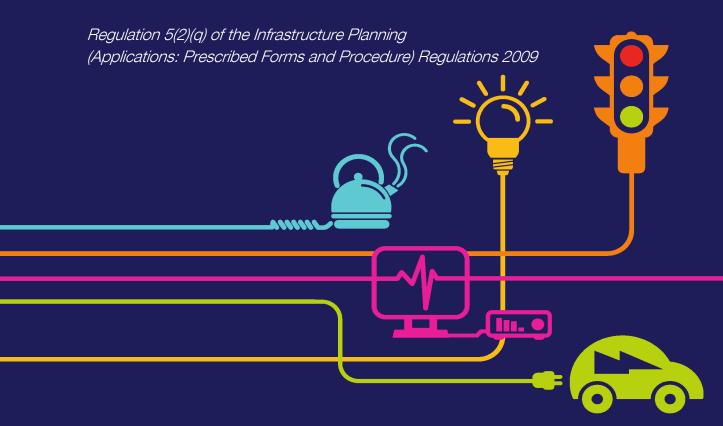
7.17_(Part 2 of 2)

Design Report

National Grid (North Wales Connection Project)





nationalgrid

North Wales Connection Project

Volume 7

Document 7.17 - Design Report

National Grid National Grid House Warwick Technology Park Gallows Hill Warwick CV34 6DA

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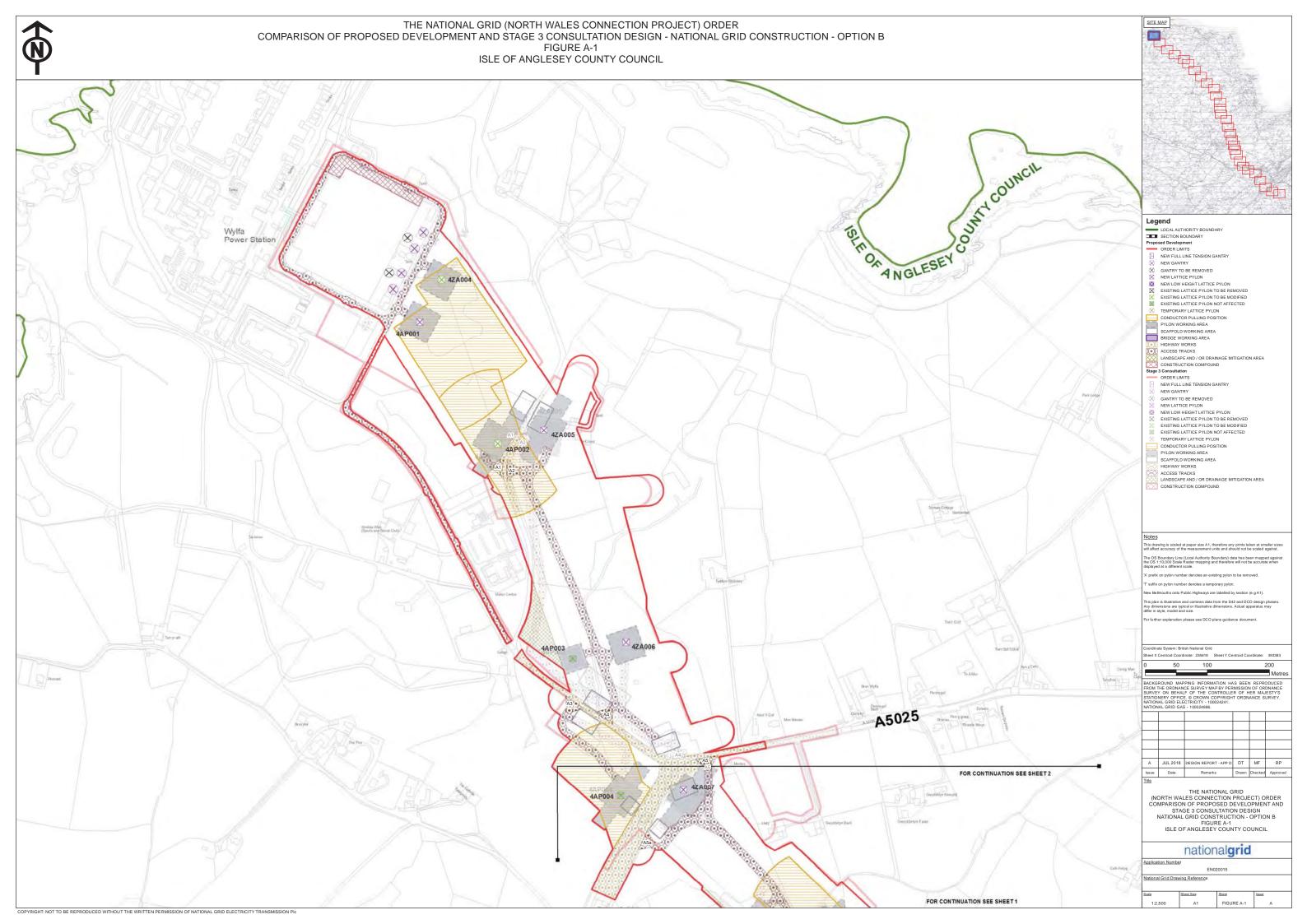
