If you have requested this information to help inform a development planning proposal, then you should view the government guidance on whether a Flood Risk Assessment is required using the FRA Guidance Note (https://www.gov.uk/flood-risk-assessment-for-planning-applications), the Flood Risk and Coastal Change planning guidance (http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/).

Flood risk data requests including an allowance for climate change will be based on the 1% annual probability flood including an additional 20% increase on peak flows to account for climate change impacts, unless otherwise stated. You should refer to 'Flood risk assessments: climate change allowances' (https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances) to check if this allowance is still appropriate for the type of development you are proposing and its location. You may need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence. Please also find attached a local guidance document on different approaches to assessing the impacts of climate change based on the new allowances. The approach taken should depend on the scale, nature and location of the proposed development.

Data Available Online

Many of our flood datasets are available online:

- Flood Map For Planning (Flood Zone 2, Flood Zone 3 ,Flood Storage Areas, Flood Defences, Areas Benefiting from Defences)
- Risk of Flooding from Rivers and Sea
- Historic Flood Map
- Current Flood Warnings

Additional information

Please be aware that we now charge for planning advice provided to developers, agents and landowners. If you would like advice to inform a future planning application for this site then please complete our https://www.gov.uk/government/publications/pre-planning-application-enquiry-form-preliminary-opinion and email it to our Sustainable Places team at: planning.brampton@environment-agency.gov.uk. They will initially provide you with a free response identifying the following:

- the environmental constraints affecting the proposal;
- the environmental issues raised by the proposal;
- the information we need for the subsequent planning application to address the issues identified and demonstrate an acceptable development;
- any required environmental permits.

If you require any further information from them (for example, a meeting or the detailed review of a technical document) they will need to set up a charging agreement. Further information can be found on our website.

East Anglia Area
Ipswich Office, Iceni House, Cobham Road, Ipswich, Suffolk, IP3 9JD
Brampton Office, Bromholme Lane, Brampton, Huntingdon, PE28 4NE
General Enquiries: 03708 506506
Email: enquiries@environment-agency.gov.uk
Website: https://www.gov.uk/government/organisations/environment-agency

Please note we have published revised climate change allowances, which are available online. These new allowances will need to be reflected in your Flood Risk Assessment. If you want to discuss this please call our Sustainable Places team on 020 8474 5242.

Please get in touch if you have any further queries or contact us within two months if you'd like us to review the information we have sent.

Yours sincerely

Karen Brown

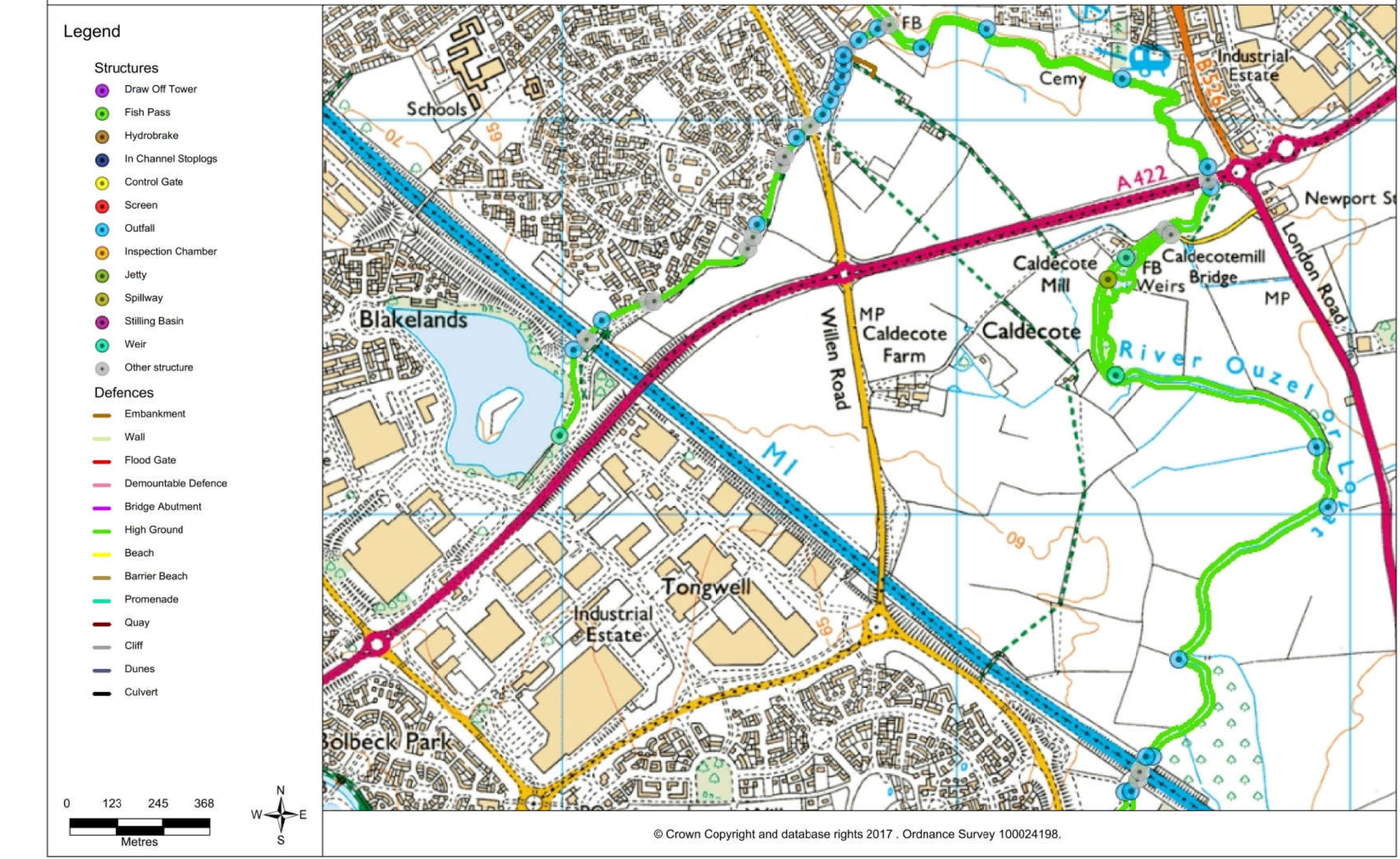
Karen Brown

Customers and Engagement Officer

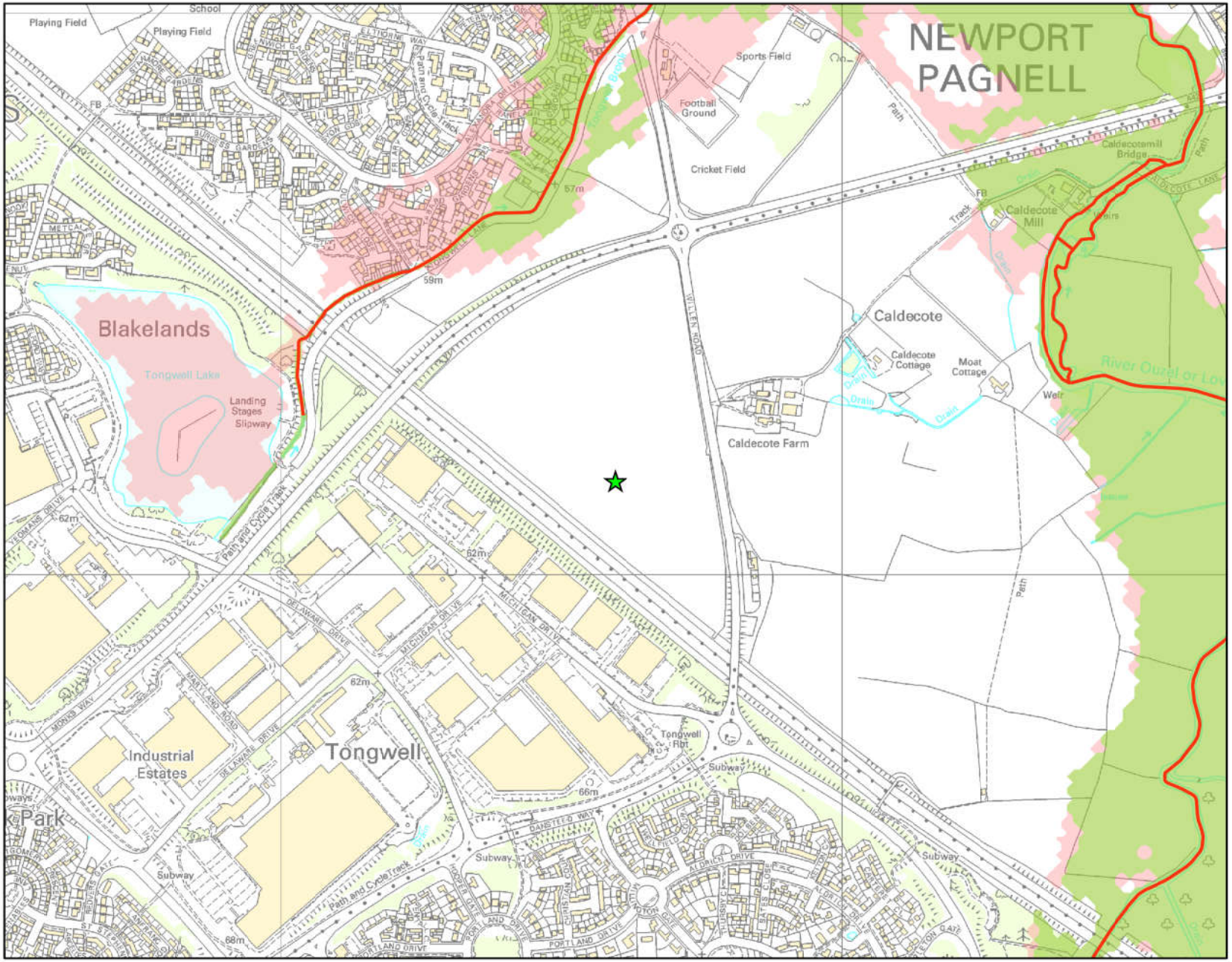
Direct dial: 02030 255472

64288 P4 Caldecote Farm

Environment Agency



Defended Climate Change Model Flood Outlines centred on Land at Caldecote Farm, Newport Pagnell, MK15 8HG, NGR SP 87596 42165. Ref 64288 Created on 8th November 2017.



