

APPENDIX A: TAN15 EXTRACTS

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Figure 1

Description of Zone		Use within the precautionary framework
Considered to be at little or no risk of fluvial or tidal/coastal flooding.	A	Used to indicate that justification test is not applicable and no need to consider flood risk further.
Areas known to have been flooded in the past evidenced by sedimentary deposits.	B	Used as part of a precautionary approach to indicate where site levels should be checked against the extreme (0.1%) flood level. If site levels are greater than the flood levels used to define adjacent extreme flood outline there is no need to consider flood risk further.
Based on Environment Agency extreme flood outline, equal to or greater than 0.1% (river, tidal or coastal)	C	Used to indicate that flooding issues should be considered as an integral part of decision making by the application of the justification test including assessment of consequences.
Areas of the floodplain which are developed and served by significant infrastructure, including flood defences.	C1	Used to indicate that development can take place subject to application of justification test, including acceptability of consequences.
Areas of the floodplain without significant flood defence infrastructure.	C2	Used to indicate that only less vulnerable development should be considered subject to application of justification test, including acceptability of consequences. Emergency services and highly vulnerable development should not be considered.

Figure 2

Development category	Types
Emergency services	hospitals, ambulance stations, fire stations, police stations, coastguard stations, command centres, emergency depots and buildings used to provide emergency shelter in time of flood
Highly vulnerable development	all residential premises (including hotels and caravan parks), public buildings (e.g. schools, libraries, leisure centres), especially vulnerable industrial development (e.g. power stations, chemical plants, incinerators), and waste disposal sites
Less vulnerable development	General industrial, employment, commercial and retail development, transport and utilities infrastructure, car parks, mineral extraction sites and associated processing facilities, excluding waste disposal sites

Summary of Policy Requirements

DAM	Development Type (Section 5)	Planning Requirements (Section 4)	Acceptability Criteria (Section 7 & Appendix 1)	Development Advice (Section 5, 6, 7 & Appendix 1)
A	Emergency services Highly vulnerable development Less vulnerable development Other	- Justification test not applicable - Refer to surface water requirements	No increase in flooding elsewhere	No constraints relating to river or coastal flooding, other than to avoid increasing risk elsewhere.
B	Emergency services	- If site levels are greater than the flood levels used to define adjacent extreme flood outline there is no need to consider flood risk further. - Refer to surface water requirements	- Acceptable consequences for nature of use - Occupiers aware of flood risk - Escape/evacuation routes present - Effective flood warning provided - Flood emergency plans and procedures - Flood resistant design - No increase in flooding elsewhere	Generally suitable for most forms of development. Assessments, where required, are unlikely to identify consequences that cannot be overcome or managed to an acceptable level. It is unlikely, therefore, that these would result in a refusal of planning consent on the grounds of flooding.
	Highly vulnerable development		- Acceptable consequences for nature of use - Occupiers aware of flood risk - Escape/evacuation routes present - Effective flood warning provided - Flood emergency plans and procedures - No increase in flooding elsewhere - Occupiers aware of flood risk - No increase in flooding elsewhere	
	Less vulnerable development		- Occupiers aware of flood risk - No increase in flooding elsewhere	
	Other	Refer to surface water requirements	No increase in flooding elsewhere	
C1	Emergency services Highly vulnerable development Less vulnerable development	- Application of justification test (section 6), including acceptability of consequences (section 7 and appendix 1) - Refer to surface water requirements	- Acceptable consequences for nature of use - Flood defences adequate - Agreement for construction and maintenance costs secured - Occupiers aware of flood risk - Escape/evacuation routes present - Effective flood warning provided - Flood emergency plans and procedures - Flood resistant design - No increase in flooding elsewhere	Plan allocations and applications for all development can only proceed subject to justification in accordance with section 6 and acceptability of consequences in accordance with section 7 and Appendix 1.
	Other	- Application of acceptability of consequences (section 7 and appendix 1) - Refer to surface water requirements	- Acceptable consequences for nature of use - Occupiers aware of flood risk - Desirable if effective flood warning and evacuation routes/procedure provided depending on nature of proposal - No increase in flooding elsewhere	Plan allocations and applications for development should only be made if considered acceptable in accordance with section 7 and Appendix 1.

DAM	Development Type (Section 5)	Planning Requirements (Section 4)	Acceptability Criteria (Section 7 & Appendix 1)	Development Advice (Section 5, 6, 7 & Appendix 1)
C2	Emergency services Highly vulnerable development	The flooding consequences associated with Emergency Services and highly vulnerable development are not considered to be acceptable. Plan allocations should not be made for such development and planning applications not proposed.		
	Less vulnerable development	• Application of justification test (section 6) , including acceptability of consequences (section 7 and appendix 1) • Refer to surface water requirements	• Acceptable consequences for nature of use • Flood defences adequate • Agreement for construction and maintenance costs secured • Occupiers aware of flood risk • Escape/evacuation routes present • Effective flood warning provided • Flood emergency plans and procedures	Plan allocations or applications for less vulnerable development can only proceed subject to justification in accordance with section 6 and acceptability of consequences in accordance with section 7 and Appendix 1.
	Other	• Application of acceptability of consequences (section 7 and appendix 1) • Refer to surface water requirements	• Flood resistant design • No increase in flooding elsewhere • Acceptable consequences for nature of use • Occupiers aware of flood risk • Effective flood warning provided • No increase in flooding elsewhere	Plan allocations and applications for development should only be made if considered acceptable in accordance with section 7 and Appendix

APPENDIX B: NRW INFORMATION & CORRESPONDENCE

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Megan Berry

From: Megan Berry
Sent: 14 December 2020 09:08
To: 'datadistribution@cyfoethnaturiolcymru.gov.uk'
Subject: Product 5 & 6
Attachments: LOCATION PLAN.pdf

To whom it may concern,

Rossett Rd, Rossett

Please could you confirm whether you have any information that you feel would be valuable to a Flood Risk Assessment and Drainage Management Strategy for the above site (location plan attached), including details of historical flooding and Specific Drainage Requirements; this would be greatly appreciated. If there are any other specific requirements that you require in a scope of works for this site please can you advise at this stage so that it can be fully incorporated into the proposals at an early stage.

Please do not hesitate to contact me on the details below to discuss further should you require additional information or clarification.

Kind Regards

Megan Berry BSc(Hons) MCIWEM
Graduate Flood Risk Analyst

BETTS HYDRO

Consulting Engineers

Old Marsh Farm Barns, Welsh Road, Sealand, Flintshire, CH5 2LY
Chester +44 (0)1244 289041

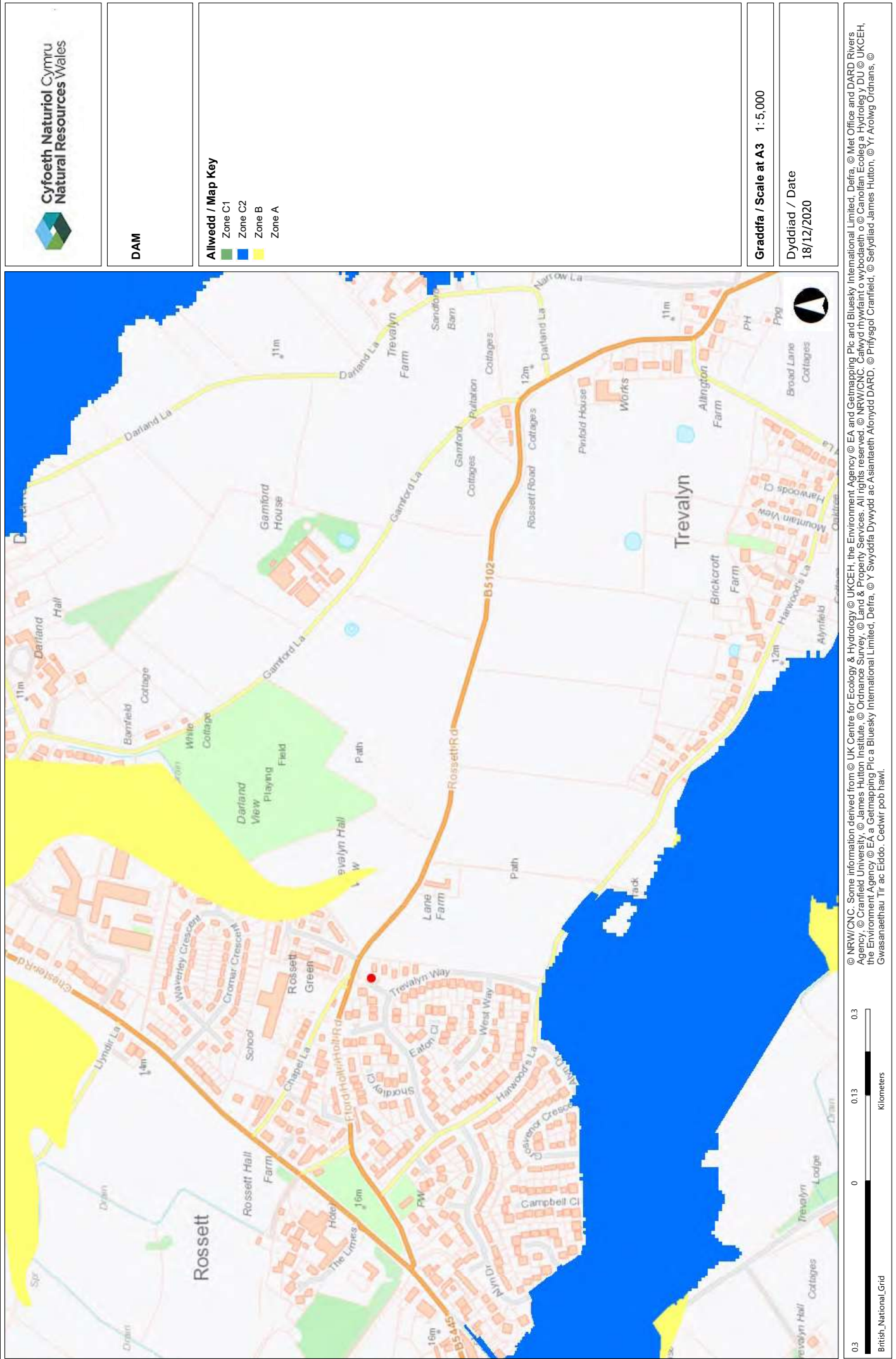
meganberry@betts-associates.co.uk
www.betts-associates.co.uk

