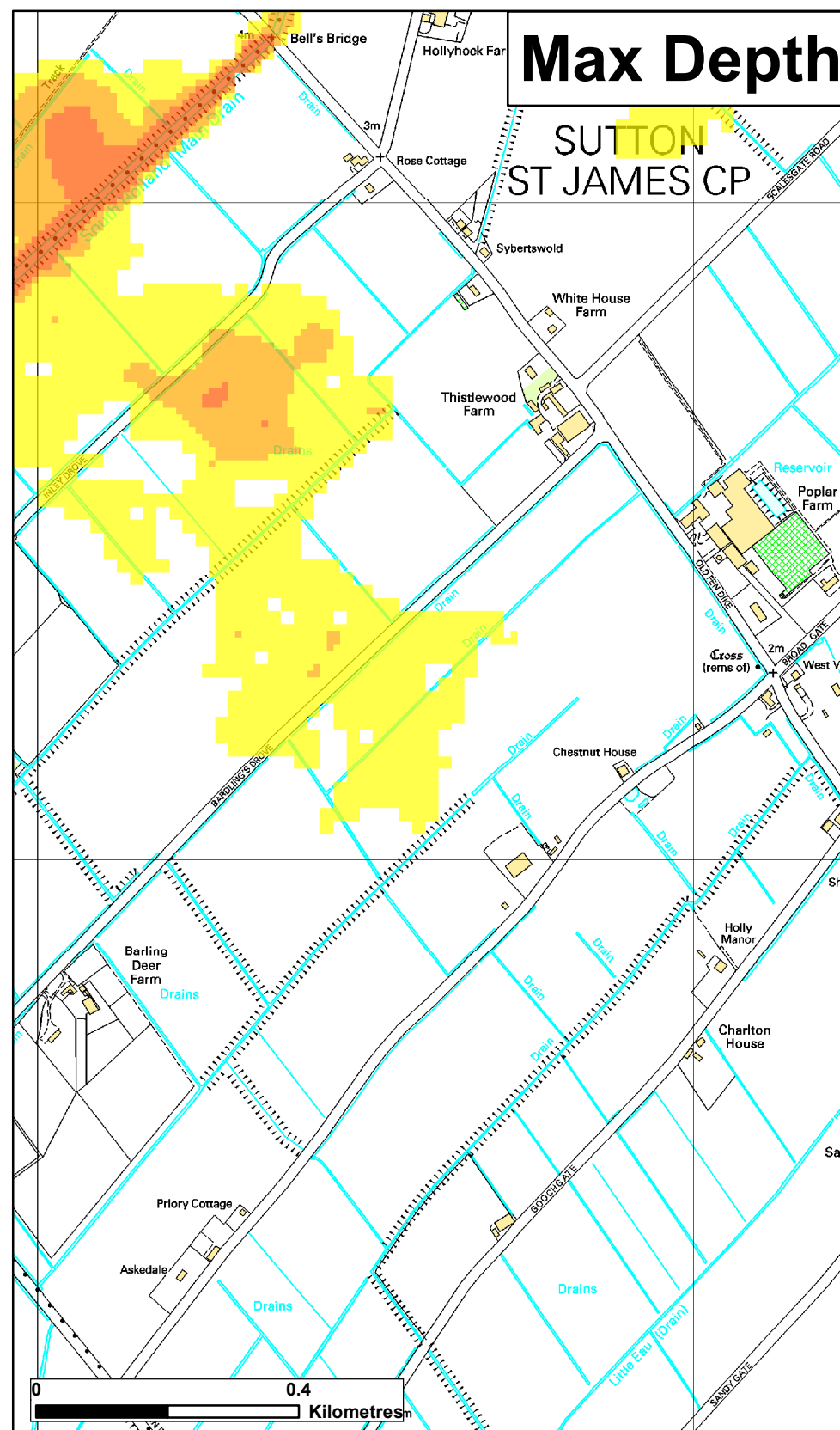