Environment Agency

Scale 1:10,000

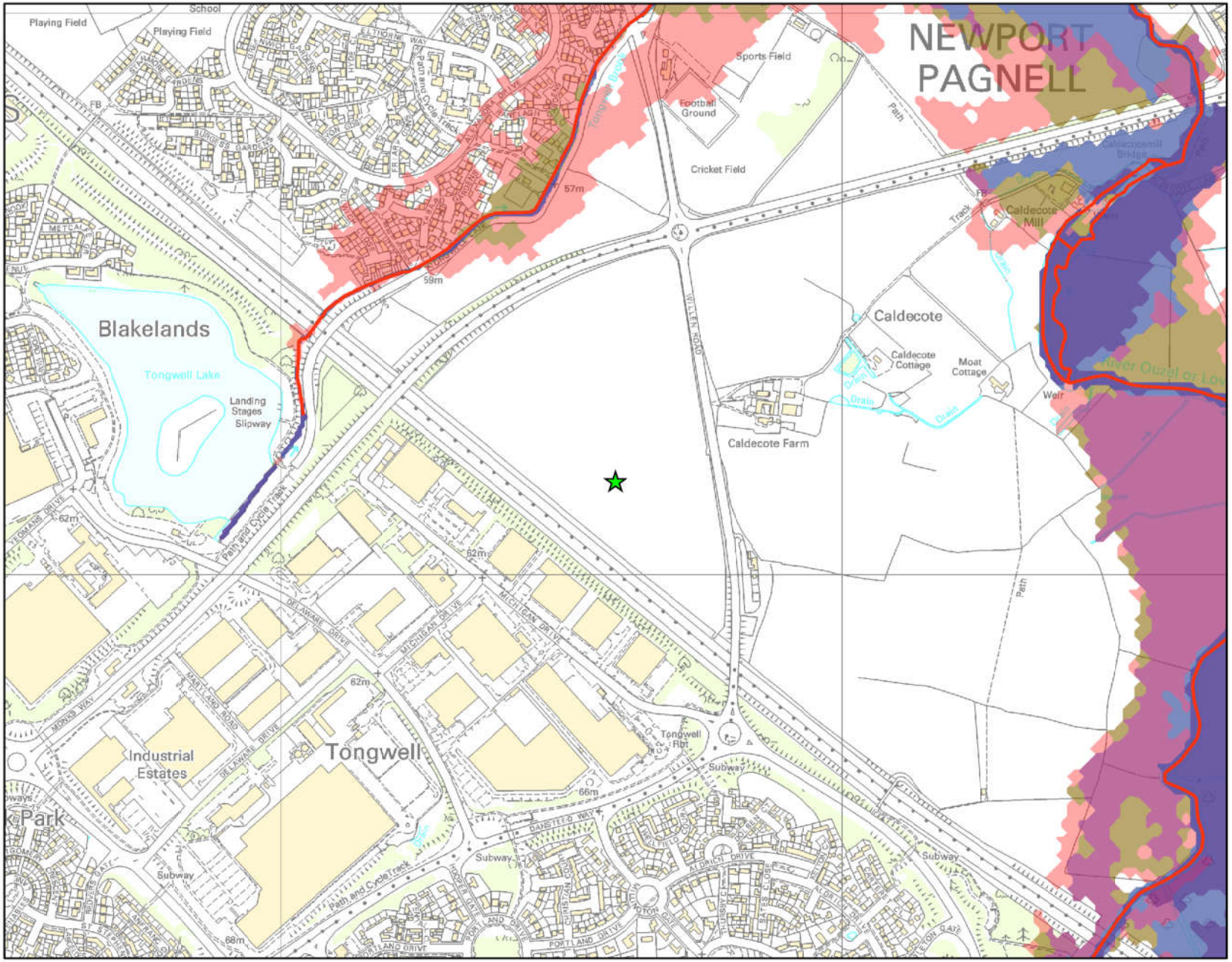
N W E S

Legend

- 1% AEP +20CC defended flood outline
- 0.1% AEP CC defended flood outline
- Main River
- Site

Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Defended Model Flood Outlines centred on Land at Caldecote Farm, Newport Pagnell, MK15 8HG, NGR SP 87596 42165. Ref 64288 Created on 8th November 2017.



Environment Agency

Scale 1:10,000

N W E S

Legend

- 20% AEP defended flood outline
- 10% AEP defended flood outline
- 5% AEP defended flood outline
- 1% AEP defended flood outline
- 0.1% AEP defended flood outline
- Main River
- Site

Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Flood risk assessments: Climate change allowances

Application of the allowances and local considerations

East Anglia; Essex, Norfolk, Suffolk, Cambridgeshire and Bedfordshire

1) The climate change allowances

The National Planning Practice Guidance refers planners, developers and advisors to the Environment Agency guidance on considering climate change in Flood Risk Assessments (FRAs). This guidance was updated in February 2016 and is available on Gov.uk. The guidance can be used for planning applications, local plans, neighbourhood plans and other projects. It provides climate change allowances for peak river flow, peak rainfall, sea level rise, wind speed and wave height. The guidance provides a range of allowances to assess fluvial flooding, rather than a single national allowance. It advises on what allowances to use for assessment based on vulnerability classification, flood zone and development lifetime.

2) Assessment of climate change impacts on fluvial flooding

Table A below indicates the level of technical assessment of climate change impacts on fluvial flooding appropriate for new developments depending on their scale and location. This should be used as **a guide only**. Ultimately, the agreed approach should be based on expert local knowledge of flood risk conditions, local sensitivities and other influences. **For these reasons we recommend that applicants and / or their consultants should contact the Environment Agency at the pre-planning application stage to confirm the assessment approach, on a case by case basis**. **Table A** defines three possible approaches to account for flood risk impacts due to climate change, in new development proposals:

- **Basic:** Developer can add an allowance to the 'design flood' (i.e. 1% annual probability) peak levels to account for potential climate change impacts. The allowance should be derived and agreed locally by Environment Agency teams.
- **Intermediate:** Developer can use existing modelled flood and flow data to construct a stage-discharge rating curve, which can be used to interpolate a flood level based on the required peak flow allowance to apply to the 'design flood' flow.
- **Detailed:** Perform detailed hydraulic modelling, through either re-running Environment Agency hydraulic models (if available) or construction of a new model by the developer.

Table A – Indicative guide to assessment approach

VULNERABILITY CLASSIFICATION	FLOOD ZONE	DEVELOPMENT TYPE		
		MINOR	SMALL-MAJOR	LARGE-MAJOR
ESSENTIAL INFRASTRUCTURE	Zone 2	Detailed		
	Zone 3a	Detailed		
	Zone 3b	Detailed		
HIGHLY VULNERABLE	Zone 2	Intermediate/ Basic	Intermediate/ Basic	Detailed
	Zone 3a	Not appropriate development		
	Zone 3b	Not appropriate development		
MORE VULNERABLE	Zone 2	Basic	Basic	Intermediate/ Basic
	Zone 3a	Intermediate/ Basic	Detailed	Detailed
	Zone 3b	Not appropriate development		
LESS VULNERABLE	Zone 2	Basic	Basic	Intermediate/ Basic
	Zone 3a	Basic	Basic	Detailed
	Zone 3b	Not appropriate development		
WATER COMPATIBLE	Zone 2	None		
	Zone 3a	Intermediate/ Basic		
	Zone 3b	Detailed		

Note: Where the table states 'not appropriate development', this is in line with national planning policy. If in exceptional circumstances such development types are proposed in these locations, we would expect a detailed modelling approach to be used.

NOTES:

- Minor: 1-9 dwellings/ less than 0.5 ha | Office / light industrial under 1ha | General industrial under 1 ha | Retail under 1 ha | Gypsy/traveller site between 0 and 9 pitches
- Small-Major: 10 to 30 dwellings | Office / light industrial 1ha to 5ha | General industrial 1ha to 5ha | Retail over 1ha to 5ha | Gypsy/traveller site over 10 to 30 pitches
- Large-Major: 30+ dwellings | Office / light industrial 5ha+ | General industrial 5ha+ | Retail 5ha+ | Gypsy/traveller site over 30+ pitches | any other development that creates a non residential building or development over 1000 sq m.