CIVIL | STRUCTURAL | GEO-ENVIRONMENTAL | HYDROLOGY | FLOOD RISK MANAGEMENT
SUDS | STRUCTURAL SURVEYS | PARTY WALL DUTIES | INFILTRATION | GEOTECHNICAL

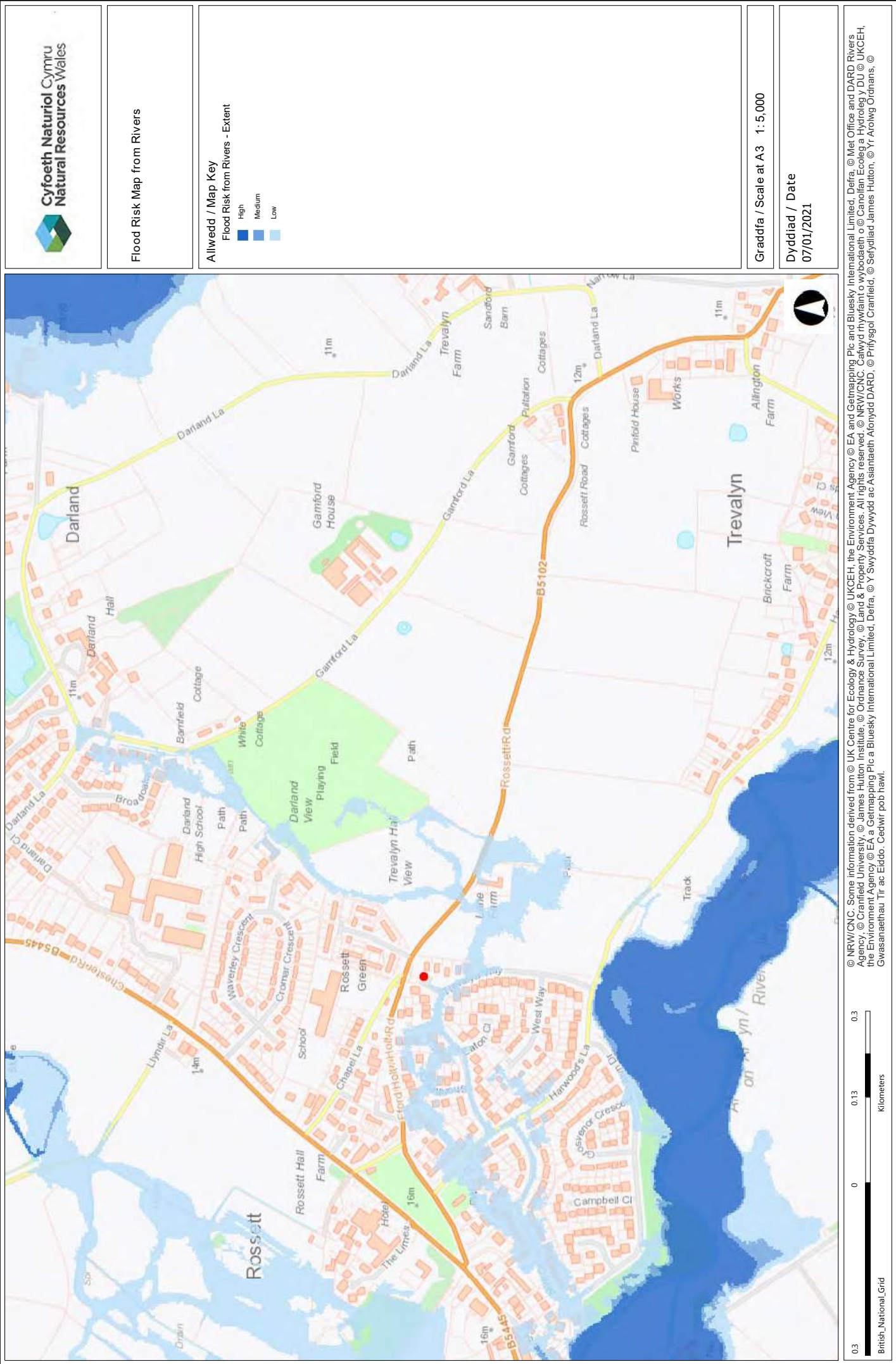
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