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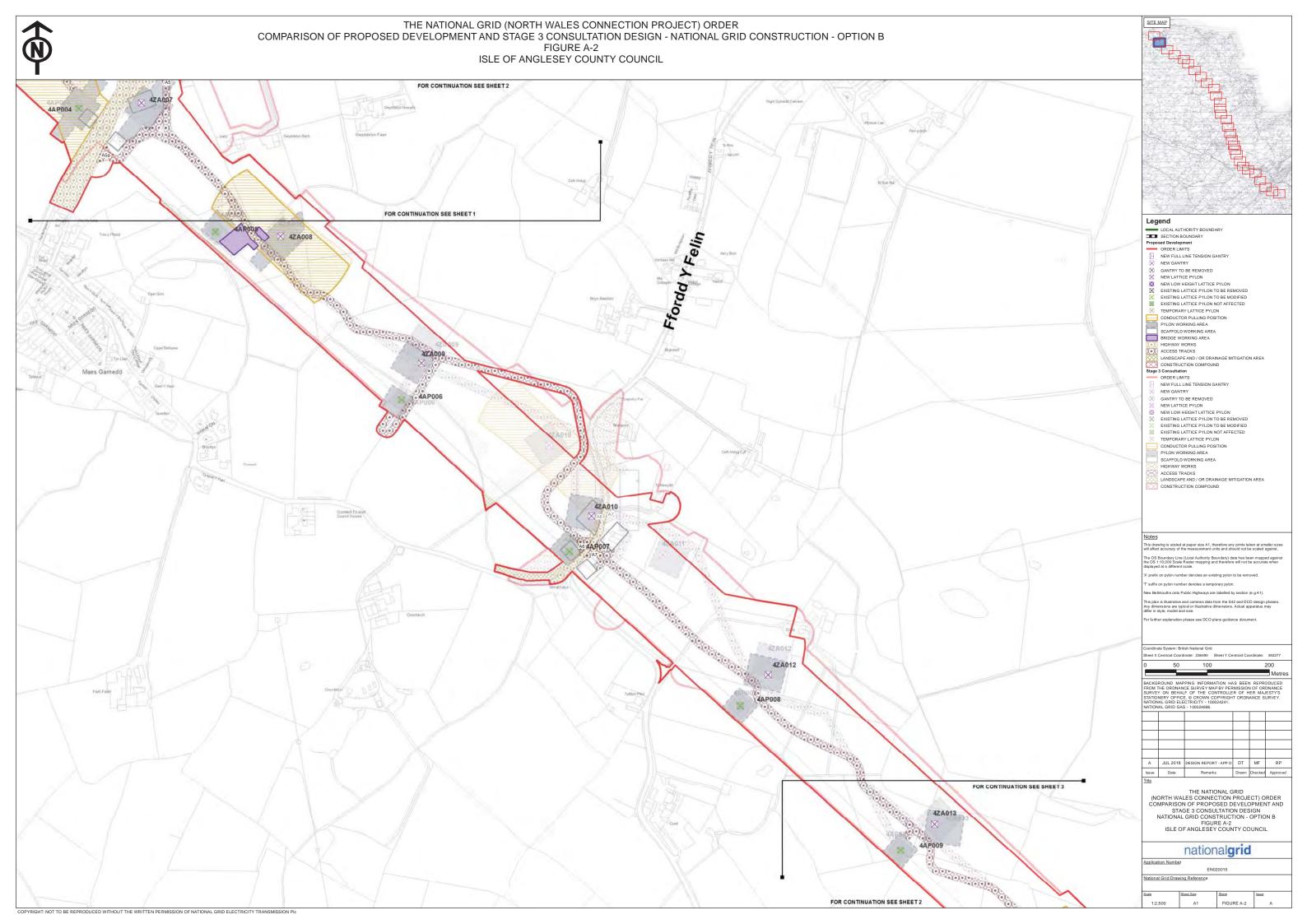