The assessment approach should be agreed with the Environment Agency as part of pre-planning application discussions to avoid abortive work.

3) Specific local considerations

Where the Environment Agency and the applicant and / or their consultant has agreed that a '**basic**´ level of assessment is appropriate the figures in Table B below can be used as a precautionary allowance for potential climate change impacts on peak 'design' (i.e. 1% annual probability) fluvial flood level rather than undertaking detailed modelling.

Table B – Local precautionary allowances for potential climate change impacts

Essex, Norfolk and Suffolk

Hydraulic Model (Watercourse)	Central	Higher Central	Upper
Blackwater & Brain - Blackwater between TL7520925623 and TL7820324314 Brain between TL7373323312 and TL7683821321	500mm	600mm	900mm
Chelmer - between TL6872107082 and TL7161609422 and TL7436306592	350mm	450mm	750mm
Colne (Model Extent)	450mm	600mm	950mm
Gipping – Downstream of Needham Market	400mm	500mm	850mm
Gipping – Needham Market and upstream including Somersham W/C	200mm	250mm	400mm
Norwich Downstream of TG2332009072	450mm	600mm	950mm
Norwich Upstream of TG2332009072	600mm	800mm	1200mm
Wensum (Model Extent)	400mm	500mm	800mm
Yare (Model Extent)	200mm	250mm	450mm
Broads (2008 Model Extent) Bure and Ant (2012 Model Extent)	Please use the current 1 in 1000 (0.1%) annual probability including climate change allowance		
Other main rivers, tributaries and ordinary watercourses	For other main rivers, tributaries and ordinary watercourses that are not stated above, basic allowances have not been calculated. In this instance you can either: • If flow data is available you can request this data from us and can conduct an intermediate assessment yourself • Or alternatively, you can choose to undertake a Detailed Assessment and "perform detailed hydraulic modelling, through either re-running our hydraulic models (if available) or constructing a new model		

Cambridgeshire and Bedfordshire

Watercourse / Model	Central	Higher Central	Upper End
Alconbury Brook River Kym	600mm	700mm	900mm
Lower Ouse (Model Extent)	700mm	800mm	1100mm
Mid Ouse (Cold Brayfield to Bromham – between SP9156852223 and TL0132950919)	700mm	800mm	1100mm
Mid Ouse (East of Bedford to Roxton – between TL0791848903 and TL1618854543)	700mm	850mm	1200mm
River Hiz and River Purwell	400mm	450mm	550mm
River Ivel	500mm	600mm	750mm
Pix Brook	450mm	500mm	600mm
Potton Brook	500mm	600mm	700mm
River Cam and tributaries (excluding the Cam Lodes and the Slade System)	600mm	700mm	950mm
Great Barford (ordinary watercourses)	500mm	550mm	650mm
Bromham (ordinary watercourse)	550mm	650mm	850mm

NOTES:

Urban areas excluded from the 'basic' approach: St Ives, Holywell, Godmanchester, Swavesey, Over, Bedford, Newport Pagnell, Buckingham and Leighton Buzzard. More detailed assessment of climate change allowances will need to be undertaken in these locations.

Use of these allowances will only be accepted after discussion with the Environment Agency.

4) Fluvial food risk mitigation

For planning consultations where we are a statutory consultee and our Flood risk standing advice **does not** apply we use the following benchmarks to inform flood risk mitigation for different vulnerability classifications. **These are a guide only**. **We strongly recommend you contact us at the pre-planning application stage to confirm this on a case by case basis.** For planning consultations where we are not a statutory consultee or our Flood risk Standing advice applies we recommend local planning authorities and developers use these benchmarks but we do not expect to be consulted.

- For development classed as '**Essential Infrastructure**' our benchmark for flood risk mitigation is for it to be designed to the '**upper end**' climate change allowance for the epoch that most closely represents the lifetime of the development, including decommissioning.

- For **highly vulnerable** or **more vulnerable developments** in flood zone 2, the '**central**' climate change allowance is our minimum benchmark for flood risk mitigation, and in flood zone 3 the '**higher central**' climate change allowance is our minimum benchmark for flood risk mitigation. In sensitive locations it may be necessary to use the **higher central** (in flood zone 2) and the **upper end** allowance (in flood zone 3).

- For **water compatible** or **less vulnerable** development (e.g. commercial), the '**central**' climate change allowance for the epoch that most closely represents the lifetime of the development is our minimum benchmark for flood risk mitigation. In sensitive locations it may be necessary to use the **higher central** (particularly in flood zone 3) to inform built in resilience.

For a visual representation of the above, please see Tables 1 and 2 overleaf.

5) Development in Tidal Areas

There is no change to the way we respond to sites affected solely by tidal flood risk as the sea level allowances are unchanged.

6) Our Service

Non-chargeable service

We will give a free opinion on:

- What climate change allowance to apply to a particular development type
- Which technical approach is suitable in the FRA

Chargeable service:

- Review of climate change impacts using intermediate and detailed technical approaches (i.e. modelling review)
- Assessment and review of proposals for managed adaptation.

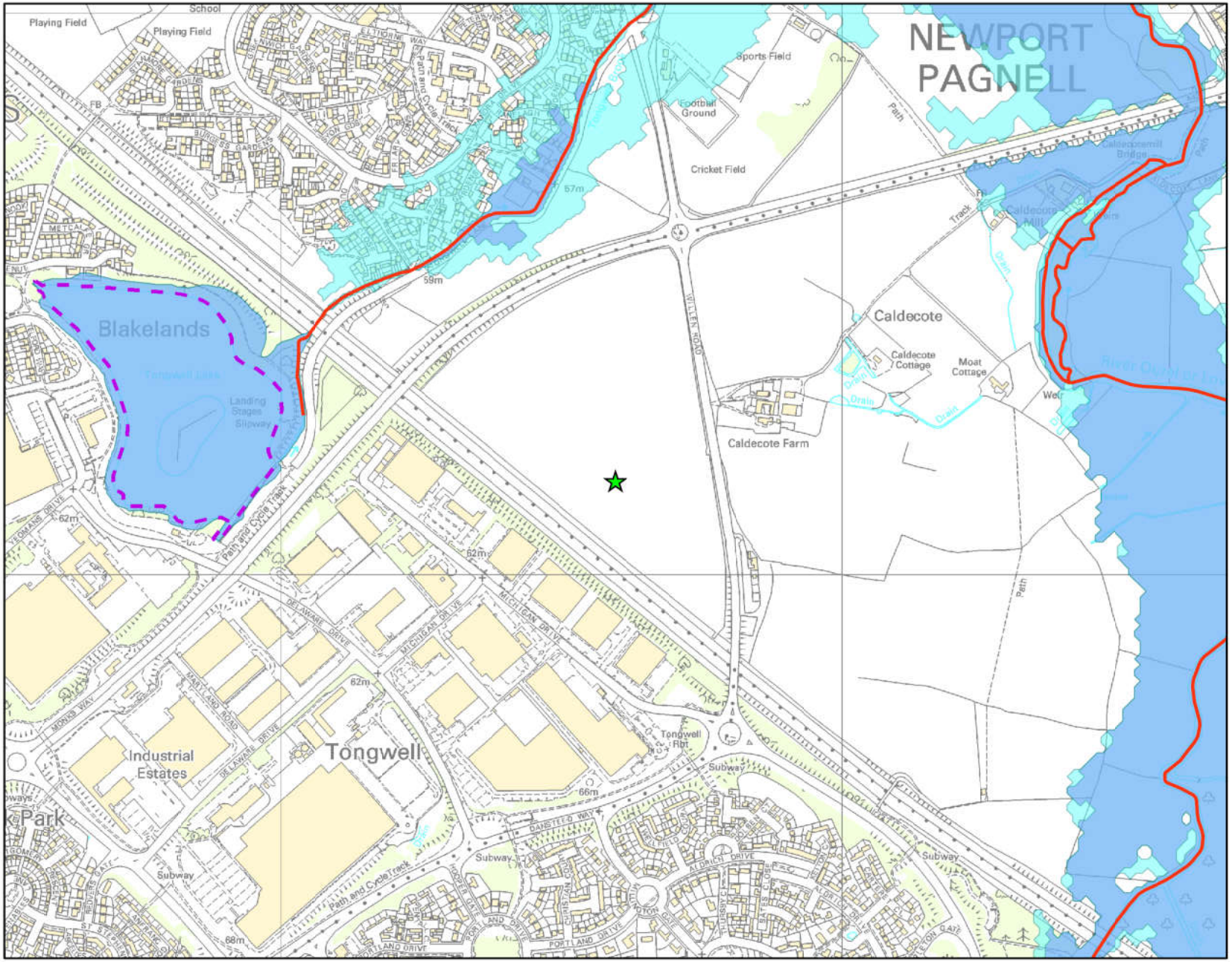
Table 1 peak river flow allowances by river basin district (use 1961 to 1990 baseline)				
River basin district	**Allowance category**	**Total potential change anticipated for '2020s'** **(2015 to 39)**	**Total potential change anticipated for '2050s'** **(2040 to 2069)**	**Total potential change anticipated for '2080s'** **(2070 to 2115)**
Anglian	**Upper end**	25%	35%	65%
	Higher central	15%	20%	35%
	Central	10%	15%	25%
Thames	**Upper end**	25%	35%	70%
	Higher central	15%	25%	35%
	Central	10%	15%	25%

Table 2: Using peak river flow allowances for flood risk assessments					
Flood Zone	**Essential Infrastructure**	**Highly Vulnerable**	**More Vulnerable**	**Less Vulnerable**	**Water Compatible**
2	higher central and upper end allowances	higher central and upper end allowances	central and higher central allowances	central allowance	none of the allowances
3a	upper end allowance	**X**	higher central and upper end	central and higher central	central allowance
3b	upper end allowance	**X**	**X**	**X**	central allowance

X – Development should not be permitted
If (exceptionally) development is considered appropriate when not in accordance with flood zone vulnerability categories, then it would be appropriate to use the upper end allowance.

