HORIZON
NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project

6.4.32 ES Volume D - WNDA Development App D8-7 - Surface water and groundwater modelling results (Part 3/7)

PINS Reference Number: EN010007

Application Reference Number: 6.4.32

June 2018

Revision 1.0

Regulation Number: 5(2)(a)

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Horizon Internal DCRM Number: WN0902-JAC-PAC-APP-00019

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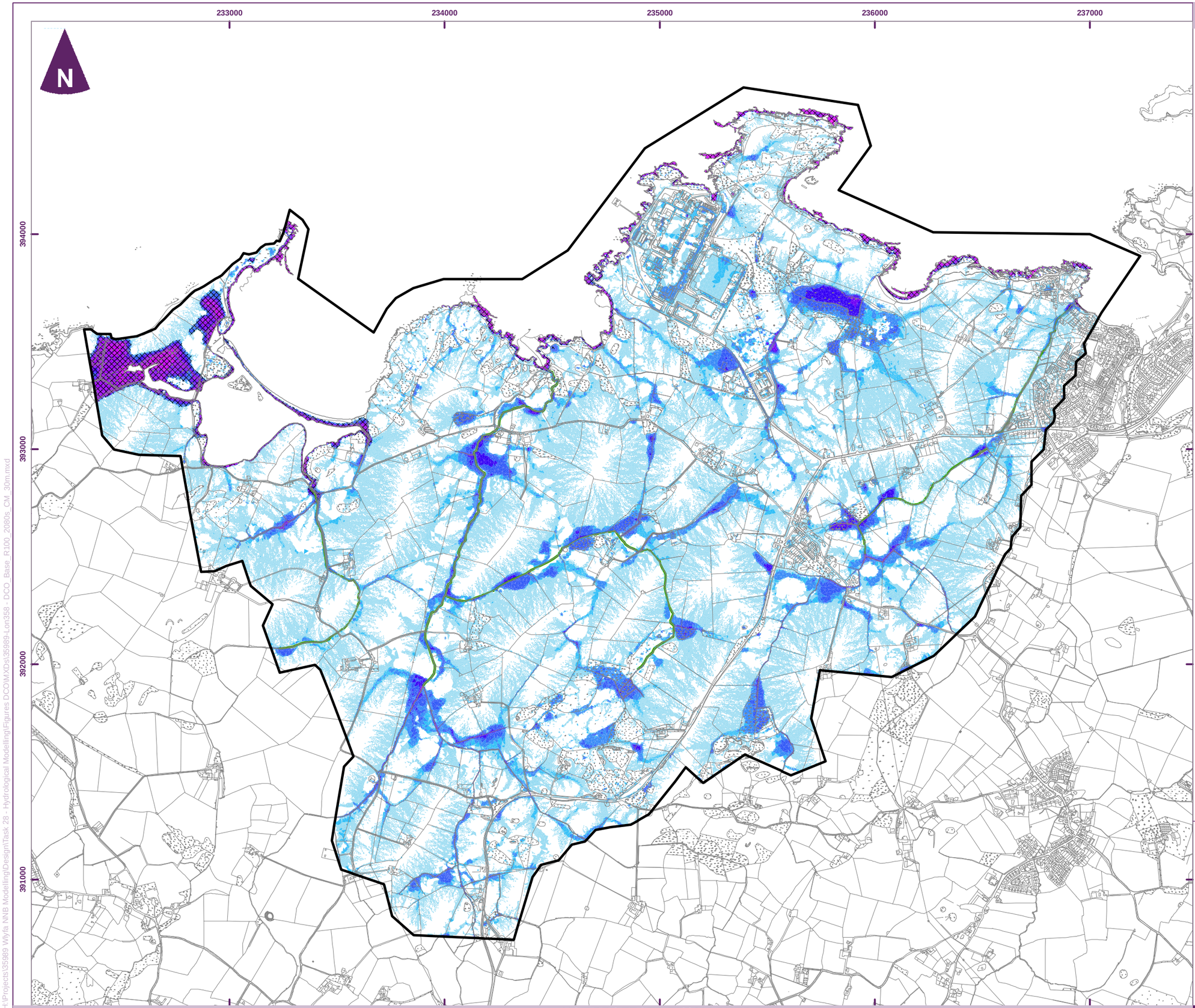

Key

Peak flood depth (m)
Baseline
1 : 100 year AEP pluvial
30 min duration
Climate change 2080s - credible maximum

- 0.01 - 0.05
- 0.05 - 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00
- Model boundary
- MHWS Extent 2080s
- Model river centreline

Notes:
The depths represent the maximum depth achieved. The flood prediction does not represent a moment in time as maximum depths can be achieved at different times.

Model run date: 28/11/2016
Corresponding data:
35989-C1220_DCO_Base_R100_2080s_CM_30m.xlsx

Meters
0 250 500 750 1,000
Scale at A3

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Figure 29
DCO baseline peak pluvial depth 1:100 year AEP 30 min duration climate change 2080s - credible maximum