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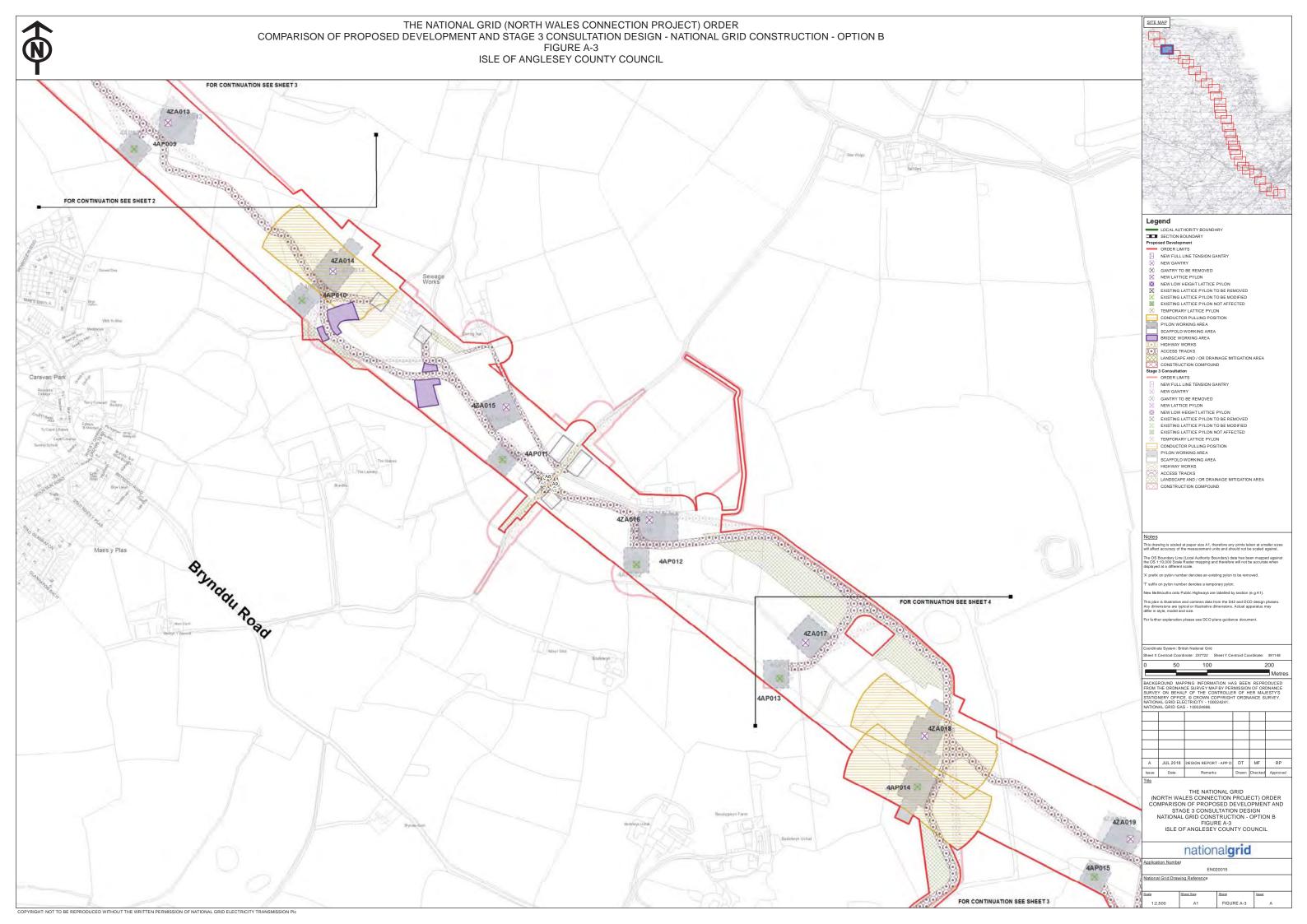


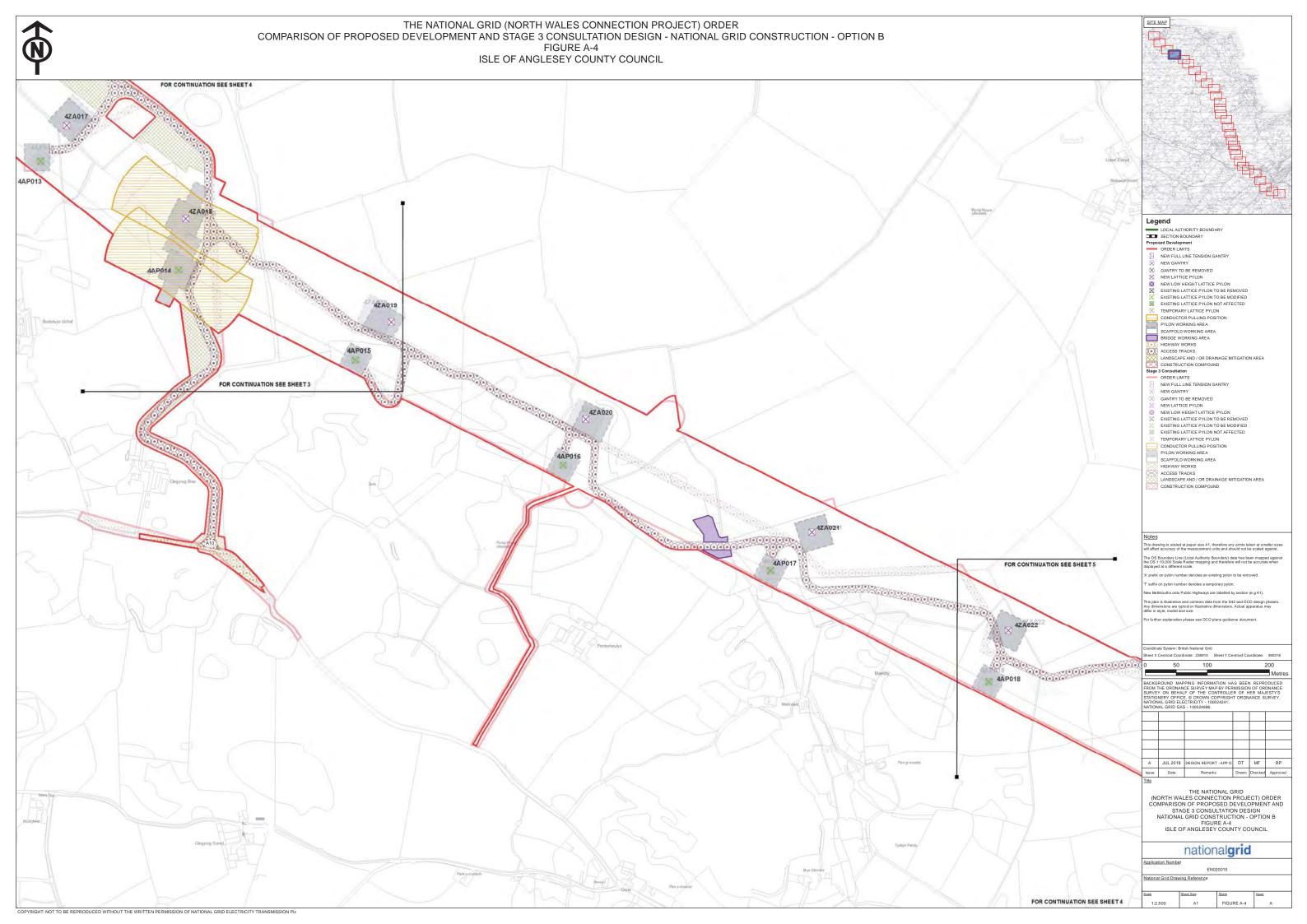