There may be circumstances where local evidence supports the use of other data or allowances. Where you think this is the case we may want to check this data and how you propose to use it.

Flood Map for Planning (Rivers and Sea) centred on Land at Caldecote Farm, Newport Pagnell, MK15 8HG, NGR SP 87596 42165. Ref 64288 Created on 8th November 2017.



Environment Agency

Scale 1:10,000

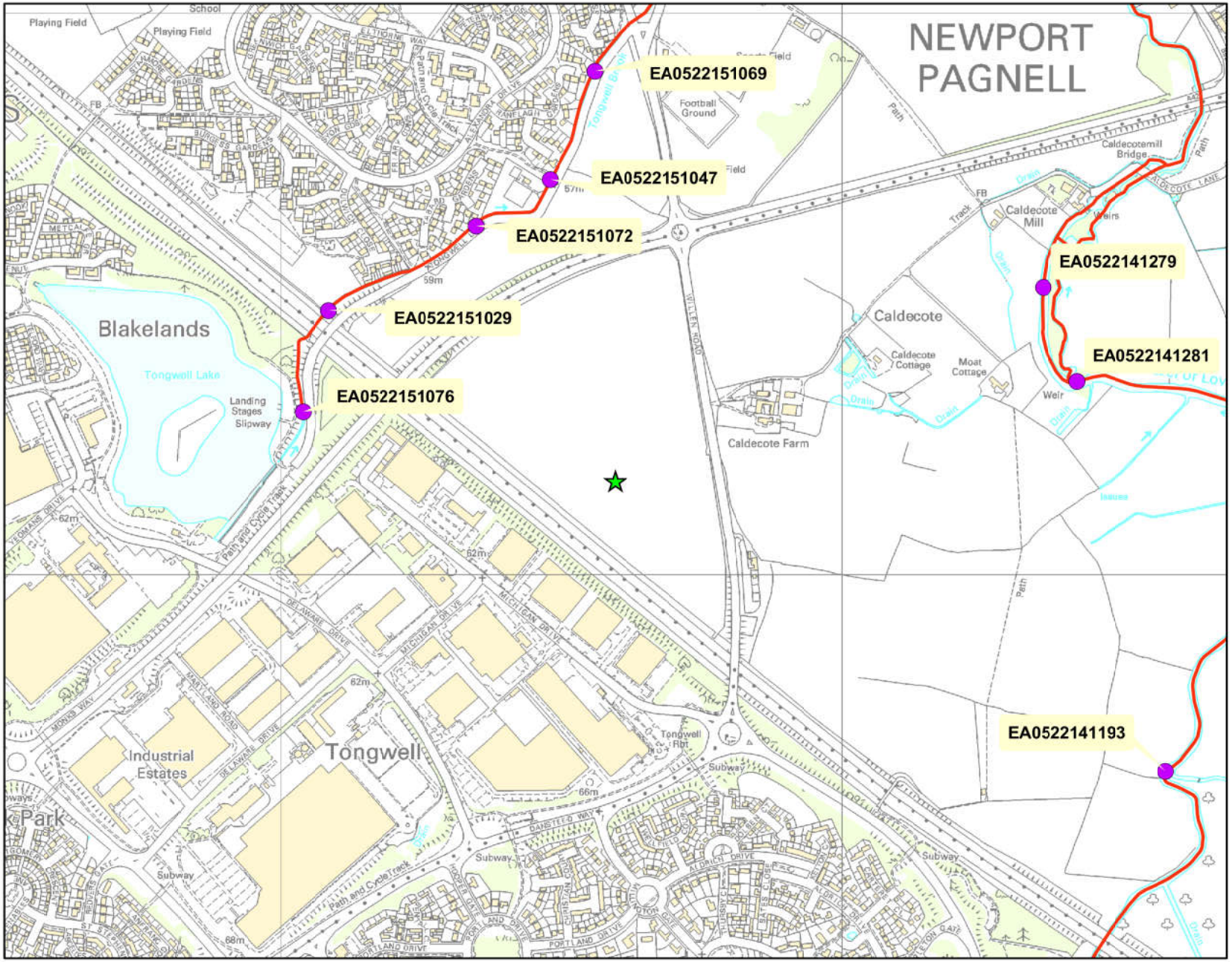
N W E S

Legend

- Flood Zone 3
- Flood Zone 2
- Areas Benefiting From Defences
- Flood Map - Flood Storage Areas
- Flood Map Defences
- Main River
- Site

Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Modelled Node Point Locations centred on Land at Caldecote Farm, Newport Pagnell, MK15 8HG, NGR SP 87596 42165. Ref 64288 Created on 8th November 2017.



Environment Agency

Scale 1:10,000

N W E S

Legend

- Modelled Node Point
- Main River
- Site

Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Product Four – Datasheet

Our Reference	Enquirer	Site	Grid Reference
64288	Robert Ward	Land at Caldecote Farm, Newport Pagnell, MK15 8HG	SP8759642165

This datasheet provides all the information we hold relating to a Product 4, relevant to the above site. Where we have no relevant data for your site we will clearly state this.

Model Information

The following table shows a summary of all the model information relevant to the area of interest.

Model Code	Model Name	Release Date
EA052335	Upper Great Ouse Flood Mapping Detailed	01/04/2012

Level Information

The following table shows modelled level information from the above models.

Node	Model	Easting	Northing	20% AEP	10% AEP	5% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
EA0522141193	EA052335/EA052337	488577	241649	56.91	57.09	57.15	57.17	57.23	57.25	57.27	57.3	57.39
EA0522141279	EA052335/EA052337	488358	242511	56.31	56.4	56.43	56.45	56.49	56.51	56.53	56.55	56.59
EA0522141281	EA052335/EA052337	488418	242343	56.39	56.5	56.54	56.57	56.62	56.64	56.66	56.7	56.76
EA0522151029	EA052335/EA052337	487085	242469	58.08	58.14	58.22	58.24	58.31	58.35	58.36	58.43	58.58
EA0522151047	EA052335/EA052337	487479	242703	56.14	56.22	56.31	56.33	56.41	56.45	56.47	56.55	56.74
EA0522151069	EA052335/EA052337	487560	242896	55.64	55.68	55.72	55.73	55.77	55.79	55.8	55.85	55.95
EA0522151072	EA052335/EA052337	487347	242620	56.98	57.05	57.13	57.14	57.21	57.25	57.26	57.33	57.49
EA0522151076	EA052335/EA052337	487039	242289	58.37	58.43	58.51	58.53	58.6	58.63	58.64	58.72	58.86

Levels Climate Change subform

The following table shows modelled level information from the above models.

Node	Model	Easting	Northing	1%(25%cc) AEP	1%(35%cc) AEP	1%(65%cc) AEP	1%(20%cc) AEP
EA0522141193	052335/EA0523	488577	241649	-9999.99	-9999.99	-9999.99	57.33
EA0522141279	052335/EA0523	488358	242511	-9999.99	-9999.99	-9999.99	56.56
EA0522141281	052335/EA0523	488418	242343	-9999.99	-9999.99	-9999.99	56.71
EA0522151029	052335/EA0523	487085	242469	-9999.99	-9999.99	-9999.99	58.46
EA0522151047	052335/EA0523	487479	242703	-9999.99	-9999.99	-9999.99	56.59
EA0522151069	052335/EA0523	487560	242896	-9999.99	-9999.99	-9999.99	55.87
EA0522151072	052335/EA0523	487347	242620	-9999.99	-9999.99	-9999.99	57.37
EA0522151076	052335/EA0523	487039	242289	-9999.99	-9999.99	-9999.99	58.75

Flow Information

The following table shows modelled flow information from the above models.

Node	Model	Easting	Northing	20% AEP	10% AEP	5% AEP	4% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
EA0522141193	EA052335/EA052337	488577	241649	28.01	32.68	34.95	35.52	36.99	37.88	38.55	40.73	46.43
EA0522141279	EA052335/EA052337	488358	242511	22.34	23.67	24.27	24.6	25.67	25.85	26.29	26.62	27.15
EA0522141281	EA052335/EA052337	488418	242343	26.97	33.51	36.53	38.25	42.02	43.8	44.64	46.77	51.7
EA0522151029	EA052335/EA052337	487085	242469	1.7	2	2.43	2.54	2.95	3.16	3.26	3.75	4.78
EA0522151047	EA052335/EA052337	487479	242703	1.69	1.99	2.41	2.5	2.9	3.11	3.2	3.69	4.78
EA0522151069	EA052335/EA052337	487560	242896	1.69	2	2.41	2.5	2.9	3.11	3.2	3.69	4.78
EA0522151072	EA052335/EA052337	487347	242620	1.69	1.99	2.41	2.51	2.91	3.12	3.21	3.69	4.78
EA0522151076	EA052335/EA052337	487039	242289	1.7	2	2.41	2.51	2.93	3.12	3.23	3.72	4.78

Flows Climate Change subform

The following table shows modelled flow information from the above models.