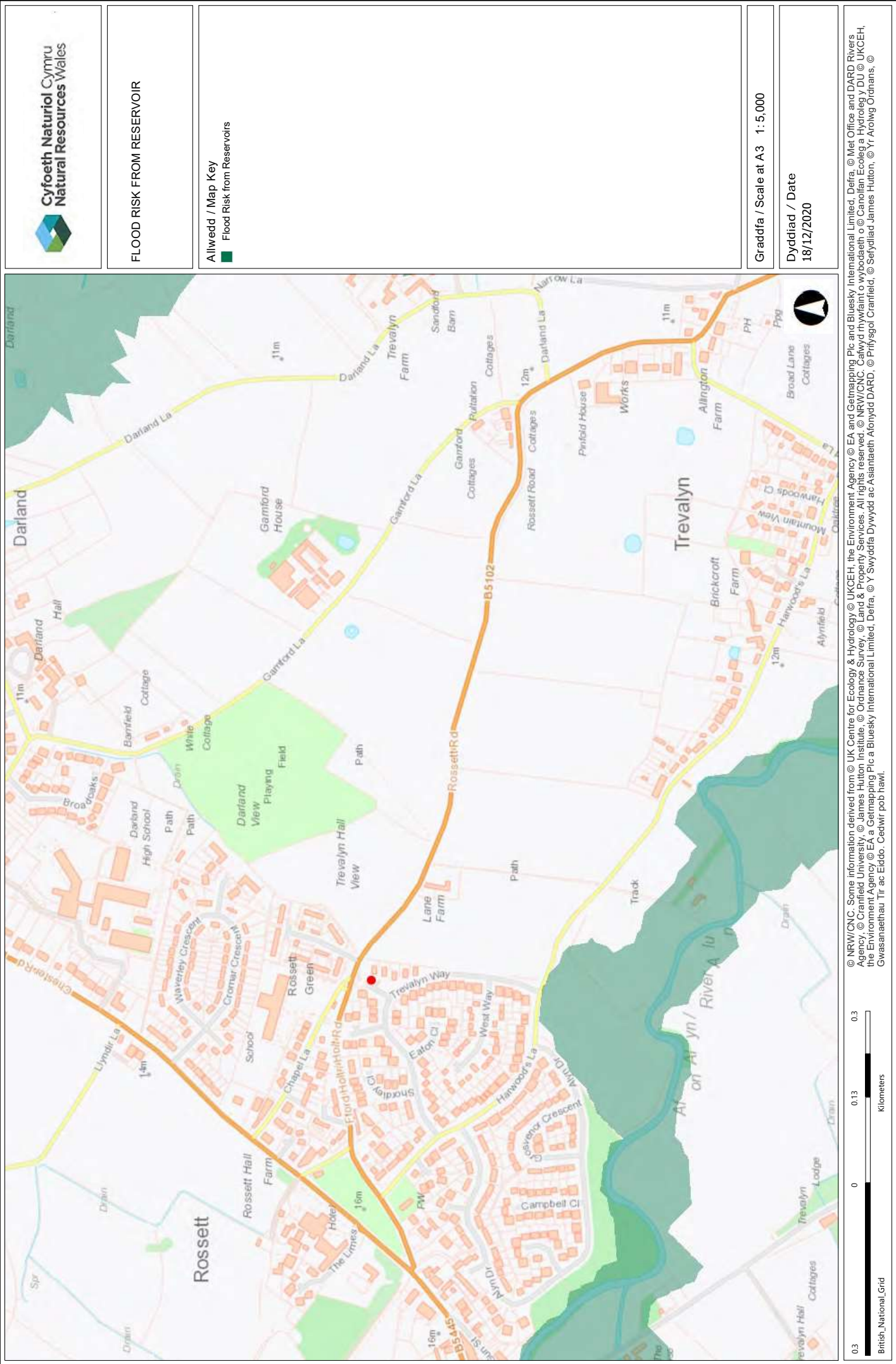
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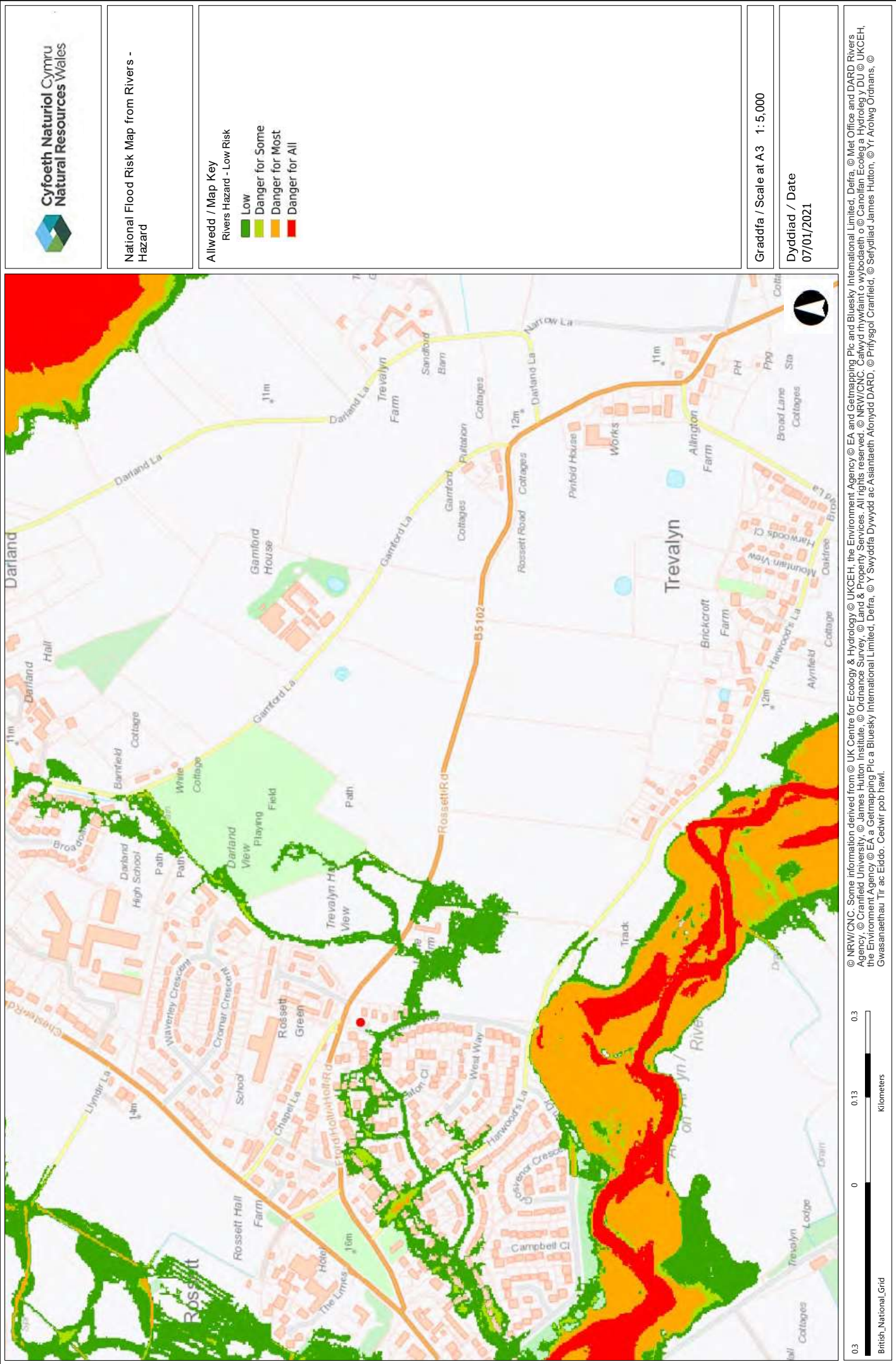
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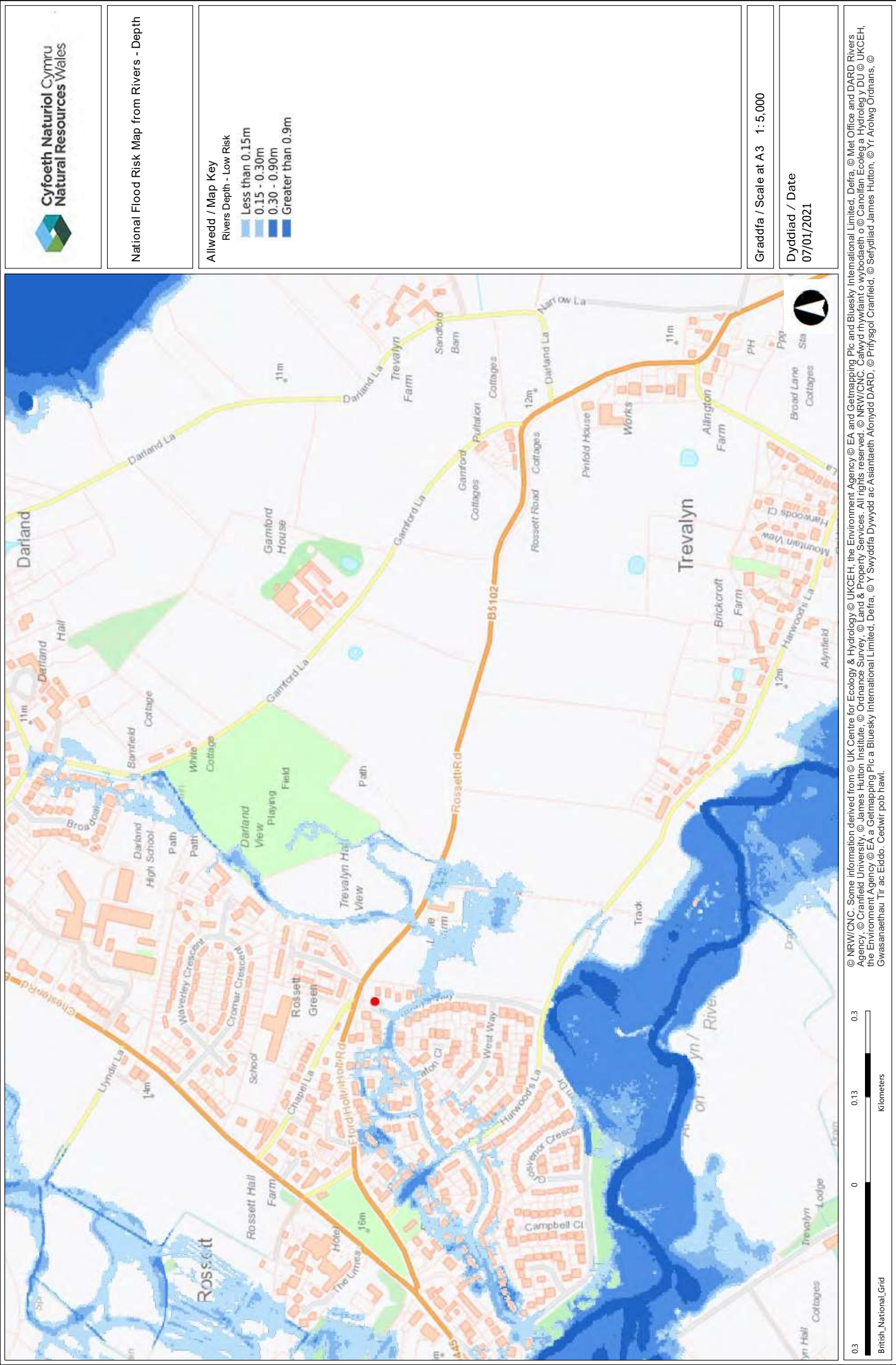