NOT PROTECTIVELY MARKED

December 2016 35989-Lon358-brays

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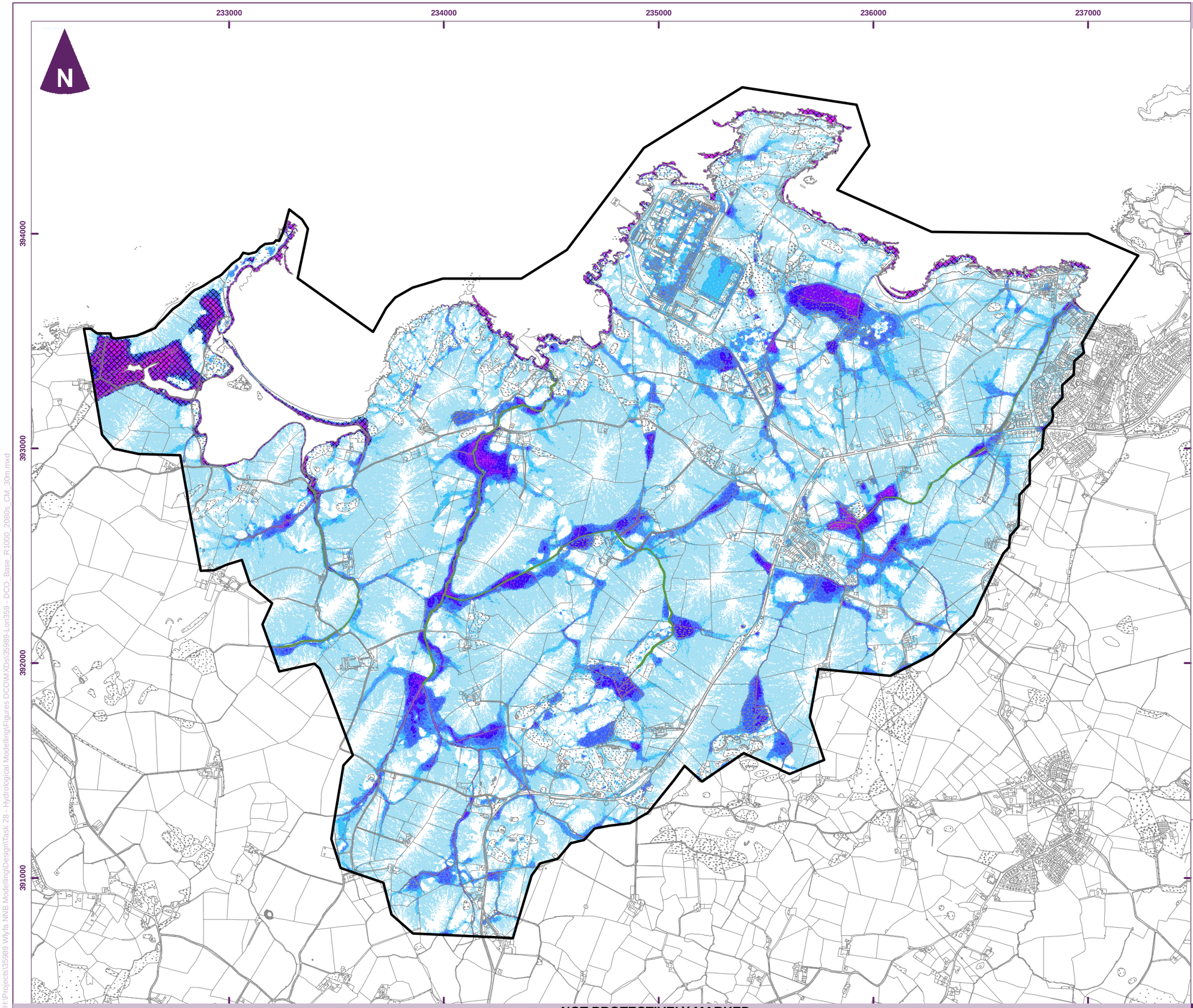

Key

Peak flood depth (m)
Baseline
1 : 1000 year AEP pluvial
30 min duration
Climate change 2080s - credible maximum

- 0.01 - 0.05
- 0.05 - 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00
- Model boundary
- MHWS Extent 2080s
- Model river centreline

Notes:
The depths represent the maximum depth achieved. The flood prediction does not represent a moment in time as maximum depths can be achieved at different times.

Model run date: 28/11/2016
Corresponding data:
35989-C1221_DCO_Base_R1000_2080s_CM_30m.xlsx

Meters
0 250 500 750 1,000
Scale at A3

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Figure 30
DCO baseline peak pluvial depth 1:1000 year AEP 30 min duration climate change 2080s - credible maximum

NOT PROTECTIVELY MARKED

December 2016 35989-Lon359-brays

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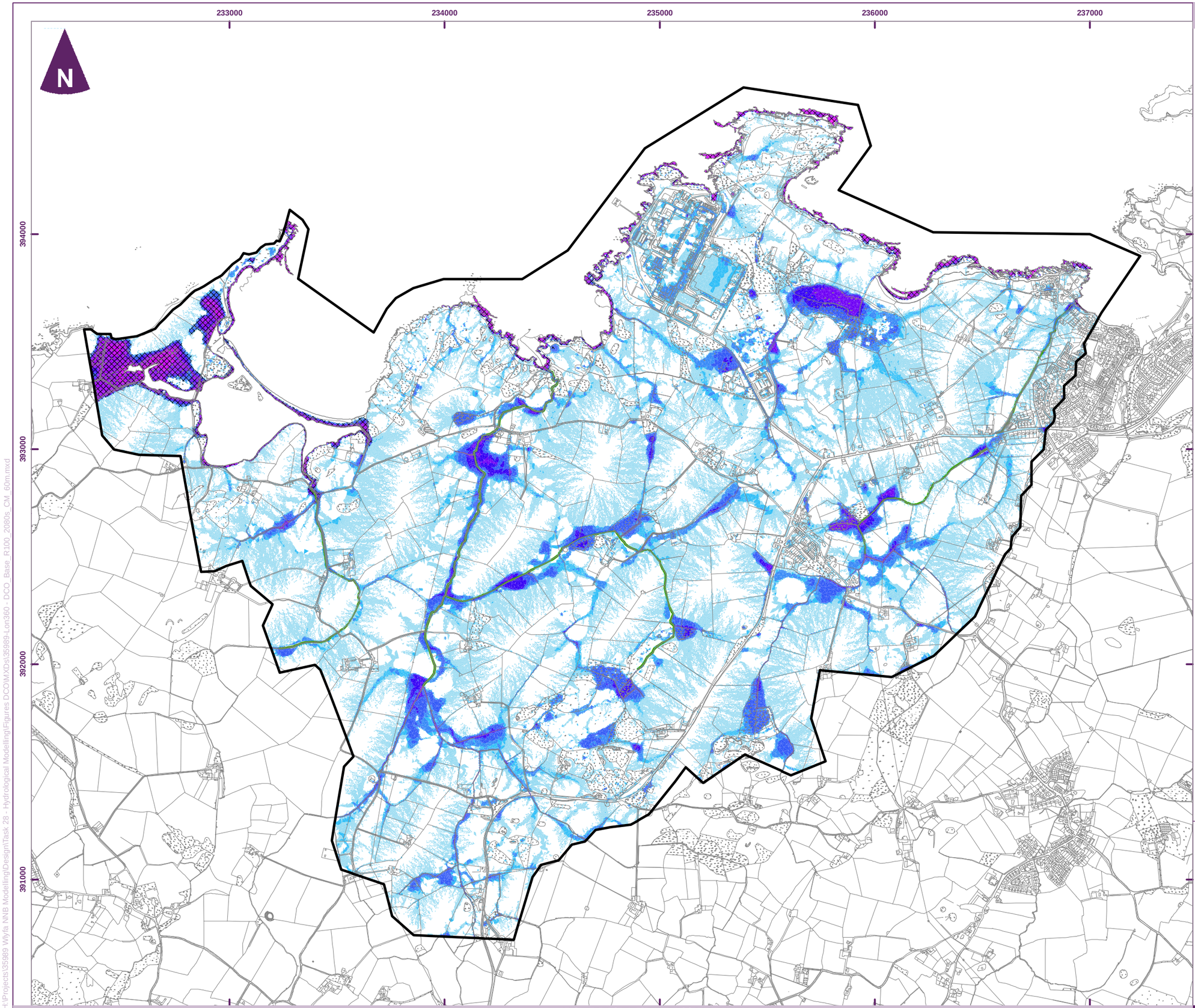