Node	Model	Easting	Northing	1%(25%cc) AEP	1%(35%cc) AEP	1%(65%cc) AEP	1%(20%cc) AEP
EA0522141193	052335/EA0523	488577	241649	-9999.99	-9999.99	-9999.99	42.06
EA0522141279	052335/EA0523	488358	242511	-9999.99	-9999.99	-9999.99	26.71
EA0522141281	052335/EA0523	488418	242343	-9999.99	-9999.99	-9999.99	47.74
EA0522151029	052335/EA0523	487085	242469	-9999.99	-9999.99	-9999.99	3.97
EA0522151047	052335/EA0523	487479	242703	-9999.99	-9999.99	-9999.99	3.91
EA0522151069	052335/EA0523	487560	242896	-9999.99	-9999.99	-9999.99	3.9
EA0522151072	052335/EA0523	487347	242620	-9999.99	-9999.99	-9999.99	3.91
EA0522151076	052335/EA0523	487039	242289	-9999.99	-9999.99	-9999.99	3.93

Historic Flooding Information

Code	Event	Start	Source	Cause
EA052199804	Easter 1998	08/04/1998	Main River	Channel Capacity Exceeded (no raised defences)
EA052199209	September 1992	22/09/1992	Unknown	Unknown
EA052194703	March 1947	13/03/1947	Main River	Channel Capacity Exceeded (no raised defences)

Informatives

AEP - Annual Exceedance Probability - The probability of a given event to occur in any one year. Please note that this is not a return period.

-9999.99 values - If the above tables show a value of -9999.99, this indicates we have no level or flow information for that particular AEP.

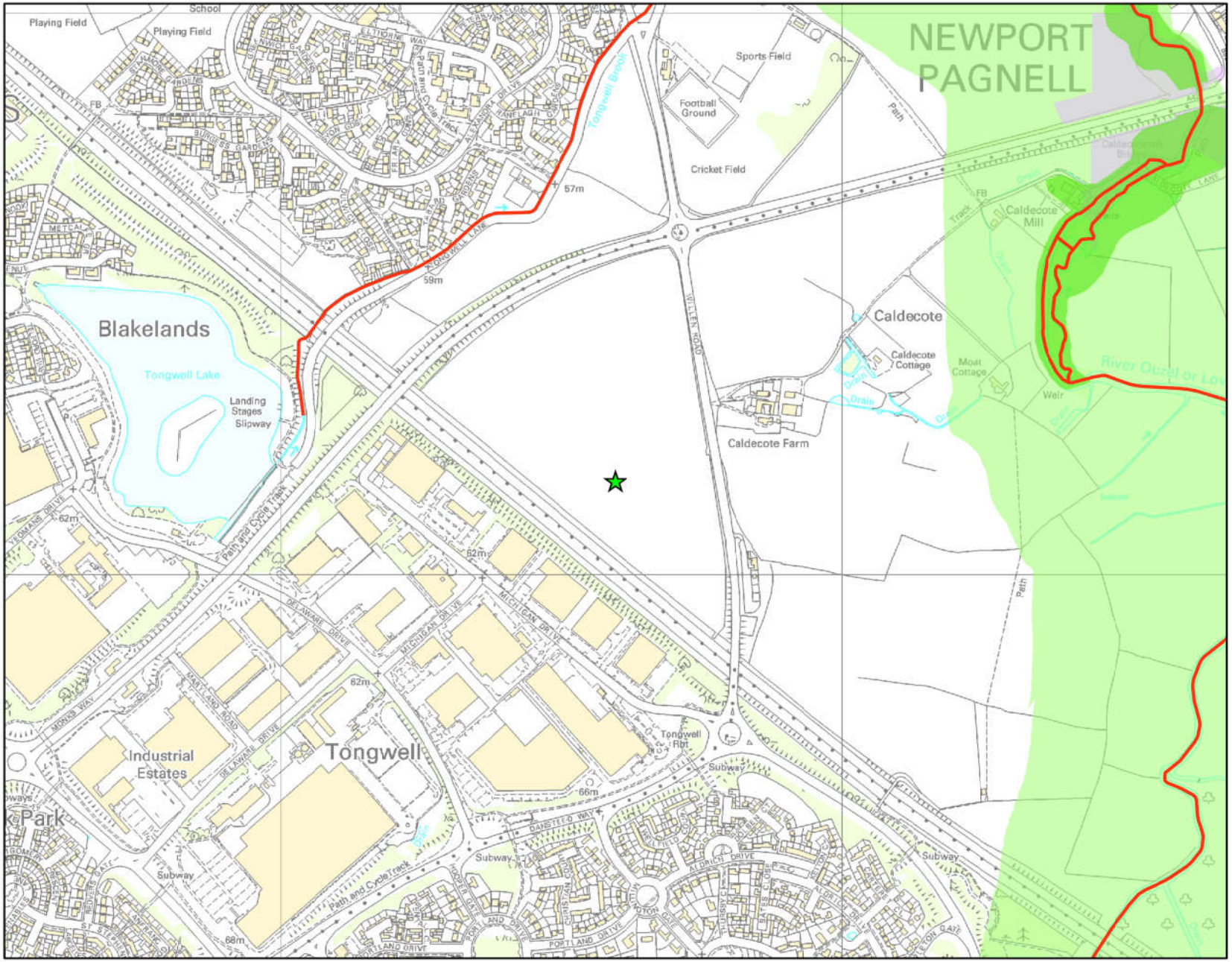
Historic Flooding - The historic flood map is an indicative outline of areas which have flooded. Not all properties within this area will have flooded.

Climate Change Allowances - Please note that the 1%+CC AEP flood level in the above table will be based on the 1% annual probability flood event including an additional 20% increase in peak flows to account for climate change impacts. We have recently released new guidance on climate change allowances for the purpose of flood risk assessments, which is available on our website at https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances. You may need to undertake further assessment / modelling of future flood risk using different climate change allowances to ensure your assessment of future flood risk is based on the best available evidence.

Defended Climate Change Model Flood Outline - Please note, this outline is based on a 20% allowance for climate change.

Surface Water Flooding - Please contact your Lead Local Flood Authority (Milton Keynes Unitary Authority) for information regarding flood risk from surface water.

Recorded Flood Event Outlines centred on Land at Caldecote Farm, Newport Pagnell, MK15 8HG, NGR SP 87596 42165. Ref 64288 Created on 8th November 2017.