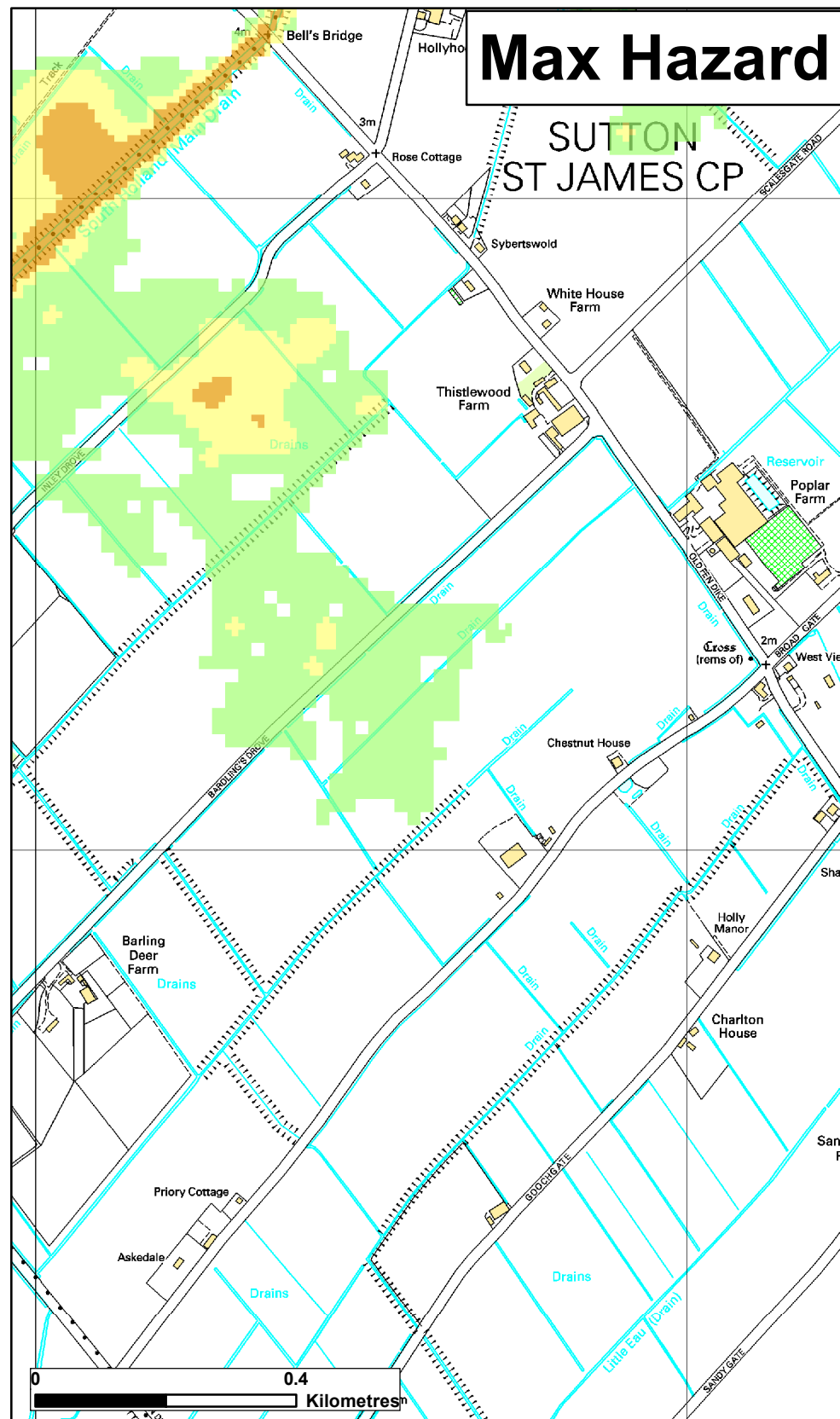