Key

Peak flood depth (m)
Baseline
1 : 100 year AEP pluvial
60 min duration
Climate change 2080s - credible maximum

- 0.01 - 0.05
- 0.05 - 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00
- Model boundary
- MHWS Extent 2080s
- Model river centreline

Notes:
The depths represent the maximum depth achieved. The flood prediction does not represent a moment in time as maximum depths can be achieved at different times.

Model run date: 28/11/2016
Corresponding data:
35989-C1222_DCO_Base_R100_2080s_CM_60m.xlsx

Meters
0 250 500 750 1,000
Scale at A3

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Figure 31
DCO baseline peak pluvial depth 1:100 year AEP 60 min duration climate change 2080s - credible maximum

NOT PROTECTIVELY MARKED

December 2016 35989-Lon360-brays

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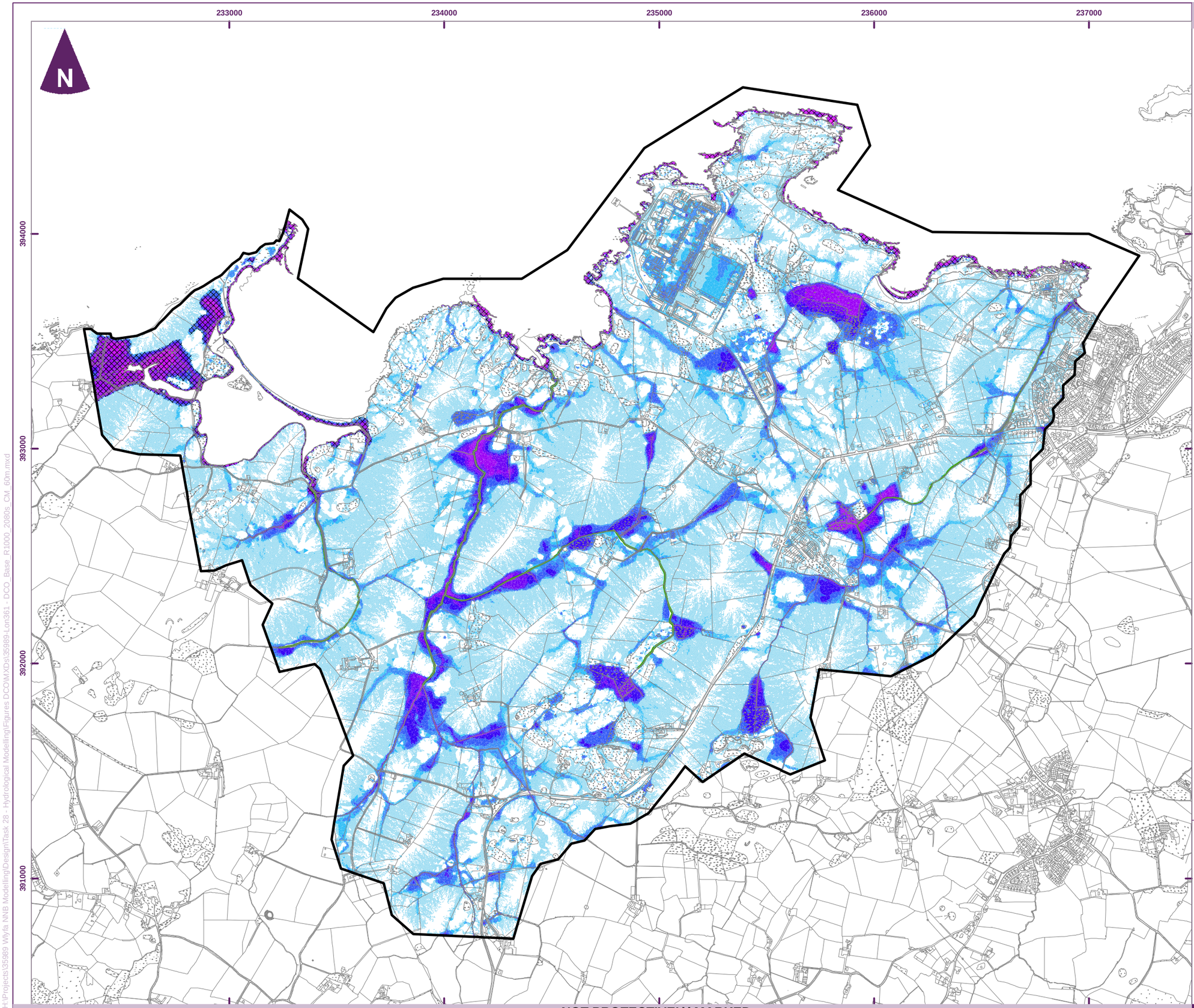