Environment Agency

Scale 1:10,000

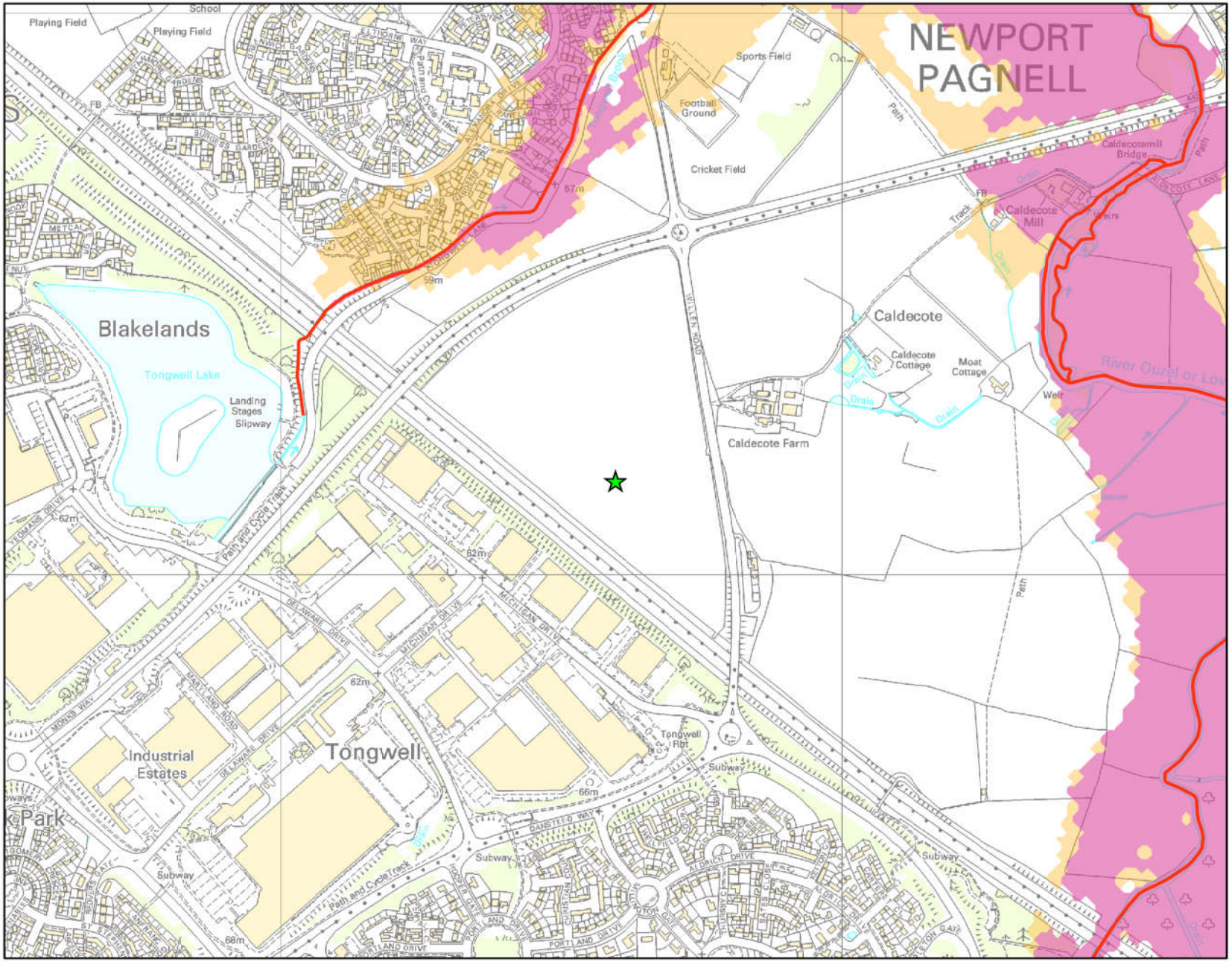
N W E S

Legend

- Historic Flood Outline Easter 1998
- Historic Flood Outline September 1992
- Historic Flood Outline March 1947
- Main River
- Site

Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Undefended Climate Change Model Flood Outlines centred on Land at Caldecote Farm, Newport Pagnell, MK15 8HG, NGR SP 87596 42165. Ref 64288 Created on 8th November 2017.



Environment Agency

Scale 1:10,000

N W E S

Legend

- 1% AEP CC Undefended Flood Outline
- 0.1% AEP CC Undefended Flood Outline
- Main River
- Site

Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

APPENDIX 4

IDB Correspondence

Robert Ward

From: Trevor Skelding <[redacted]k>
Sent: 24 October 2017 10:26
To: Robert Ward
Subject: RE: Request for Information - Land at Caldecote Farm, Newport Pagnell
Attachments: Caldecote.pdf

Robert

For your information I have attached a plan indicating the extent of the Board's district relative to your site. Please note that although no ditches are shown on the plan, any minor land drainage ditch found within the Board's area will be subject to its statutory control.

No flood records exist for this location. Any proposed surface water discharge into the land drainage system will be subject to the Board's agreement and consent and should be based on the equivalent of a maximum of 4 l/s per impermeable hectare.

Regards

Trevor Skelding MSc IEng MICE
Principal Engineer

Bedford Group of Drainage Boards|Vale House|Broadmead Road|Stewartby|Bedfordshire|MK43 9ND

[redacted] | www.idbs.org.uk

From: Robert Ward [mailto:[redacted]]
Sent: 23 October 2017 15:55
To: Frances Bowler <[redacted] Farm, Newport Pagnell

Dear Sir/Madam,

I'm an engineer at BWB Consulting Ltd, our team deal with flood risk and flood risk assessment. We are assessing the above site in terms of flood risk and wondered if you had any relevant information for the site or surface water drainage advice in particular any information regarding; ditches and discharge from the site, allowable discharge rates and information on any water which are IDB managed.

Please find attached plan showing the location of the site. Your website indicates that the site is within close proximity to IDB watercourses 18a, 18b and 19, for which I cannot find any other record or information on.

Please feel free to contact me if you require any further information. I look forward to hearing from you.