Produced by the Flood Risk Mapping & Data Management Team, Lincoln  
General Enquiries No: 08708 506 506

Northern Area Tidal Hazard Mapping

Location of Modelled Breaches

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| ★ Modelled Breach Locations - see also the accompanying plan "Location of Modelled Breaches" |             |               |      |                        |                    |
|----------------------------------------------------------------------------------------------|-------------|---------------|------|------------------------|--------------------|
| Max Hazard<br>(Flood Risk to People : FD2320)                                                |             | Max Depth (m) |      | Max Velocity (m/s)     |                    |
| Less than 0.75<br>(Low Hazard)                                                               |             | 0 - 0.25      |      | 0 - 0.3                |                    |
| Between 0.75 and 1.25<br>(Danger for Some)                                                   |             | 0.25 - 0.50   |      | 0.3 - 1.0              |                    |
| Between 1.25 and 2.0<br>(Danger for Most)                                                    |             | 0.50 - 1.0    |      | 1.0 - 1.5              |                    |
| Greater than 2.0<br>(Danger for All)                                                         |             | 1.0 - 2.0     |      | 1.5 - 2.5              |                    |
|                                                                                              |             | 2.0 +         |      | 2.5 +                  |                    |
| Date Printed                                                                                 | August 2013 | Scenario year | 2115 | Scenario Annual Chance | 0.5%<br>(1 in 200) |

This map shows the level of flood hazard to people (called a hazard rating) if our flood defences are breached at certain locations, for a range of scenarios. The hazard rating depends on the depth and velocity of floodwater, and maximum values of these are also mapped.