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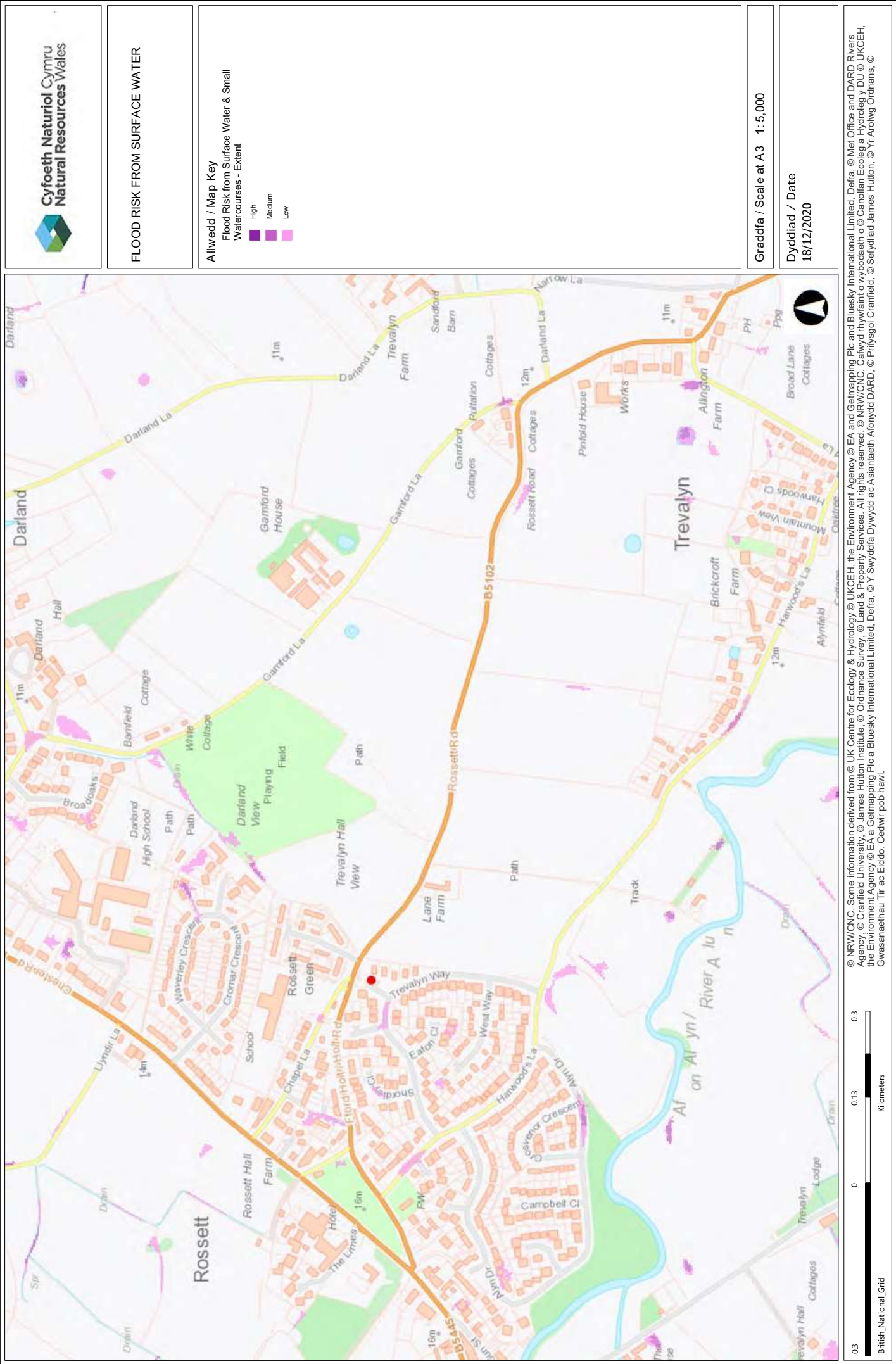


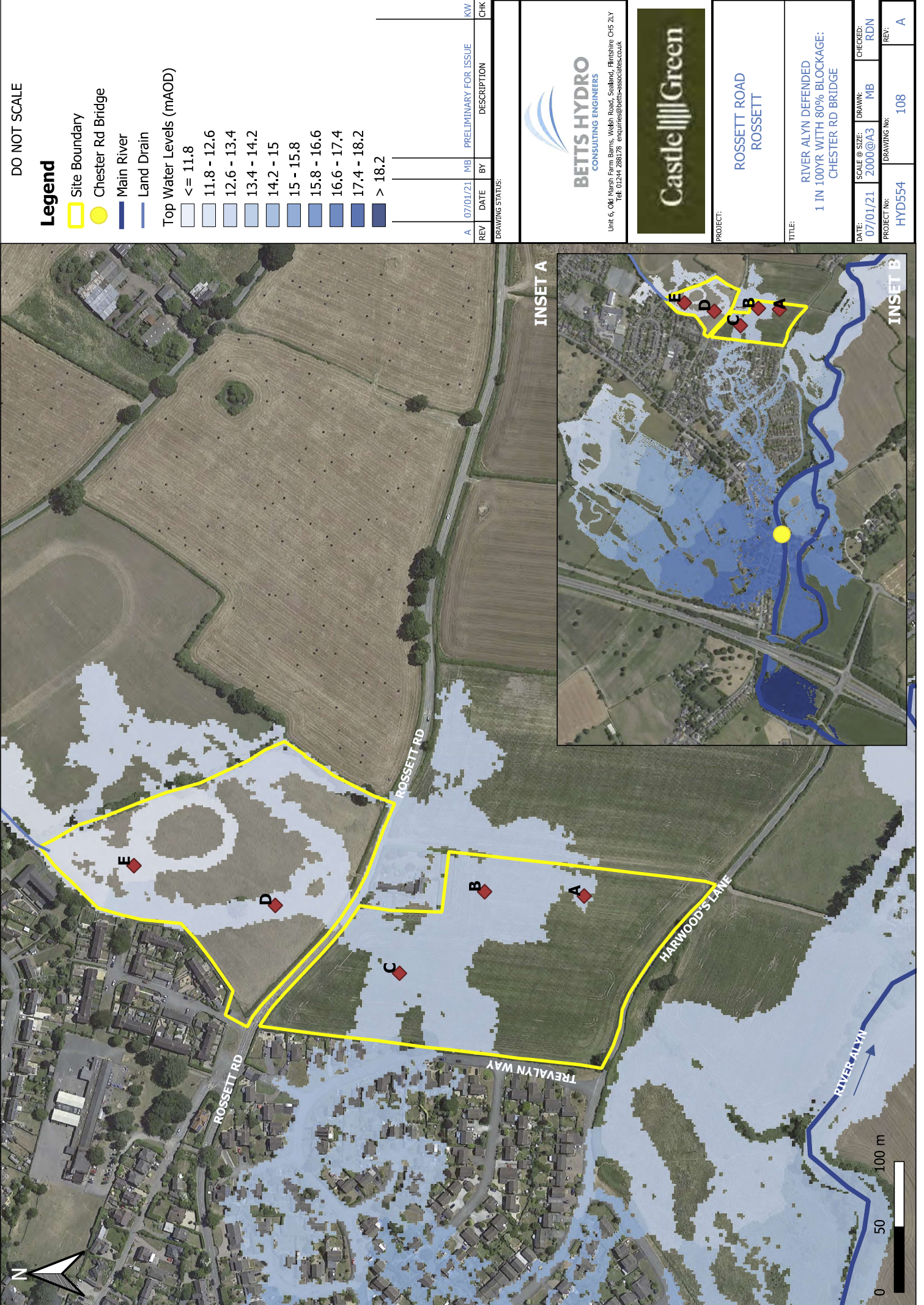






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A		07/01/21	MB	PRELIMINARY FOR ISSUE	KW
REV	DATE	BY	DESCRIPTION	CHK	
DRAWING STATUS:					

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Unit 6, Old Marsh Farm Barns, Welsh Road, Sealand, Flintshire CH5 2LY
Tel 01247 288178 enquiries@betts-associates.co.uk