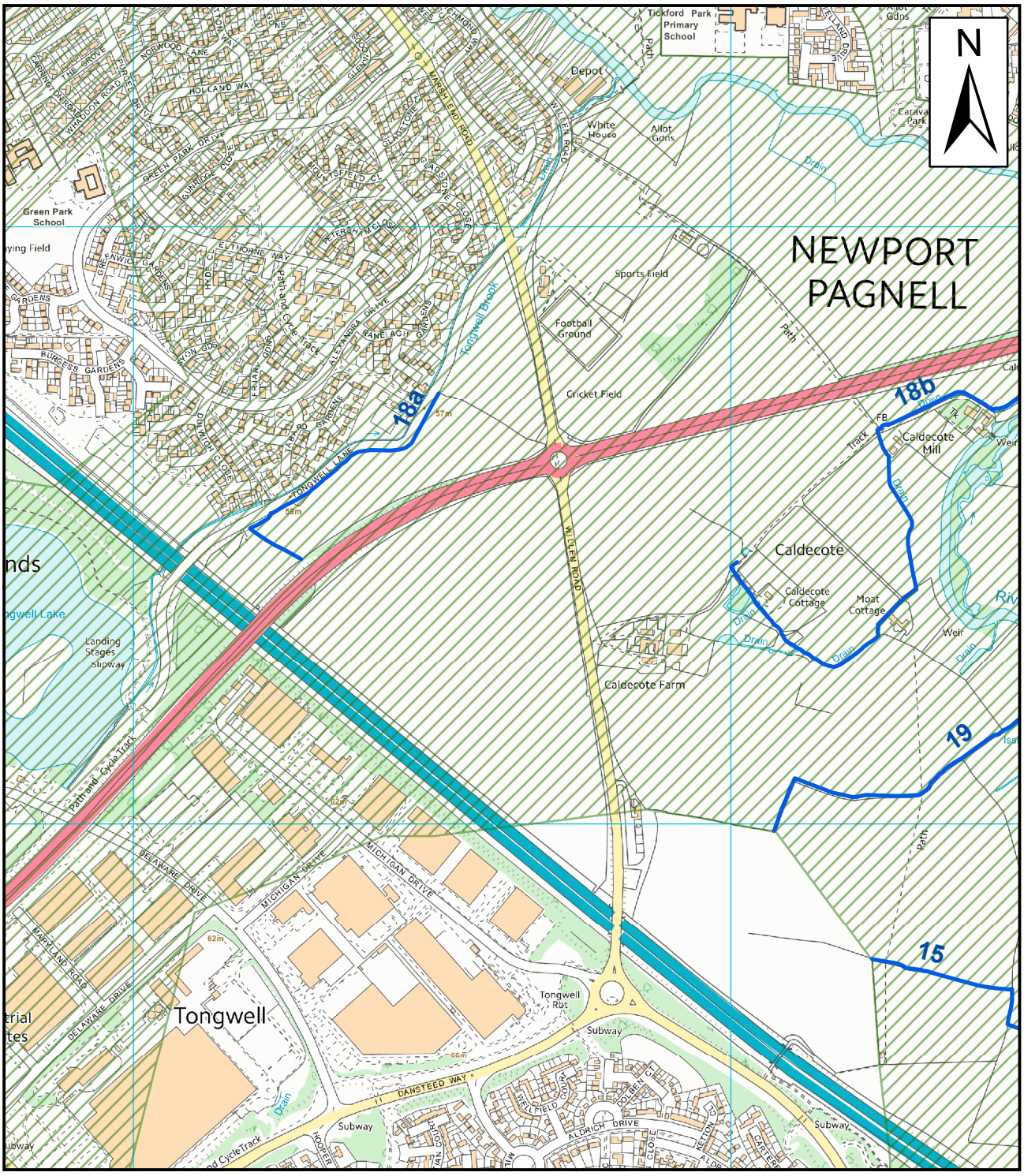
Kind Regards

Robert Ward
Engineer | BWB Consulting Limited

[redacted]ottingham, NG2 3DQ

Bedford Group of Drainage Boards

Buckingham & River Ouzel



Scale 1 = 10,000

Legend

IDB Watercourse

IDB District

BOARD

Buckingham and River Ouzel IDB

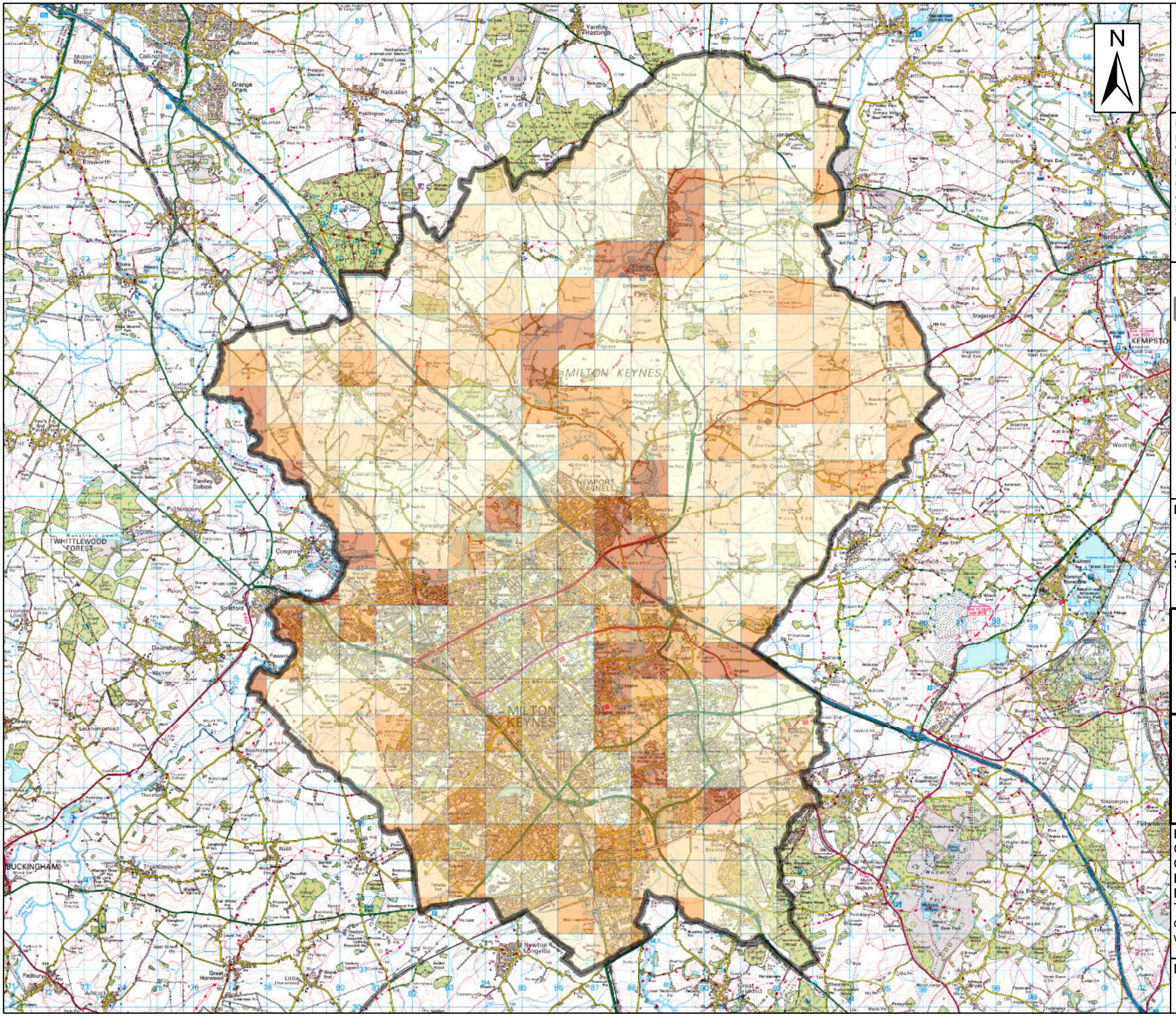
Meters

0 100 200 400

Caldecote Farm

APPENDIX 5

PFRA Groundwater Mapping



MILTON KEYNES COUNCIL

NOTES

LEGEND

MILTON KEYNES

RISK OF GROUNDWATER FLOODING

- >75% OF AREA SUSCEPTIBLE
- 50% to 75% OF AREA SUSCEPTIBLE
- 25% to 50% OF AREA SUSCEPTIBLE
- < 25% OF AREA SUSCEPTIBLE

DRAWN	DATE	CHECKED	DATE
JOD	01/06/2011	TS	01/06/2011

SCALE @ A3	ISSUE STATUS
1 : 100000	FINAL

AREAS SUSCEPTIBLE TO GROUND WATER FLOODING IN MILTON KEYNES

UPPER GREAT OUSE CATCHMENT TRI LLFA PRELIMINARY FLOOD RISK ASSESSMENT

BEDFORD GROUP OF DRAINAGE BOARDS
CAMBRIDGE HOUSE
CAMBRIDGE ROAD
BEDFORD
MK42 0LH
TEL: (01234) 354396
contact@idbs.org.uk
www.idbs.org.uk