The map is based on computer modelling of simulated breaches at specific locations. Each breach has been modelled individually and the results combined to create this map. Multiple breaches, other combinations of breaches, different sized tidal surges or flood flows may all give different results.

The map only considers the consequences of a breach, it does not make any assumption about the likelihood of a breach occurring. The likelihood of a breach occurring will depend on a number of different factors, including the construction and condition of the defences in the area. A breach is less likely where defences are of a good standard, but a risk of breaching remains.

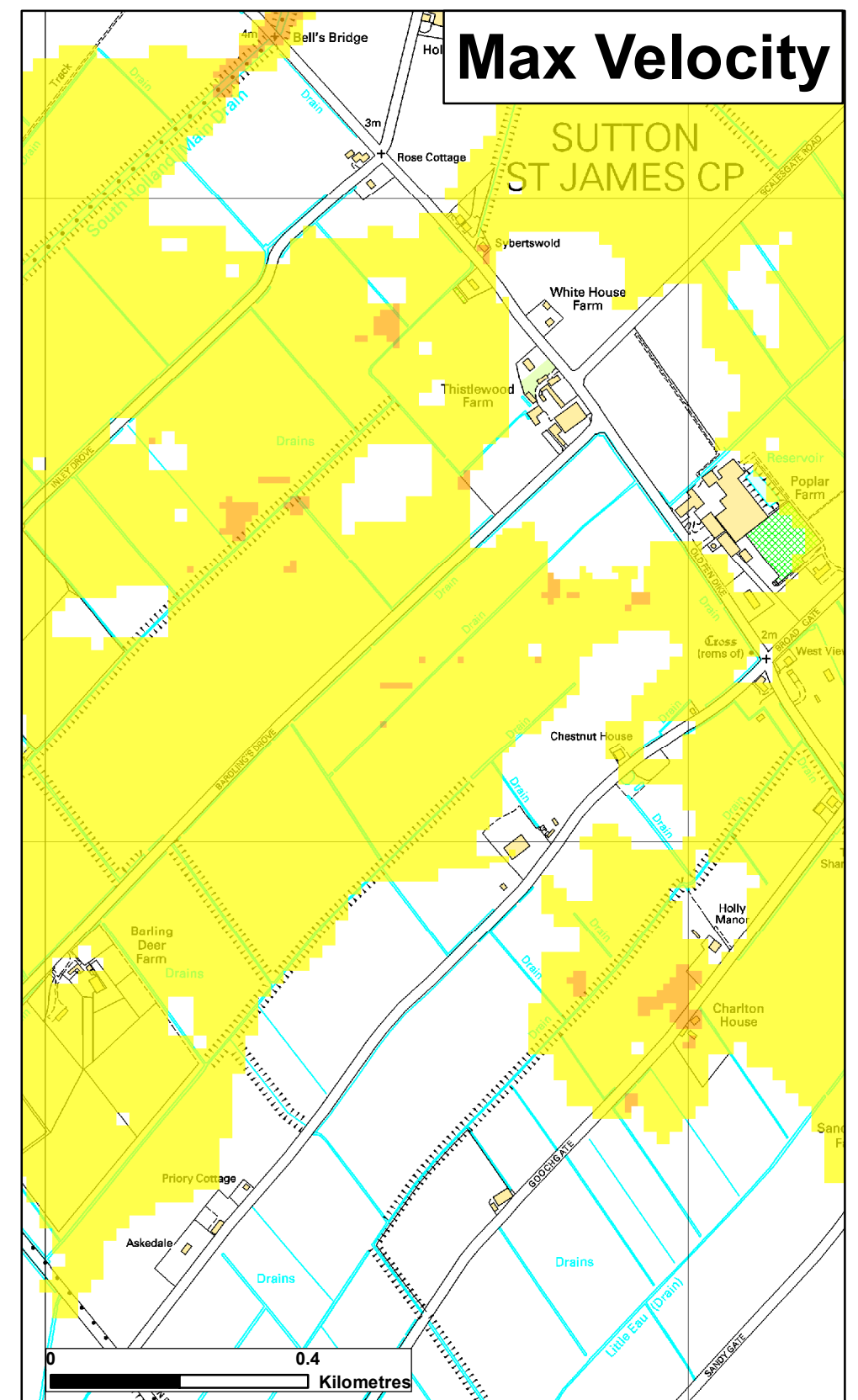
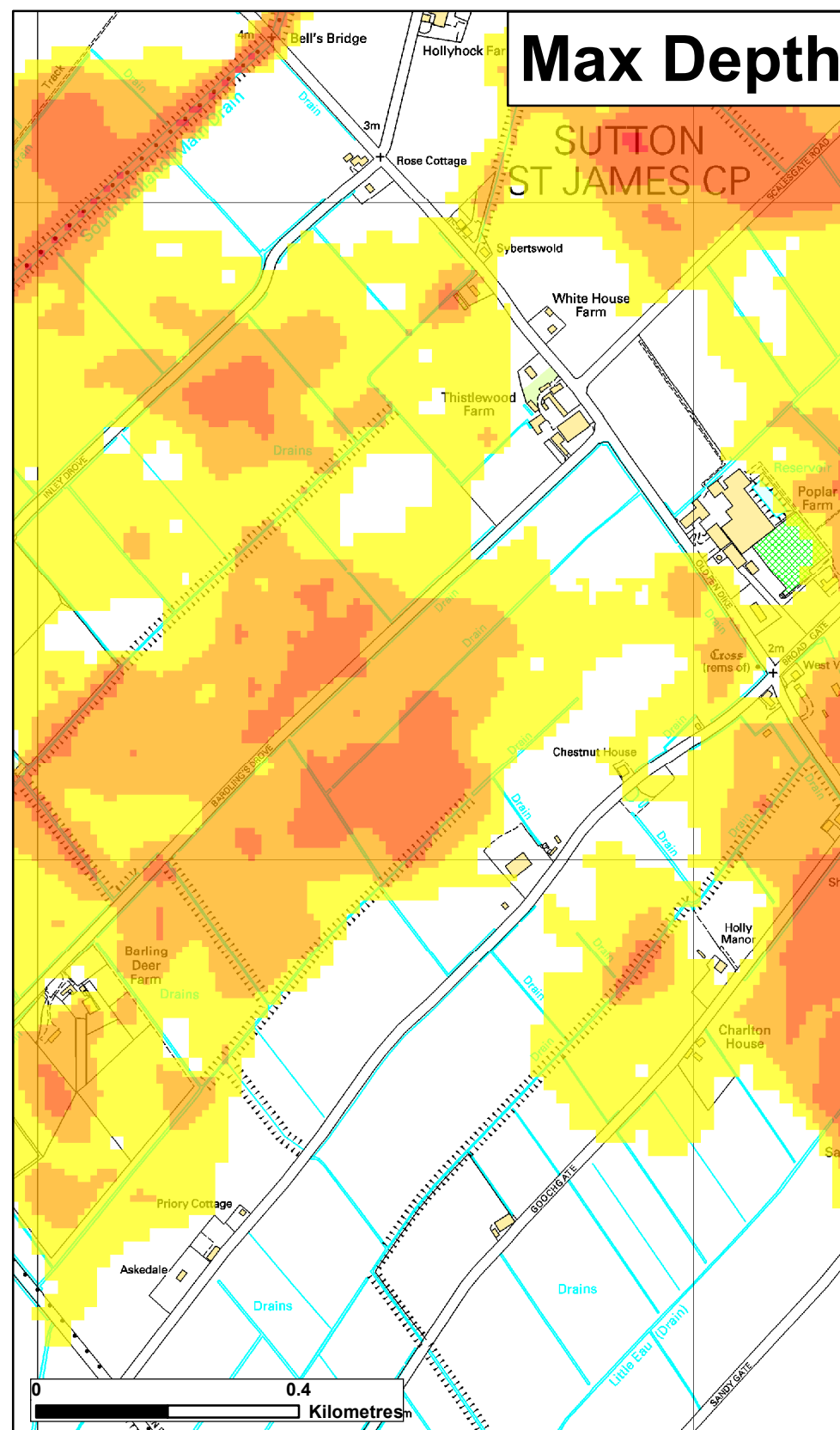
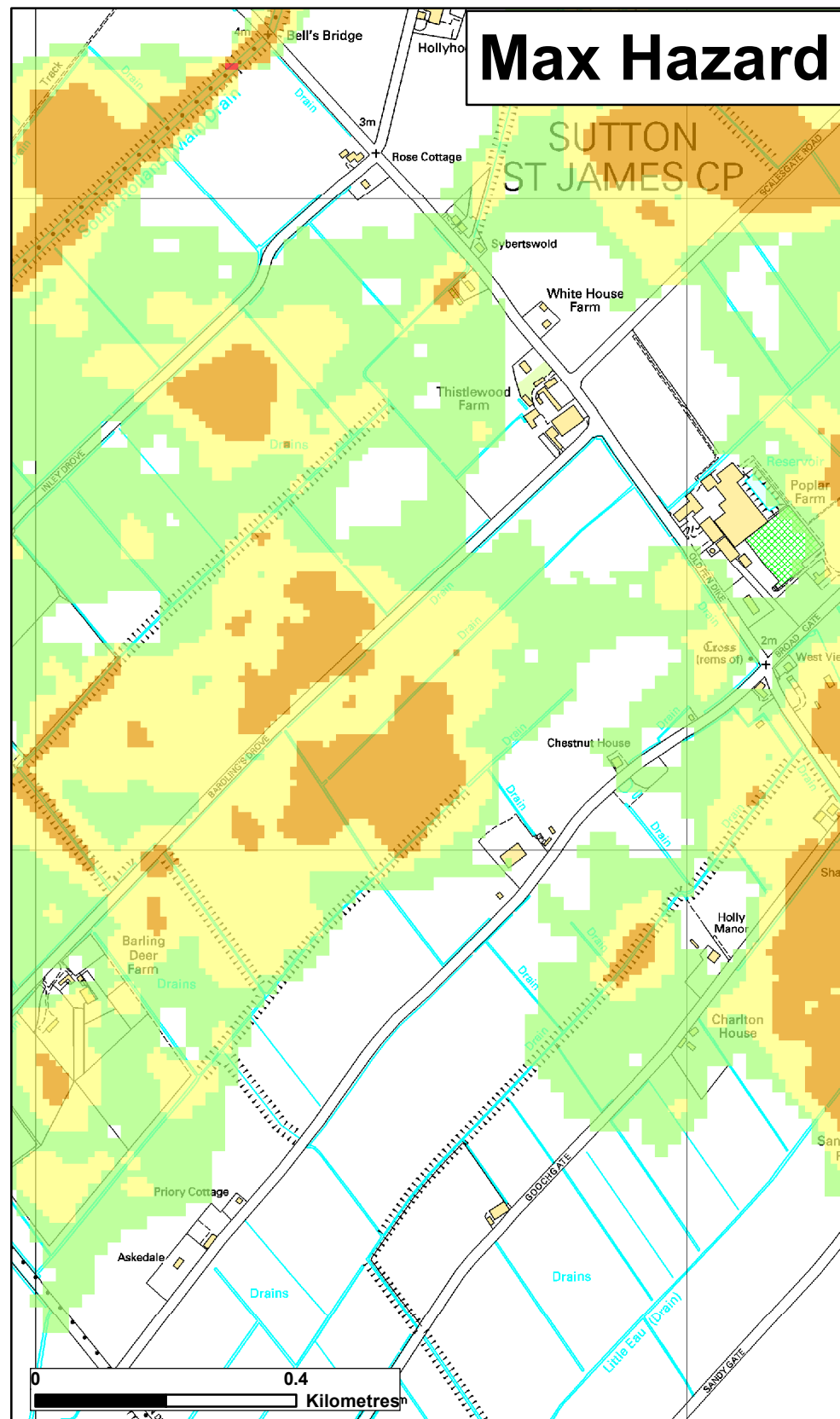
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### Northern Area Tidal Breach Hazard Mapping