Key

Peak flood depth (m)
Baseline
1 : 1000 year AEP pluvial
60 min duration
Climate change 2080s - credible maximum

- 0.01 - 0.05
- 0.05 - 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00
- Model boundary
- MHWS Extent 2080s
- Model river centreline

Notes:
The depths represent the maximum depth achieved. The flood prediction does not represent a moment in time as maximum depths can be achieved at different times.

Model run date: 28/11/2016
Corresponding data:
35989-C1223_DCO_Base_R1000_2080s_CM_60m.xlsx

Meters
0 250 500 750 1,000
Scale at A3

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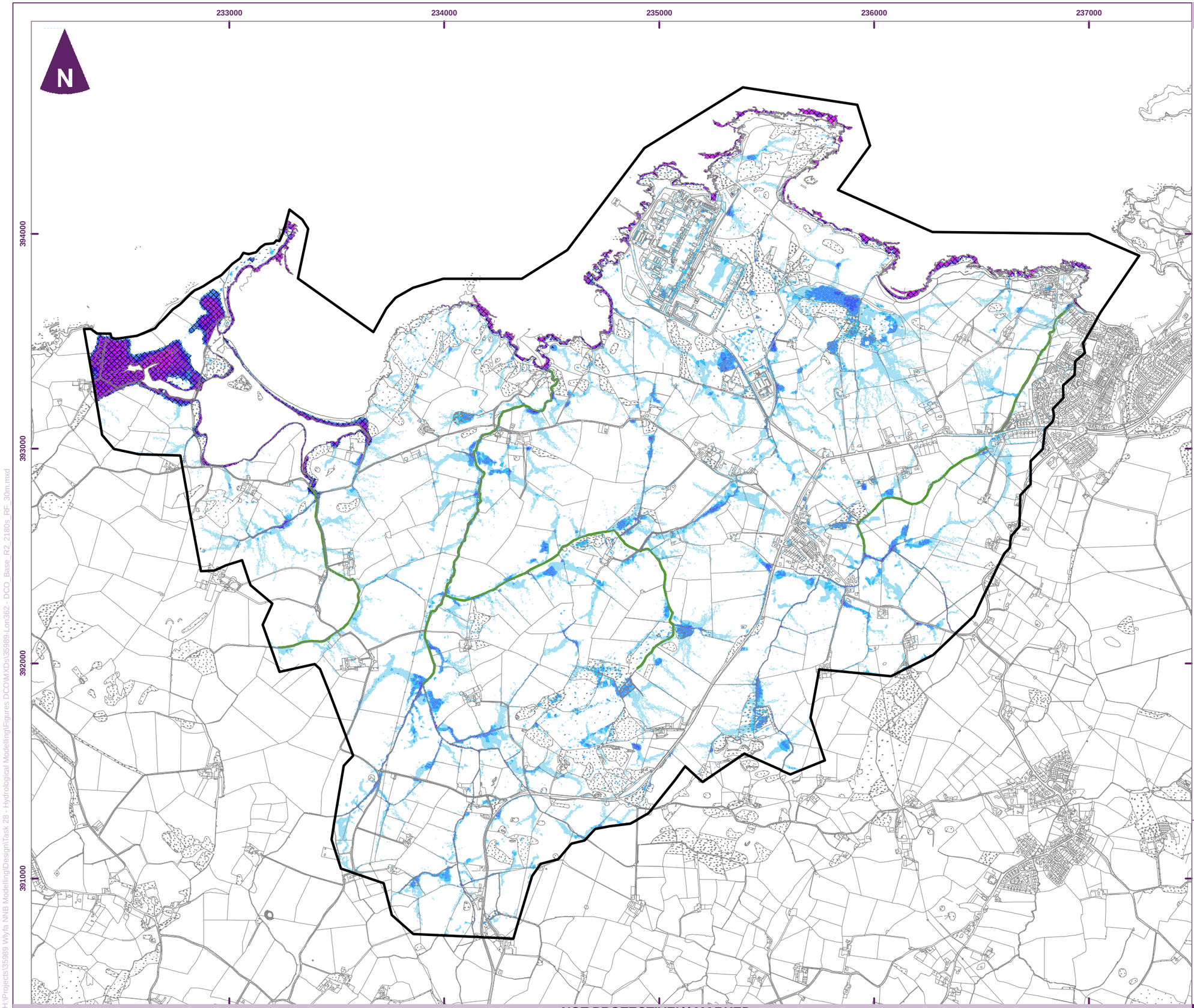
Figure 32
DCO baseline peak pluvial depth 1:1000 year AEP 60 min duration climate change 2080s - credible maximum



Key

Peak flood depth (m)
Baseline
1 : 2 year AEP pluvial
30 min duration
Climate change 2180s - reasonably foreseeable

- 0.01 - 0.05
- 0.05 - 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00
- Model boundary
- MHWS Extent 2180s
- Model river centreline

Notes:
The depths represent the maximum depth achieved. The flood prediction does not represent a moment in time as maximum depths can be achieved at different times.