IDB Bedford Group

DRAWING NUMBER

FIGURE 5.6

APPENDIX 6

Anglian Water Sewer Records

Date: 28/09/17

Scale: 1:1250

Map Centre: 487541,242423

Data updated: 01/08/17

Our Ref: 237853 - 2

Wastewater Plan A0

jane.griffin@utilityconnections.co.uk

2292

love every drop
anglianwater

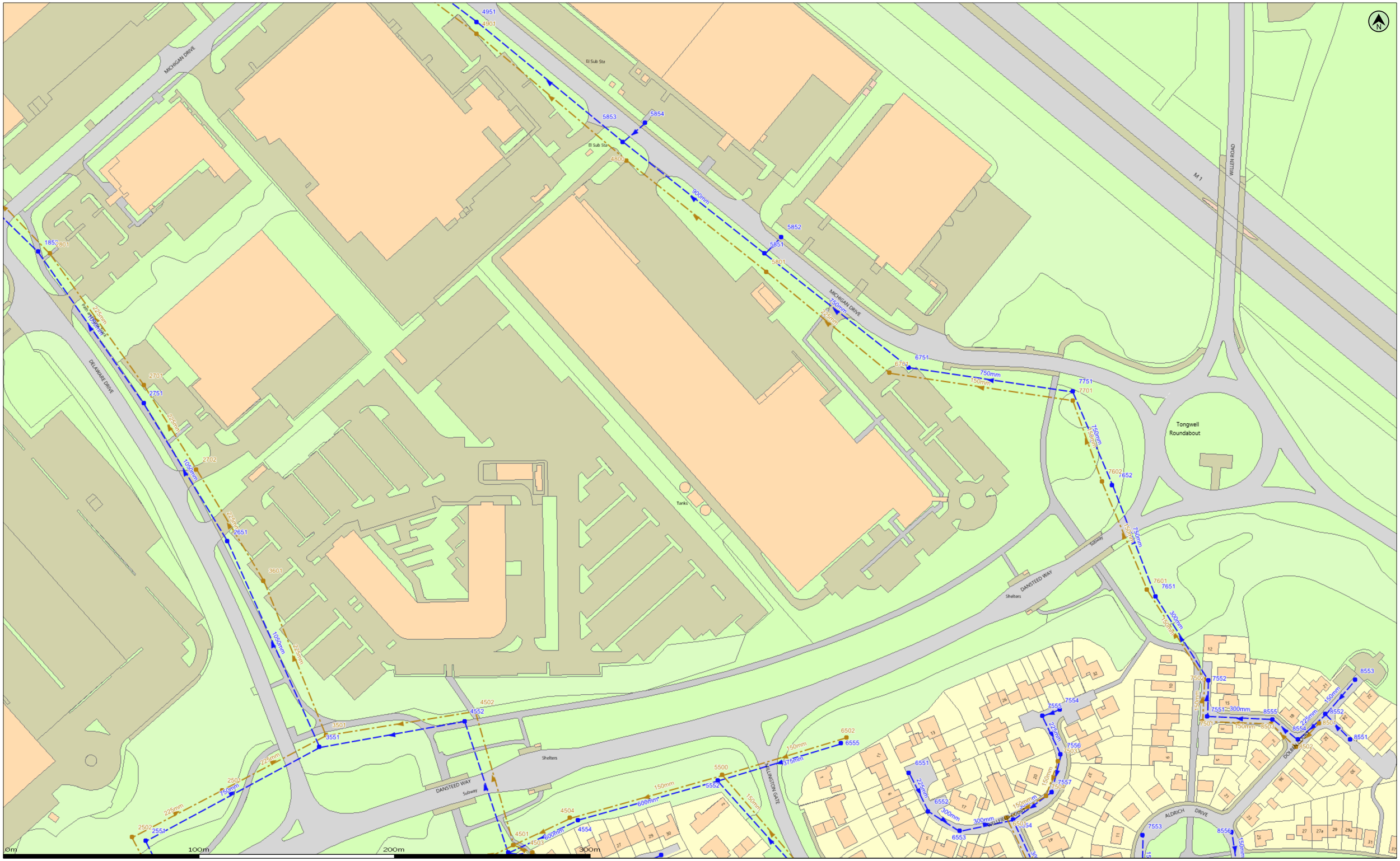
Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert
2501	488223	242547	E	-	-	-
0001	487022	242032	F	-	-	-
0002	487074	242095	F	-	-	-
0600	487078	242677	F	59.32	56.85	2.47
0601	487048	242663	F	59.77	58.27	1.5
0602	487075	242607	F	58.892	57.69	1.202
0701	487095	242789	F	59.07	56.9	2.17
0702	487075	242769	F	59.22	56.54	2.68
0703	487005	242751	F	61.12	58.3	2.82
0704	487012	242735	F	60.77	58.37	2.4
0705	487030	242735	F	60.49	58.44	2.05
0801	487028	242866	F	60.21	58.86	1.35
0802	487056	242896	F	59.34	57.97	1.37
0803	487061	242866	F	59.68	58.41	1.27
0804	487006	242811	F	60.644	57.582	3.062
0805	487015	242818	F	-	-	-
0901	487005	241944	F	60.95	57.56	3.39
1100	487114	242164	F	-	-	-
1101	487132	242164	F	-	-	-
1500	487157	242589	F	58.22	57.07	1.15
1501	487168	242561	F	58.32	57.17	1.15
1502	487176	242557	F	-	-	-
1503	487177	242553	F	-	-	-
1504	487179	242544	F	-	-	-
1600	487108	242677	F	58.9	56.41	2.49
1601	487113	242649	F	58.63	56.53	2.1
1602	487114	242610	F	58.56	57.16	1.4
1603	487130	242622	F	58.43	56.85	1.58
1700	487128	242725	F	59.207	55.997	3.21
1801	487133	242800	F	58.75	57.19	1.56
1802	487181	242857	F	-	-	-
1803	487151	242862	F	-	-	-
1804	487142	242867	F	-	-	-
1805	487136	242856	F	-	-	-
2001	487295	242033	F	-	-	-
2002	487216	242098	F	-	-	-
2500	487253	242589	F	58.065	56.775	1.29
2600	487220	242646	F	58.235	57.815	0.42
2601	487208	242652	F	58.405	56.005	2.4
2602	487278	242668	F	58.07	56.902	1.168
2603	487260	242639	F	57.925	56.125	1.8
2704	487290	242735	F	58.53	55.18	3.35
2706	487285	242780	F	58.64	55.51	3.13
2707	487258	242717	F	-	-	-
2708	487267	242703	F	58.139	55.675	2.464
2709	487264	242703	F	58.093	55.663	2.43
2710	487204	242705	F	58.451	55.651	2.8
2711	487205	242751	F	58.748	56.168	2.58
2712	487213	242772	F	58.657	56.327	2.33
2713	487230	242799	F	58.285	56.615	1.67
2800	487221	242824	F	58.318	56.888	1.43
2801	487202	242887	F	-	-	-
3600	487303	242664	F	58.055	56.145	1.91
3601	487301	242635	F	57.745	56.485	1.26
3701	487322	242773	F	58.18	54.99	3.19
3702	487335	242700	F	57.655	56.455	1.2
3703	487361	242736	F	58.039	55.639	2.4
3704	487368	242753	F	58.089	55.543	2.546
3801	487390	242820	F	57.28	54.72	2.56
3802	487367	242841	F	57.57	54.62	2.95
3803	487344	242809	F	58.07	54.88	3.19
3901	487356	241975	F	62.06	58.97	3.09
4701	487467	242753	F	57.18	56.05	1.13
4702	487440	242772	F	57.28	55.69	1.59
4703	487435	242782	F	57.18	55.6	1.58
4801	487439	242800	F	57.01	55.46	1.55
4802	487405	242816	F	57.15	55.05	2.1
4803	487440	242821	F	56.84	55.28	1.56
4804	487488	242836	F	56.57	55.04	1.53
4805	487482	242858	F	56.74	54.78	1.96
4806	487492	242869	F	56.52	54.67	1.85
4807	487424	242886	F	56.94	54.15	2.79
4901	487499	242900	F	56.48	54.46	2.02
5801	487520	242899	F	56.67	54.9	1.77
8700	486884	242746	F	64.38	62.44	1.94
8701	486892	242765	F	64.47	62.02	2.45
8702	486860	242787	F	65.73	63.93	1.8
8703	486822	242790	F	66.75	64.74	2.01
8802	486820	242878	F	65.99	64.53	1.46
8803	486841	242885	F	65.43	64.13	1.3
8804	486893	242876	F	63.77	62.31	1.46
8805	486869	242879	F	64.54	63.13	1.41
9001	486980	242009	F	-	-	-
9700	486981	242776	F	61.43	57.83	3.6
9701	486962	242765	F	62.21	60.04	2.17
9702	486934	242741	F	62.8	60.63	2.17
9703	486941	242723	F	62.45	60.73	1.72
9704	486933	242762	F	63.07	60.49	2.58
9800	486913	242888	F	62.91	61.01	1.9
9901	486934	241963	F	61.54	58.73	2.81
0051	487010	242050	S	-	-	-
0052	487037	242065	S	-	-	-
0053	487040	242095	S	-	-	-
0054	487042	242096	S	-	-	-
0055	487068	242098	S	-	-	-
0651	487083	242675	S	59.27	57.7	1.57
0652	487059	242665	S	59.69	58.49	1.2
0653	487099	242607	S	58.63	57.683	0.947
0751	487075	242772	S	59.26	56.97	2.29
0752	487095	242792	S	59.1	57.31	1.79
0753	487062	242760	S	58.97	56.3	2.67
0754	487014	242733	S	60.74	58.71	2.03
0755	487047	242732	S	60.02	58.84	1.18
0756	487014	242708	S	60.49	59.27	1.22
0757	487004	242756	S	61.05	58.56	2.49
0851	487026	242864	S	60.21	58.37	1.84
0852	487064	242865	S	59.61	57.84	1.77
0853	487058	242896	S	59.38	57.24	2.14
0854	487009	242810	S	-	-	-
1151	487114	242168	S	-	-	-
1152	487132	242170	S	-	-	-
1551	487156	242594	S	58.31	57.16	1.15
1552	487168	242566	S	58.39	57.29	1.1
1553	487180	242554	S	-	-	-
1651	487110	242674	S	58.81	56.45	2.36
1652	487116	242649	S	58.692	56.72	1.972
1653	487117	242608	S	58.52	57.55	0.97
1654	487135	242621	S	58.37	56.99	1.38
1655	487164	242698	S	58.888	56.248	2.64
1851	487129	242800	S	58.58	57.4	1.18
1852	487176	242883	S	58.143	57.193	0.95
2051	487294	242038	S	-	-	-
2052	487221	242098	S	-	-	-
2551	487255	242587	S	58.05	56.85	1.2
2651	487233	242695	S	58.4	56.05	2.35
2652	487219	242645	S	58.29	57.03	1.26
2653	487207	242650	S	58.42	57.22	1.2
2654	487279	242667	S	58.045	56.295	1.75
2655	487261	242638	S	57.95	56.46	1.49
2656	487202	242693	S	58.493	56.113	2.38
2751	487227	242798	S	58.36	56.97	1.39
2752	487209	242771	S	58.65	56.74	1.91
2753	487233	242757	S	58.69	57.01	1.68
2755	487298	242723	S	58.13	55.79	2.34
2756	487267	242706	S	58.24	55.88	2.36
2757	487201	242708	S	58.451	56.411	2.04
2758	487202	242750	S	58.796	56.596	2.2
2851	487201	242867	S	58.64	57.07	1.57
2852	487256	242837	S	58.41	56.39	2.02
3651	487300	242638	S	57.745	56.645	1.1
3652	487331	242663	S	57.7	56.6	1.1
3653	487323	242671	S	57.9	56.48	1.42
3654	487301	242662	S	58.05	56.55	1.5
3751	487310	242768	S	58.35	56.03	2.32
3752	487329	242758	S	58.2	55.6	2.6
3753	487367	242755	S	58.169	56.126	2.043
3754	487344	242759	S	58.259	55.909	2.35
3755	487334	242702	S	57.705	56.315	1.39
3756	487360	242737	S	58.054	56.186	1.868
3851	487393	242821	S	57.3	55.57	1.73
3852	487380	242832	S	57.31	55.48	1.83
3853	487386	242838	S	57.42	55.41	2.01
3951	487358	241980	S	62.15	59.5	2.65
4751	487466	242756	S	57.21	56.21	1
4752	487443	242772	S	57.28	56.07	1.21
4753	487437	242782	S	57.22	55.88	1.34
4754	487441	242799	S	56.98	55.78	1.2
4851	487403	242818	S	57.15	55.62	1.53
4852	487442	242823	S	56.83	55.72	1.11
4853	487491	242833	S	56.55	55.67	0.88
4854	487485	242857	S	56.74	55.28	1.46
4855	487492	242865	S	56.55	55.2	1.35
4856	487459	242895	S	56.81	55.12	1.69
4857	487412	242860	S	57.44	55.26	2.18
4951	487449	242904	S	56.56	55.52	1.04
5951	487502	242902	S	56.55	55.11	1.44
8051	486858	242010	S	-	-	-
8751	486887	242748	S	64.39	62.58	1.81
8752	486894	242763	S	64.4	62.47	1.93
8753	486857	242785	S	65.71	64.18	1.53
8754	486833	242787	S	66.52	64.72	1.8
8851	486822	242876	S	65.97	64.02	1.95
8852	486867	242877	S	64.71	62.83	1.88
8853	486839	242882	S	65.49	63.74	1.75
8854	486864	242858	S	64.83	63.34	1.49
8855	486891	242874	S	63.8	61.89	1.91
8951	486856	241979	S	62.2	58.85	3.35
8952	486891	241947	S	-	59.08	-
9651	486946	242696	S	62.31	61.26	1.05
9751	486985	242776	S	61.4	58.34	3.06
9752	486961	242761	S	62.23	60.43	1.8
9753	486938	242736	S	62.67	60.94	1.73
9754	486945	242719	S	62.39	61.09	1.3
9755	486936	242758	S	63.01	60.82	2.19
9851	486913	242883	S	62.96	59.83	3.13
9852	486950	242846	S	-	-	-
9951	486962	241996	S	61.88	-	-

Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert

Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert

Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert

Manhole Reference	Easting	Northing	Liquid Type	Cover Level	Invert Level	Depth to Invert



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- Foul Sewer
- Surface Sewer
- Combined Sewer
- Final Effluent
- Rising Main (Colour denotes effluent type)
- Private Sewer (Colour denotes effluent type)
- Decommissioned Sewer (Colour denotes effluent type)
- Outfall (Colour denotes effluent type)
- Inlet (Colour denotes effluent type)
- Manhole (Colour denotes effluent type)
- Sewage Treatment Works
- Pumping Station

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2292

love every drop anglianwater