Map Centered on TF 37603 17207

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| ★ Modelled Breach Locations - see also the accompanying plan "Location of Modelled Breaches"       |                                            |                                                                                                   |             |                                                                                                   |                     |
|----------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------|---------------------|
| Max Hazard<br>(Flood Risk to People : FD2320)                                                      |                                            | Max Depth (m)                                                                                     |             | Max Velocity (m/s)                                                                                |                     |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightgreen;"></span>  | Less than 0.75<br>(Low Hazard)             | <span style="display:inline-block; width:15px; height:15px; background-color:yellow;"></span>     | 0 - 0.25    | <span style="display:inline-block; width:15px; height:15px; background-color:yellow;"></span>     | 0 - 0.3             |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightyellow;"></span> | Between 0.75 and 1.25<br>(Danger for Some) | <span style="display:inline-block; width:15px; height:15px; background-color:orange;"></span>     | 0.25 - 0.50 | <span style="display:inline-block; width:15px; height:15px; background-color:orange;"></span>     | 0.3 - 1.0           |
| <span style="display:inline-block; width:15px; height:15px; background-color:gold;"></span>        | Between 1.25 and 2.0<br>(Danger for Most)  | <span style="display:inline-block; width:15px; height:15px; background-color:darkorange;"></span> | 0.50 - 1.0  | <span style="display:inline-block; width:15px; height:15px; background-color:darkorange;"></span> | 1.0 - 1.5           |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightcoral;"></span>  | Greater than 2.0<br>(Danger for All)       | <span style="display:inline-block; width:15px; height:15px; background-color:red;"></span>        | 1.0 - 2.0   | <span style="display:inline-block; width:15px; height:15px; background-color:red;"></span>        | 1.5 - 2.5           |
|                                                                                                    |                                            | <span style="display:inline-block; width:15px; height:15px; background-color:darkred;"></span>    | 2.0 +       | <span style="display:inline-block; width:15px; height:15px; background-color:darkred;"></span>    | 2.5 +               |
| Date Printed                                                                                       | August 2013                                | Scenario year                                                                                     | 2115        | Scenario Annual Chance                                                                            | 0.1%<br>(1 in 1000) |