Model run date: 28/11/2016
Corresponding data:
35989-C1224_DCO_Base_R2_2180s_RF_30m.xlsx

Meters
0 250 500 750 1,000
Scale at A3

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Figure 33
DCO baseline peak pluvial depth 1:2 year AEP 30 min duration climate change 2180s - reasonably foreseeable

NOT PROTECTIVELY MARKED

December 2016 35989-Lon362-brays

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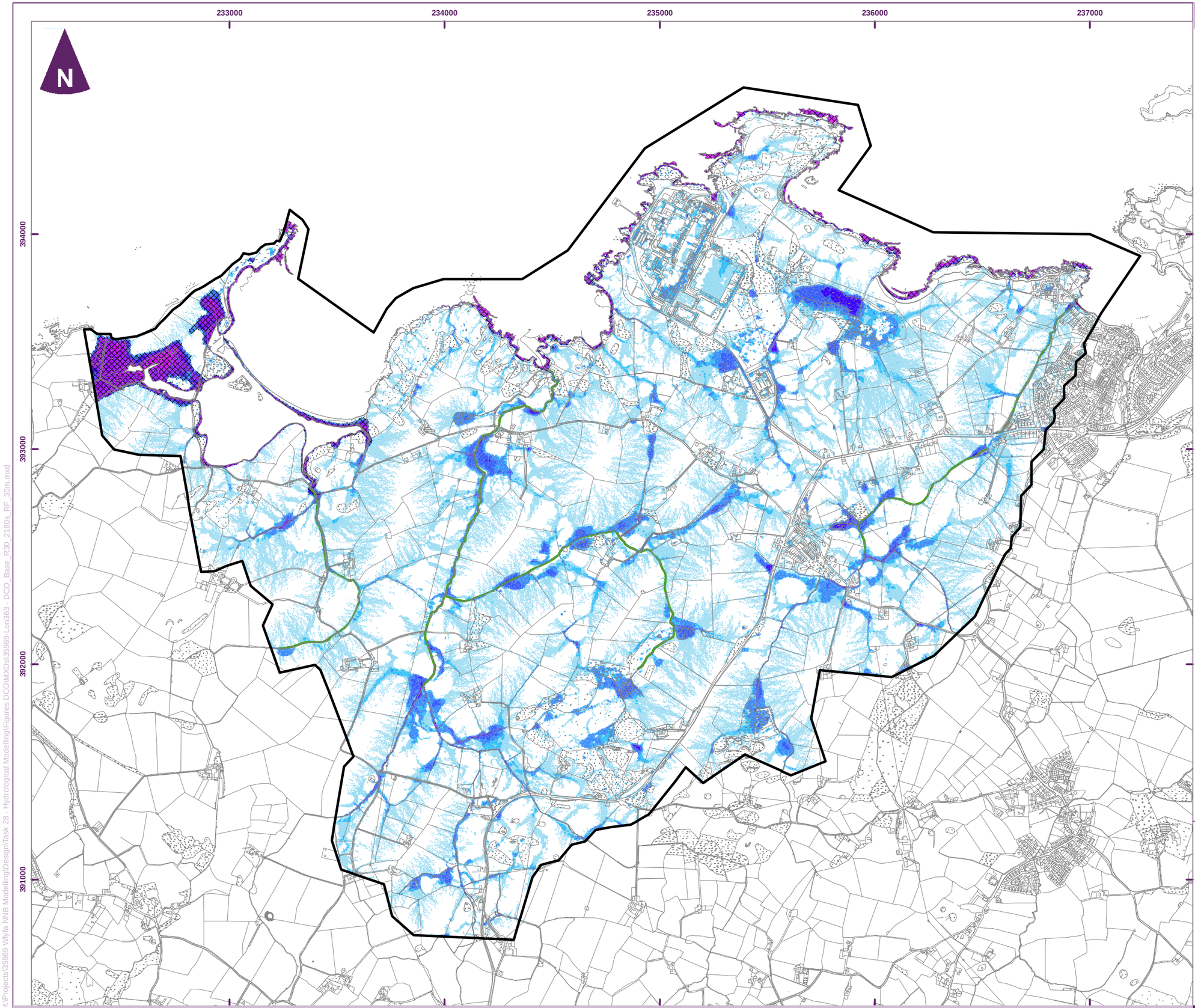

Key

Peak flood depth (m)
Baseline
1 : 30 year AEP pluvial
30 min duration
Climate change 2180s - reasonably foreseeable

- 0.01 - 0.05
- 0.05 - 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00
- Model boundary
- MHWS Extent 2180s
- Model river centreline

Notes:
The depths represent the maximum depth achieved. The flood prediction does not represent a moment in time as maximum depths can be achieved at different times.

Model run date: 28/11/2016
Corresponding data:
35989-C1225_DCO_Base_R30_2180s_RF_30m.xlsx

Meters
0 250 500 750 1,000
Scale at A3

Wylfa Newydd
DCO
Hydraulic Modelling

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Figure 34
DCO baseline peak pluvial depth 1:30 year AEP 30 min duration climate change 2180s - reasonably foreseeable