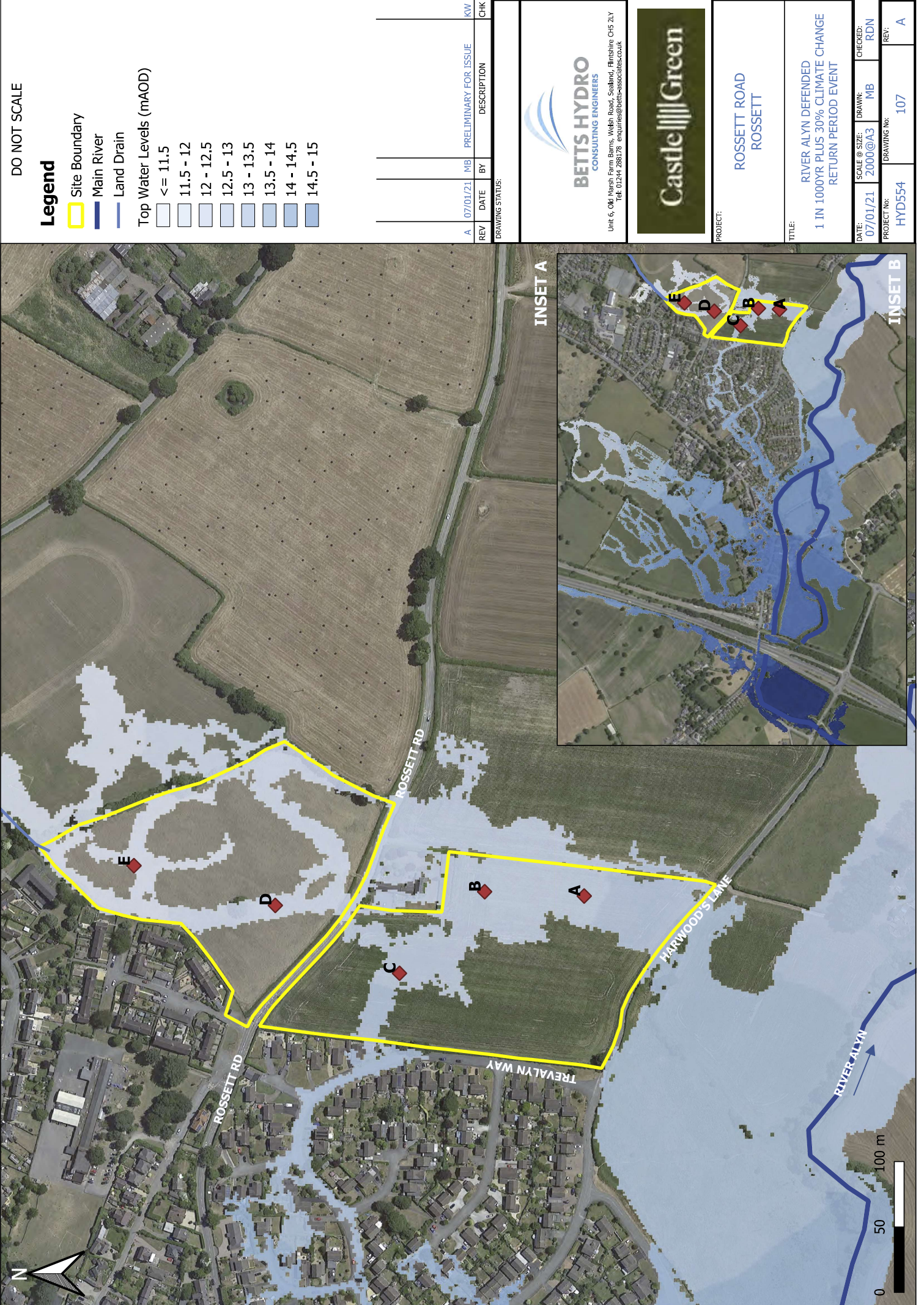
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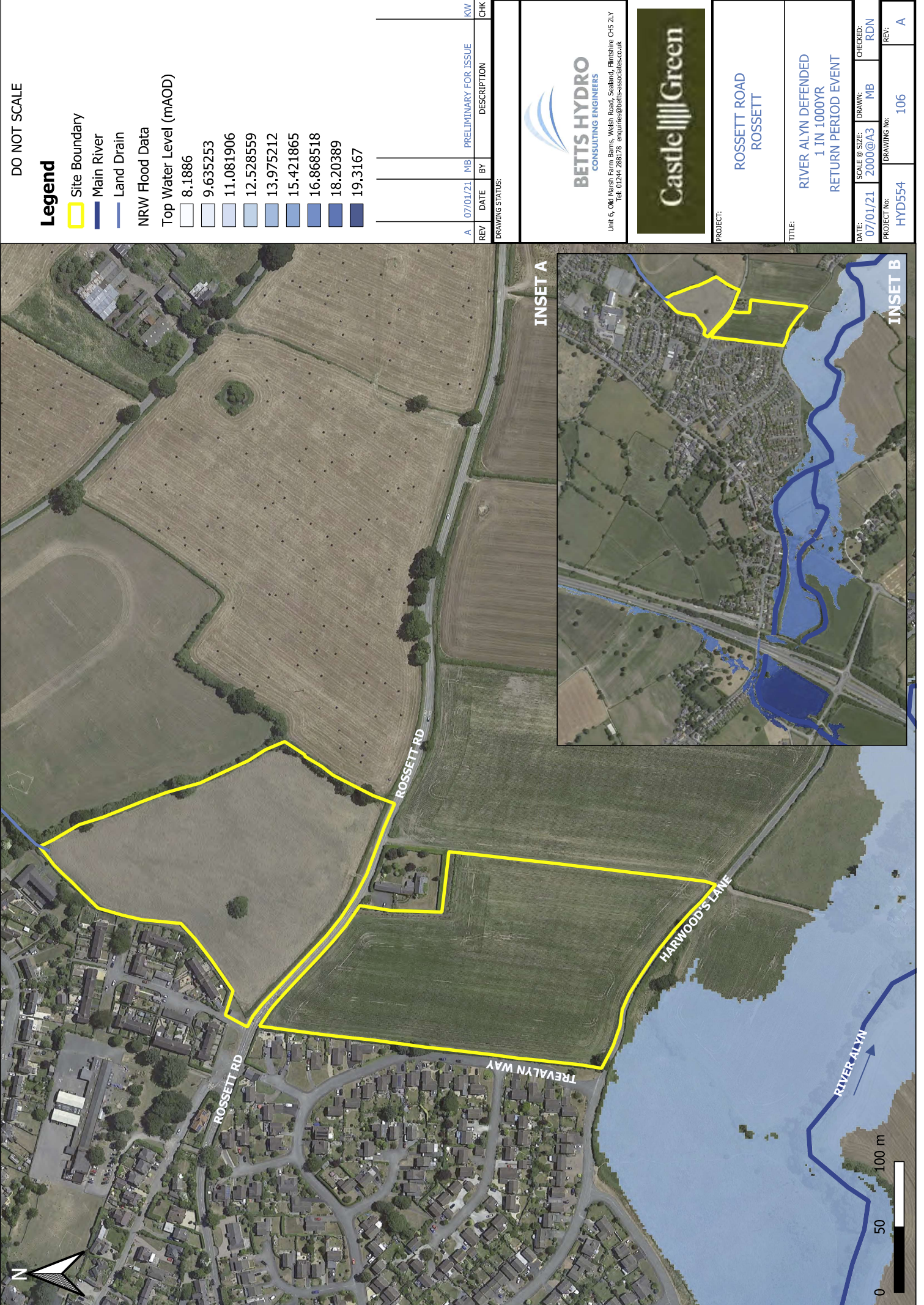
ROSSETT ROAD
ROSSETT

TITLE:

RIVER ALYN DEFENDED
1 IN 100YR WITH 80% BLOCKAGE:
CHESTER RD BRIDGE

DATE:	07/01/21	SCALE & SIZE:	2000@A3	DRAWN:	MB	CHECKED:	RDN
PROJECT No:	HYD554	DRAWING No:	108	REV:	A		





DO NOT SCALE

Legend

- Site Boundary
- Main River
- Land Drain

NRW Flood Data

Top Water Level (mAOD)

- 8.1886
- 9.635253
- 11.081906
- 12.528559
- 13.975212
- 15.421865
- 16.868518
- 18.20389
- 19.3167

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DRAWING STATUS:					