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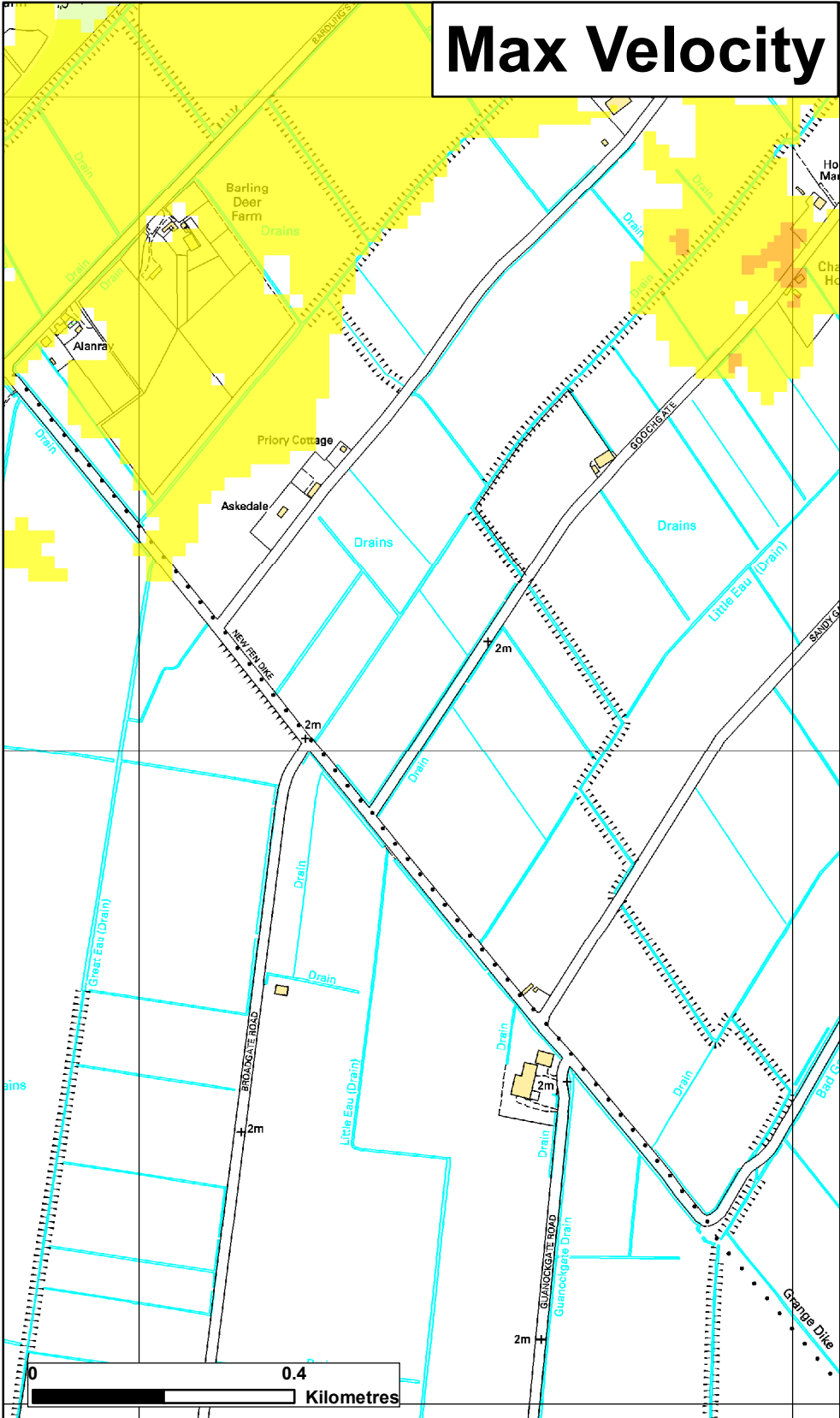
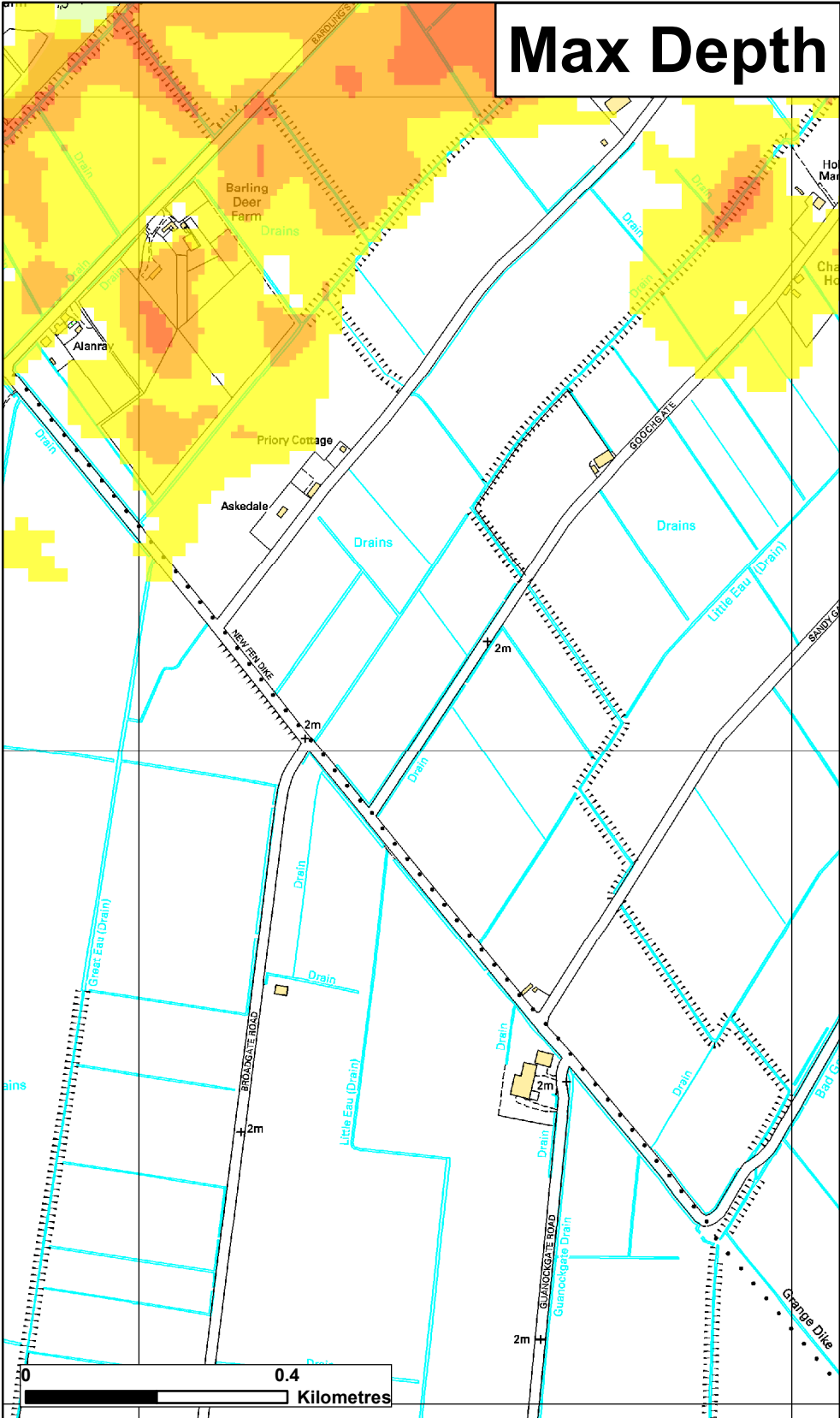
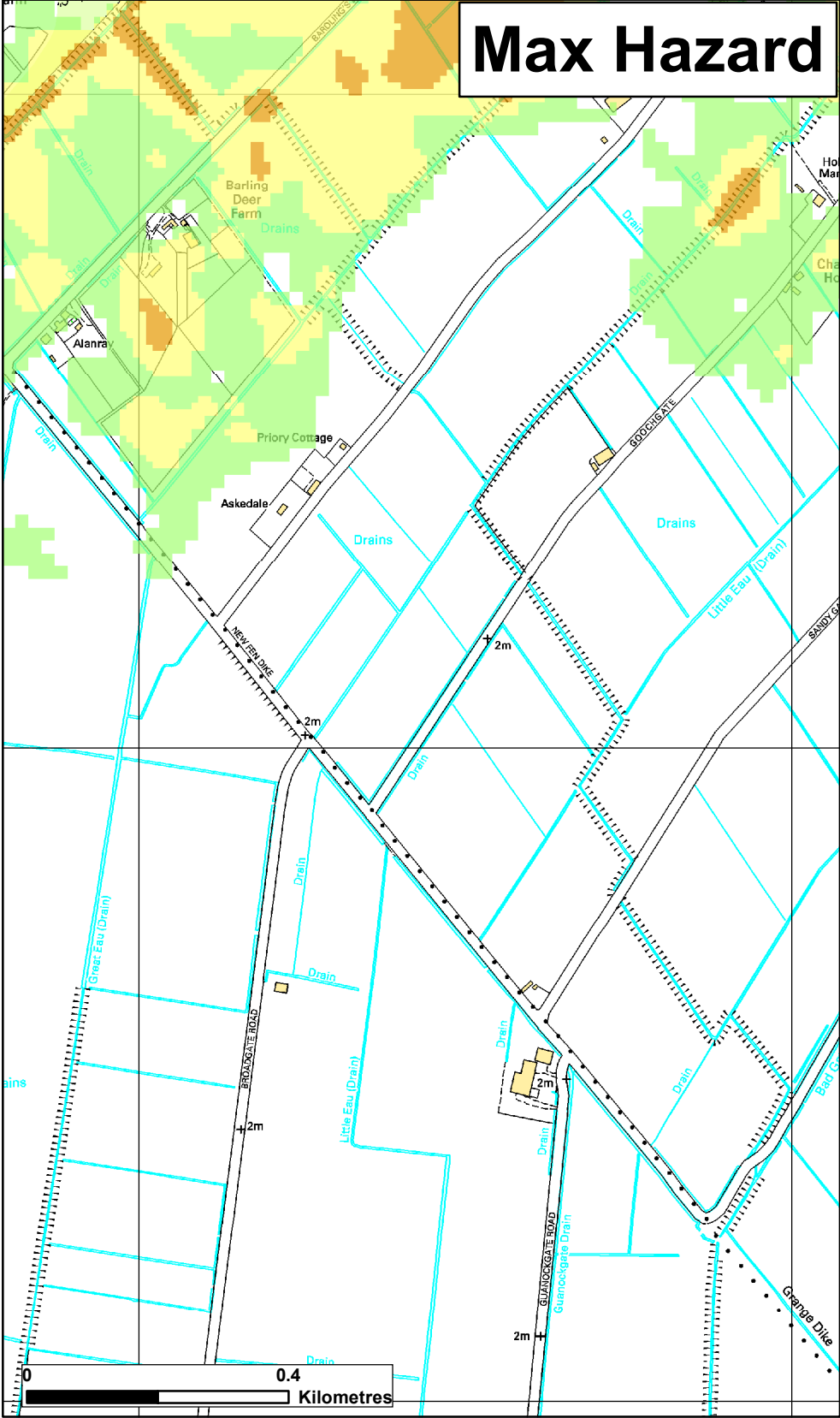
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### Northern Area Tidal Breach Hazard Mapping

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|                                                                                              | Greater than 2.0<br>(Danger for All)       |               | 1.0 - 2.0   |                        | 1.5 - 2.5           |
|                                                                                              |                                            |               | 2.0 +       |                        | 2.5 +               |
| Date Printed                                                                                 | August 2013                                | Scenario year | 2115        | Scenario Annual Chance | 0.1%<br>(1 in 1000) |

This map shows the level of flood hazard to people (called a hazard rating) if our flood defences are breached at certain locations, for a range of scenarios. The hazard rating depends on the depth and velocity of floodwater, and maximum values of these are also mapped.

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### Northern Area Tidal Breach Hazard Mapping

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