NOT PROTECTIVELY MARKED

December 2016 35989-Lon363-brays

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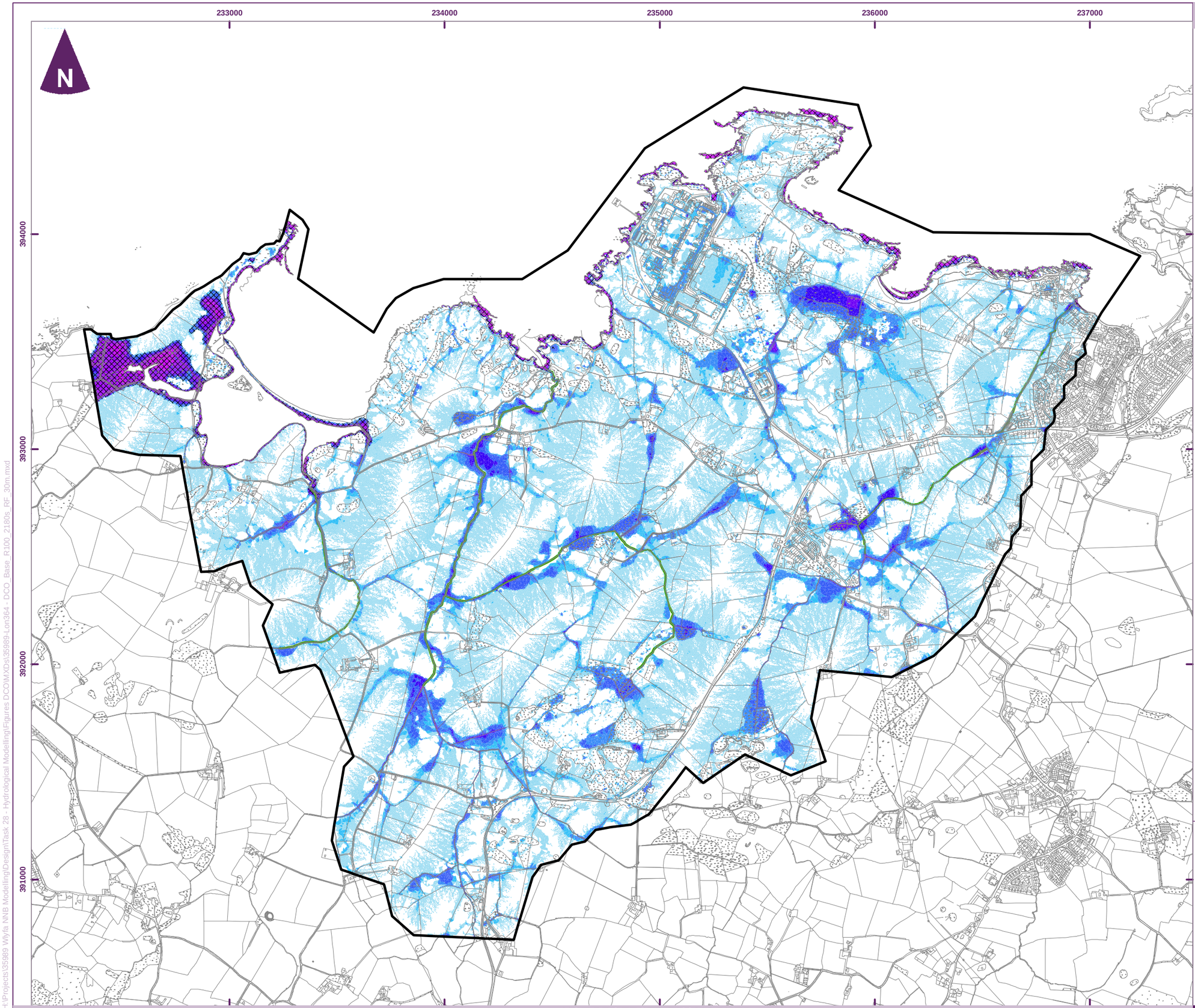

Key

Peak flood depth (m)
Baseline
1 : 100 year AEP pluvial
30 min duration
Climate change 2180s - reasonably foreseeable

- 0.01 - 0.05
- 0.05 - 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00
- Model boundary
- MHWS Extent 2180s
- Model river centreline

Notes:
The depths represent the maximum depth achieved. The flood prediction does not represent a moment in time as maximum depths can be achieved at different times.

Model run date: 28/11/2016
Corresponding data:
35989-C1226_DCO_Base_R100_2180s_RF_30m.xlsx

Meters
0 250 500 750 1,000
Scale at A3

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Figure 35
DCO baseline peak pluvial depth 1:100 year AEP 30 min duration climate change 2180s - reasonably foreseeable

NOT PROTECTIVELY MARKED

December 2016 35989-Lon364-brays

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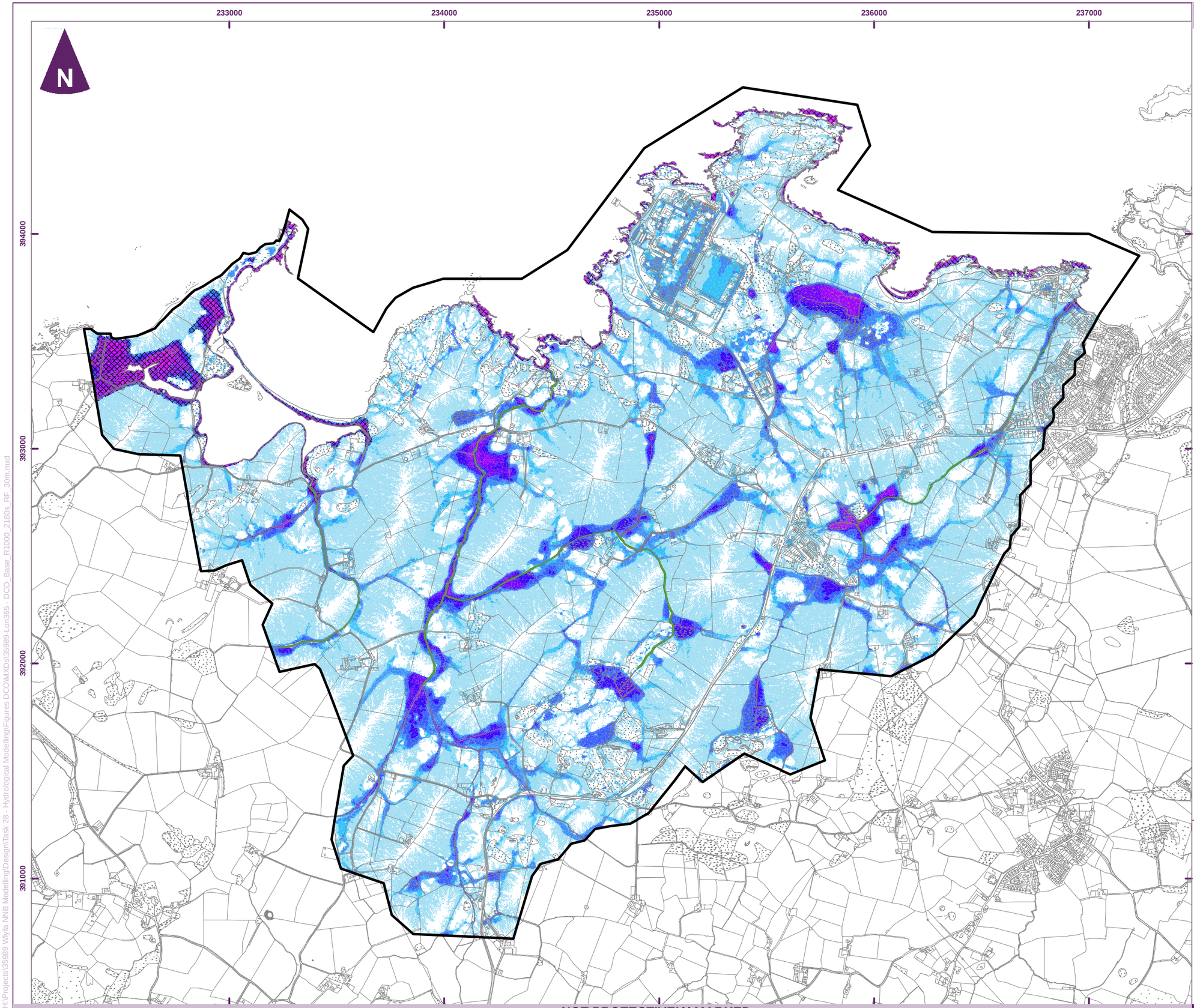