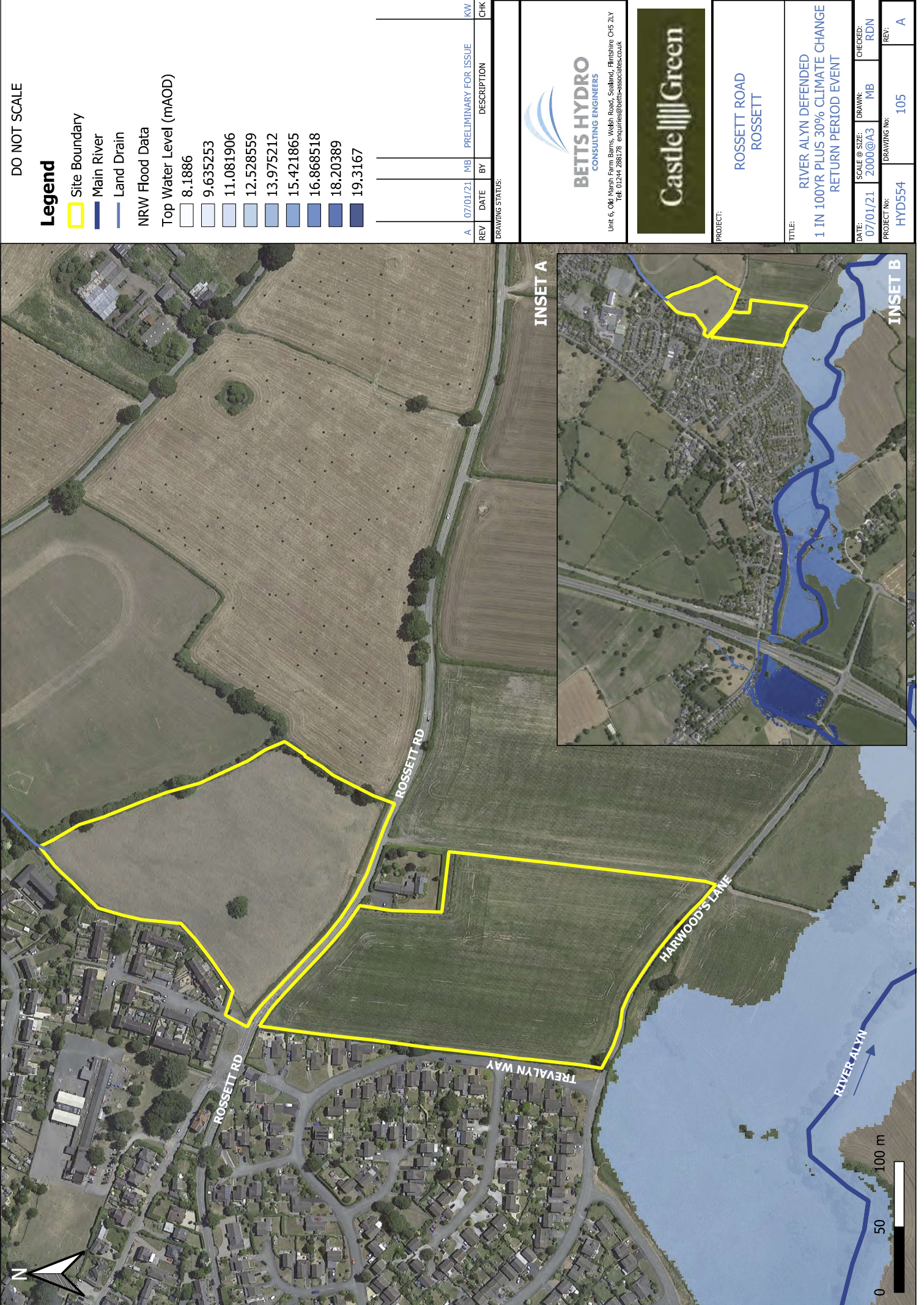
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Tel 01247 288178 enquiries@betts-associates.co.uk



PROJECT:
ROSSETT ROAD
ROSSETT

TITLE:
RIVER ALYN DEFENDED
1 IN 1000YR
RETURN PERIOD EVENT

DATE: 07/01/21	SCALE @ SIZE: 2000@A3	DRAWN: MB	CHECKED: RDN
PROJECT No: HYD554	DRAWING No: 106	REV: A	



DO NOT SCALE

Legend

Site Boundary

Main River

Land Drain

NRW Flood Data

Top Water Level (mAOD)

8.1886

9.635253

11.081906

12.528559

13.975212

15.421865

16.868518

18.20389

19.3167

REV	DATE	BY	DESCRIPTION	KW	CHK
A	07/01/21	MB	PRELIMINARY FOR ISSUE		
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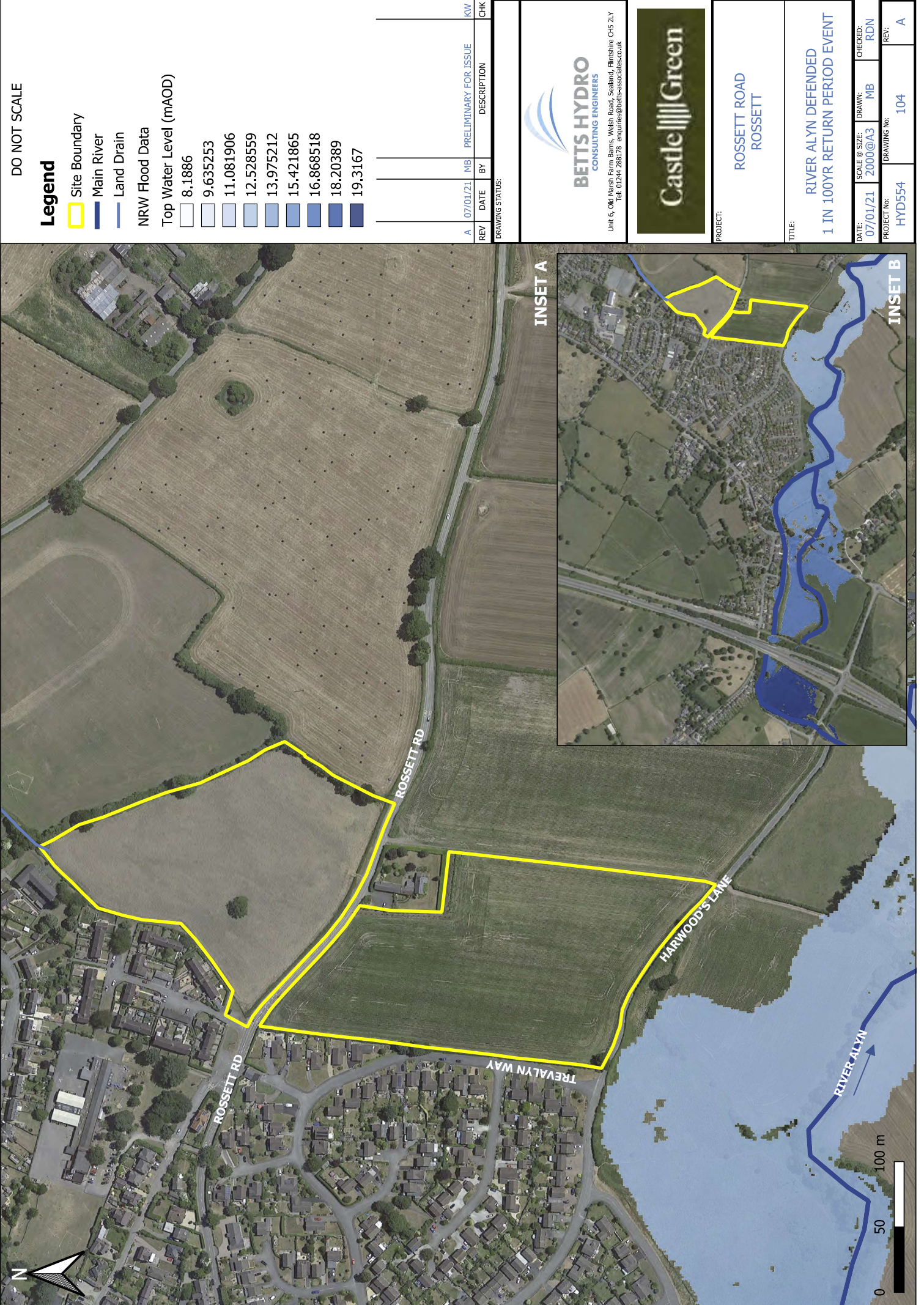
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Tel 01247 288178 enquiries@betts-associates.co.uk



PROJECT:
**ROSSETT ROAD
ROSSETT**

TITLE:
**RIVER ALYN DEFENDED
1 IN 100YR PLUS 30% CLIMATE CHANGE
RETURN PERIOD EVENT**

DATE: 07/01/21	SCALE @ SIZE: 2000@A3	DRAWN: MB	CHECKED: RDN
PROJECT No: HYD554	DRAWING No: 105	REV: A	



DO NOT SCALE

Legend

- Site Boundary
- Main River
- Land Drain

NRW Flood Data

Top Water Level (mAOD)

- 8.1886
- 9.635253
- 11.081906
- 12.528559
- 13.975212
- 15.421865
- 16.868518
- 18.20389
- 19.3167

REV	DATE	BY	DESCRIPTION	KW	CHK
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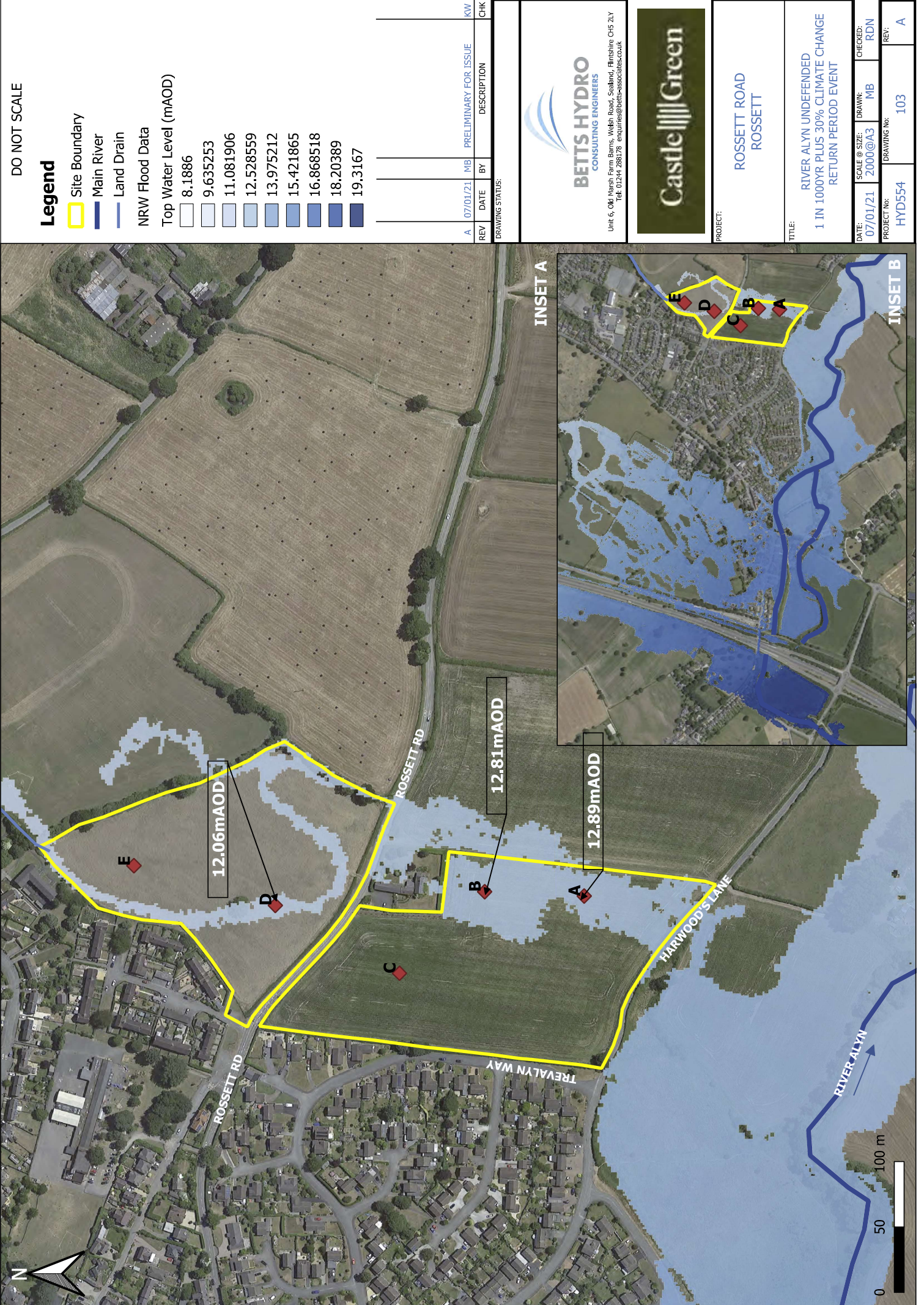
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PROJECT:
**ROSSETT ROAD
ROSSETT**

TITLE: RIVER ALYN DEFENDED 1 IN 100YR RETURN PERIOD EVENT			
DATE: 07/01/21	SCALE & SIZE: 2000@A3	DRAWN: MB	CHECKED: RDN
PROJECT No: HYD554	DRAWING No: 104	REV: A	



DO NOT SCALE

Legend

- Site Boundary
- Main River
- Land Drain

NRW Flood Data

Top Water Level (mAOD)

- 8.1886
- 9.635253
- 11.081906
- 12.528559
- 13.975212
- 15.421865
- 16.868518
- 18.20389
- 19.3167

REV	DATE	BY	DESCRIPTION	KW	CHK
A	07/01/21	MB	PRELIMINARY FOR ISSUE		
DRAWING STATUS:					

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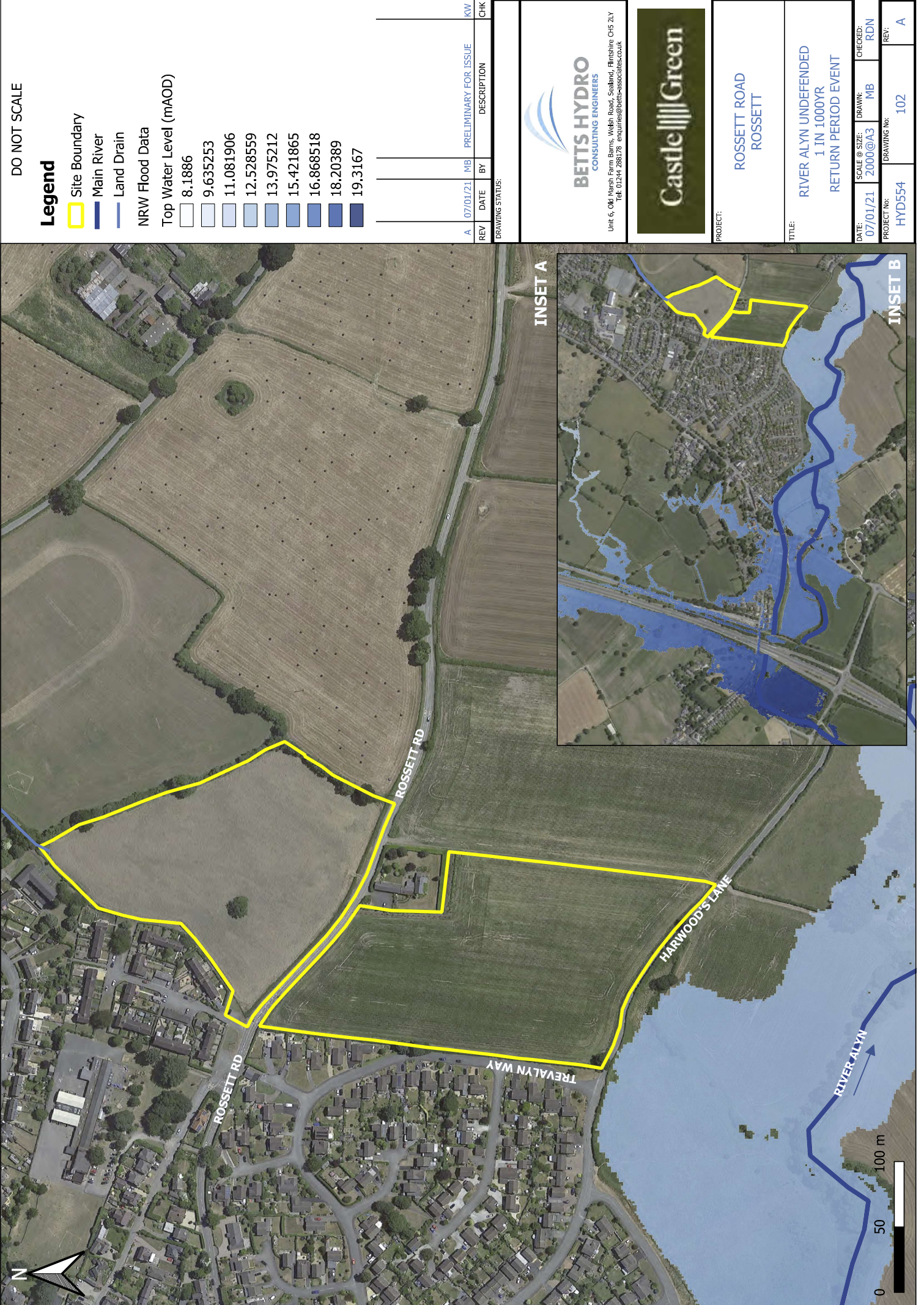
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PROJECT:
**ROSSETT ROAD
ROSSETT**