Key

Peak flood depth (m)
Baseline
1 : 1000 year AEP pluvial
30 min duration
Climate change 2180s - reasonably foreseeable

- 0.01 - 0.05
- 0.05 - 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00
- Model boundary
- MHWS Extent 2180s
- Model river centreline

Notes:
The depths represent the maximum depth achieved. The flood prediction does not represent a moment in time as maximum depths can be achieved at different times.

Model run date: 28/11/2016
Corresponding data:
35989-C1227_DCO_Base_R1000_2180s_RF_30m.xlsx

Meters
0 250 500 750 1,000
Scale at A3

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DCO
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Figure 36
DCO baseline peak pluvial depth 1:1000 year AEP 30 min duration climate change 2180s - reasonably foreseeable

NOT PROTECTIVELY MARKED

December 2016 35989-Lon365-brays

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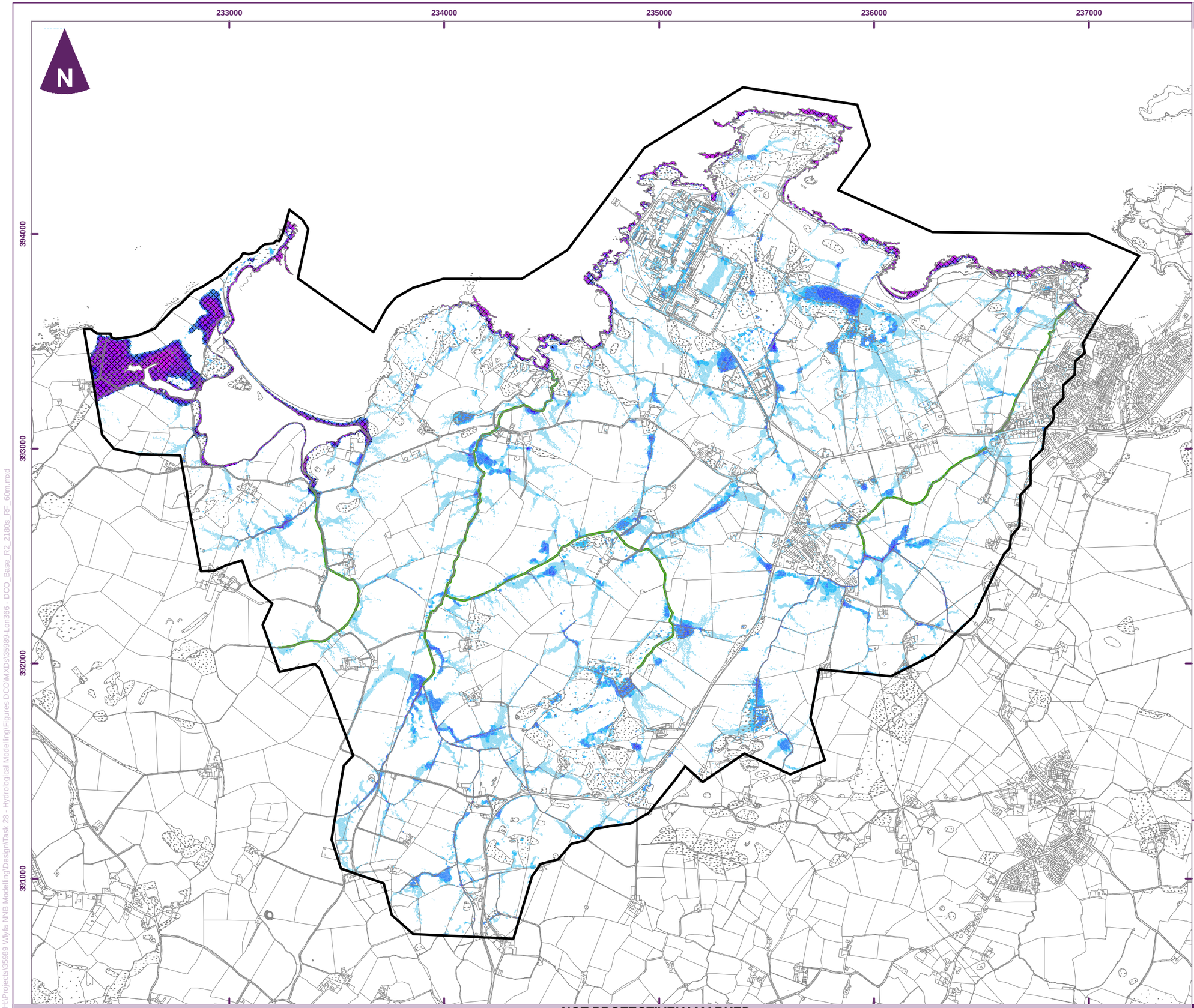

Key

Peak flood depth (m)
Baseline
1 : 2 year AEP pluvial
60 min duration
Climate change 2180s - reasonably foreseeable

- 0.01 - 0.05
- 0.05 - 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00
- Model boundary
- MHWS Extent 2180s
- Model river centreline

Notes:
The depths represent the maximum depth achieved. The flood prediction does not represent a moment in time as maximum depths can be achieved at different times.

Model run date: 28/11/2016
Corresponding data:
35989-C1228_DCO_Base_R2_2180s_RF_60m.xlsx

Meters
0 250 500 750 1,000
Scale at A3

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DCO
Hydraulic Modelling

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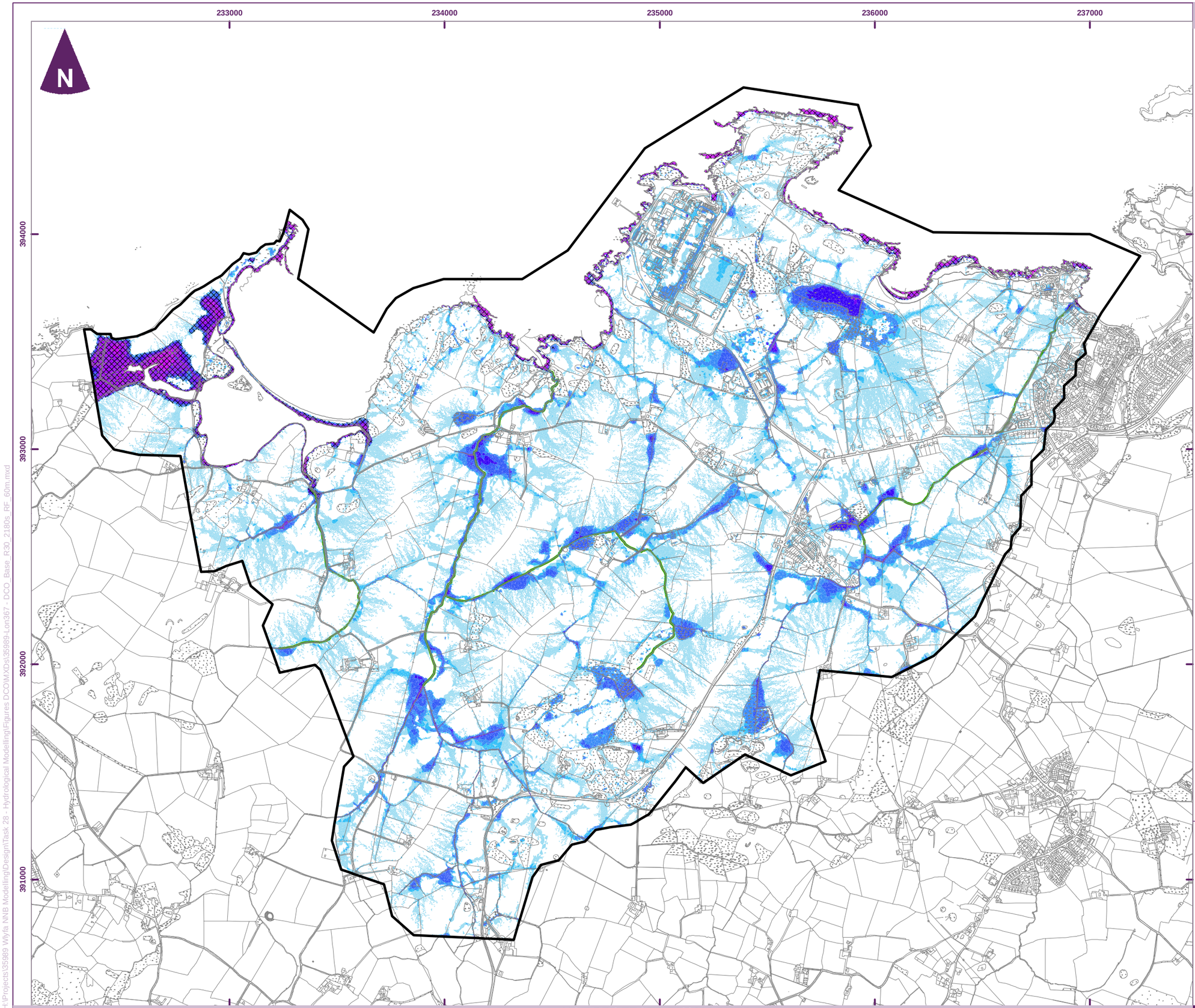
Figure 37
DCO baseline peak pluvial depth 1:2 year AEP 60 min duration climate change 2180s - reasonably foreseeable



Key

Peak flood depth (m)
Baseline
1 : 30 year AEP pluvial
60 min duration
Climate change 2180s - reasonably foreseeable

- 0.01 - 0.05
- 0.05 - 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00
- Model boundary
- MHWS Extent 2180s
- Model river centreline

Notes:
The depths represent the maximum depth achieved. The flood prediction does not represent a moment in time as maximum depths can be achieved at different times.

Model run date: 28/11/2016
Corresponding data:
35989-C1229_DCO_Base_R30_2180s_RF_60m.xlsx

Meters
0 250 500 750 1,000
Scale at A3

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Figure 38
DCO baseline peak pluvial depth 1:30 year AEP 60 min duration climate change 2180s - reasonably foreseeable