TITLE:
**RIVER ALYN UNDEFENDED
1 IN 1000YR PLUS 30% CLIMATE CHANGE
RETURN PERIOD EVENT**

DATE: 07/01/21	SCALE & SIZE: 2000@A3	DRAWN: MB	CHECKED: RDN
PROJECT No: HYD554	DRAWING No: 103	REV: A	



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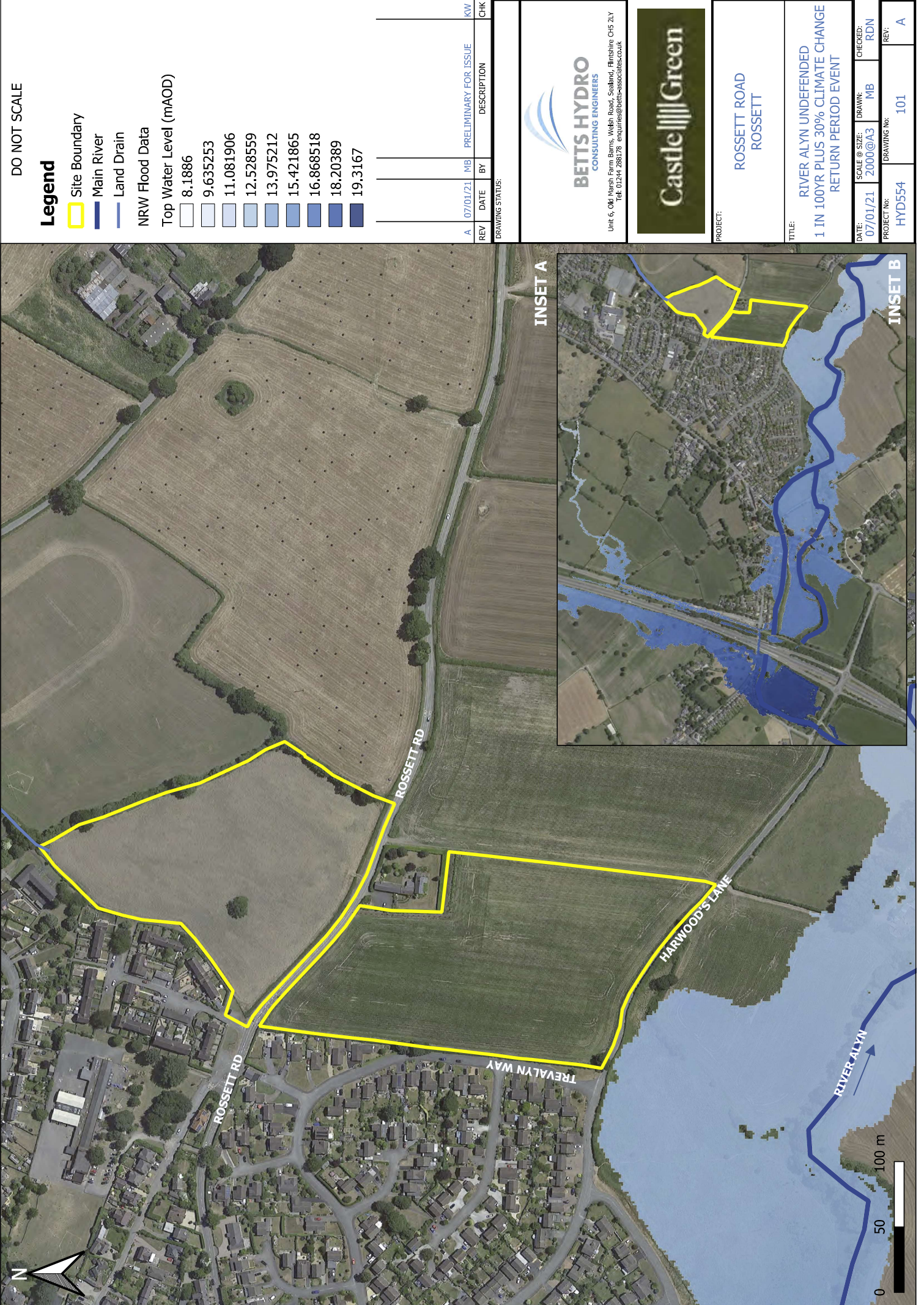
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Tel 01247 288178 enquiries@betts-associates.co.uk



PROJECT:
ROSSETT ROAD
ROSSETT

TITLE:
RIVER ALYN UNDEFENDED
1 IN 1000YR
RETURN PERIOD EVENT

DATE: 07/01/21	SCALE & SIZE: 2000@A3	DRAWN: MB	CHECKED: RDN
PROJECT No: HYD554	DRAWING No: 102	REV: A	



DO NOT SCALE

Legend

- Site Boundary
- Main River
- Land Drain

NRW Flood Data

Top Water Level (mAOD)

- 8.1886
- 9.635253
- 11.081906
- 12.528559
- 13.975212
- 15.421865
- 16.868518
- 18.20389
- 19.3167

REV	DATE	BY	DESCRIPTION	KW	CHK
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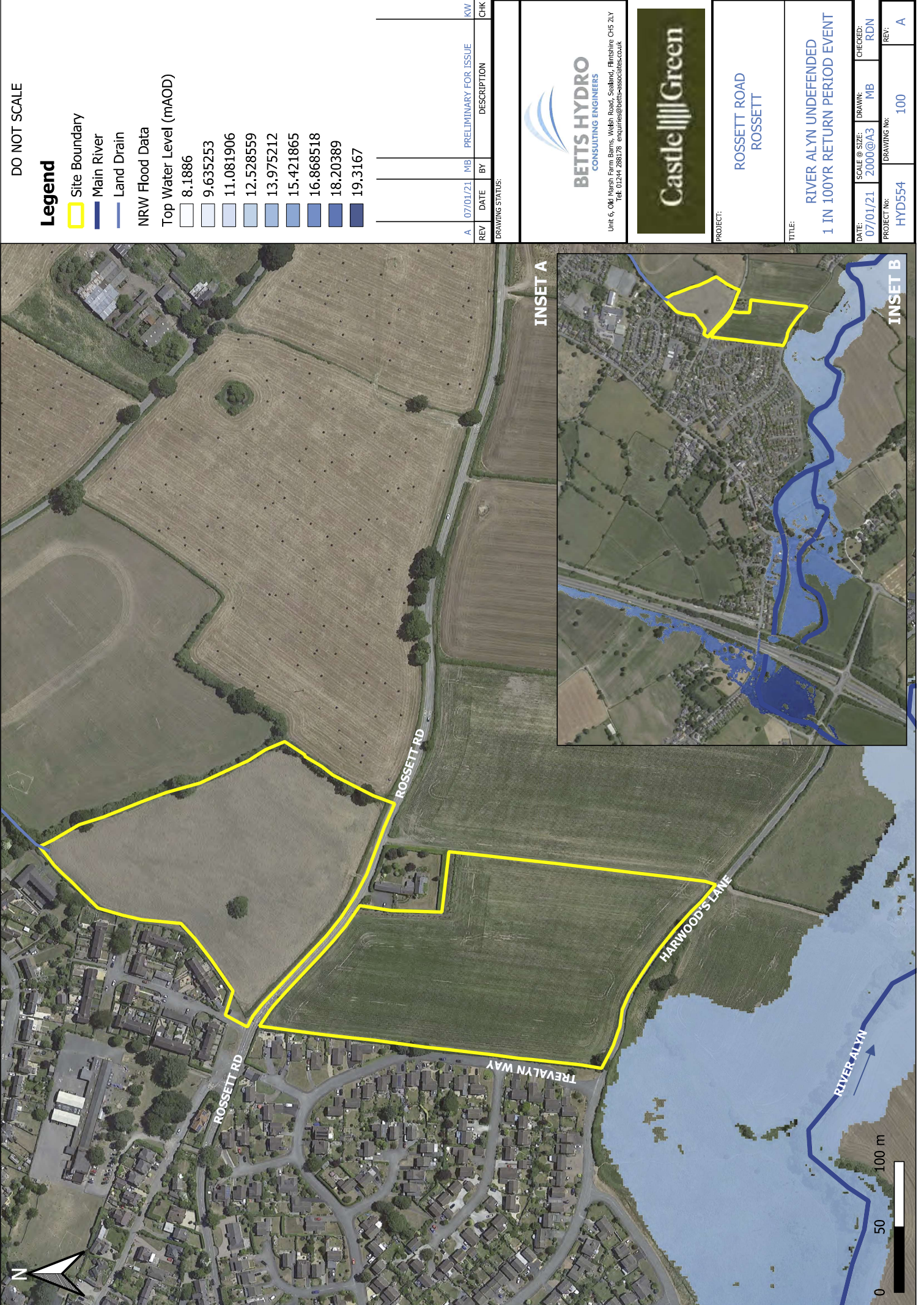
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PROJECT:
**ROSSETT ROAD
ROSSETT**

TITLE:
**RIVER ALYN UNDEFENDED
1 IN 100YR PLUS 30% CLIMATE CHANGE
RETURN PERIOD EVENT**

DATE: 07/01/21	SCALE & SIZE: 2000@A3	DRAWN: MB	CHECKED: RDN
PROJECT No: HYD554	DRAWING No: 101	REV: A	



DO NOT SCALE

Legend

- Site Boundary
- Main River
- Land Drain

NRW Flood Data

Top Water Level (mAOD)

- 8.1886
- 9.635253
- 11.081906
- 12.528559
- 13.975212
- 15.421865
- 16.868518
- 18.20389
- 19.3167

REV	DATE	BY	DESCRIPTION	KW	CHK
A	07/01/21	MB	PRELIMINARY FOR ISSUE		
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Tel 01247 288178 enquiries@betts-associates.co.uk



PROJECT:
**ROSSETT ROAD
ROSSETT**

TITLE:
**RIVER ALYN UNDEFENDED
1 IN 100YR RETURN PERIOD EVENT**

DATE: 07/01/21	SCALE @ SIZE: 2000@A3	DRAWN: MB	CHECKED: RDN
PROJECT No: HYD554	DRAWING No: 100	REV: A	

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