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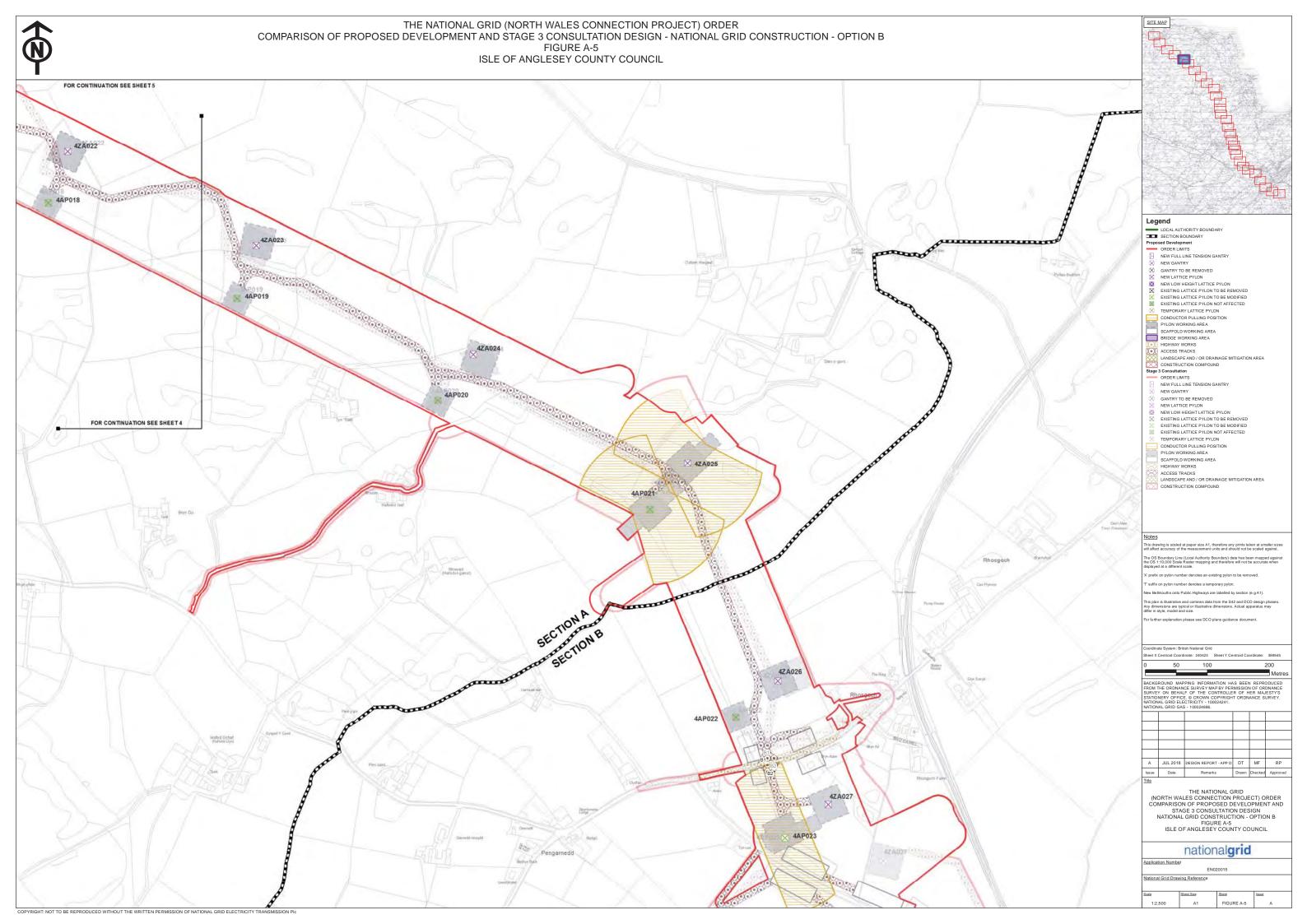


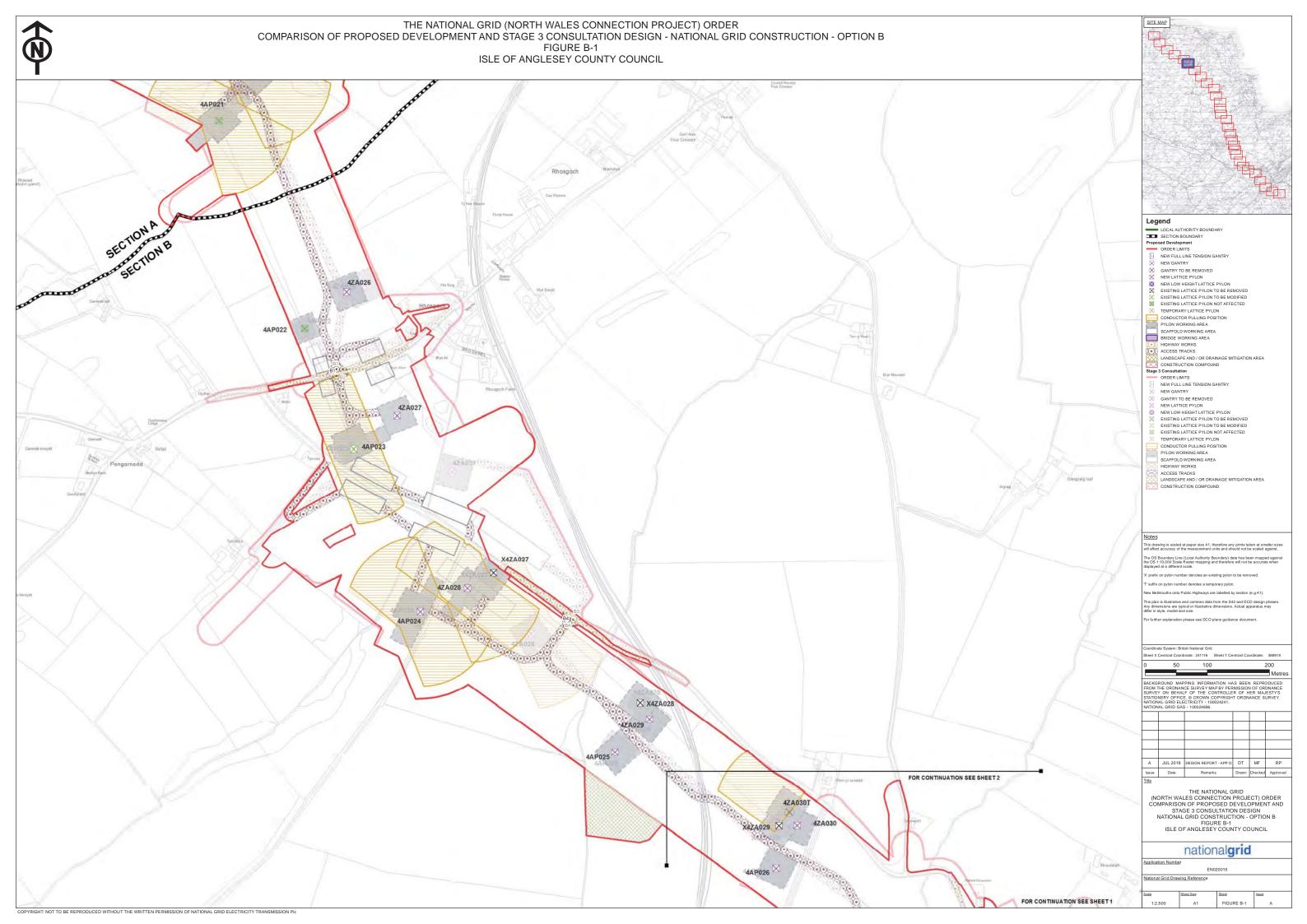


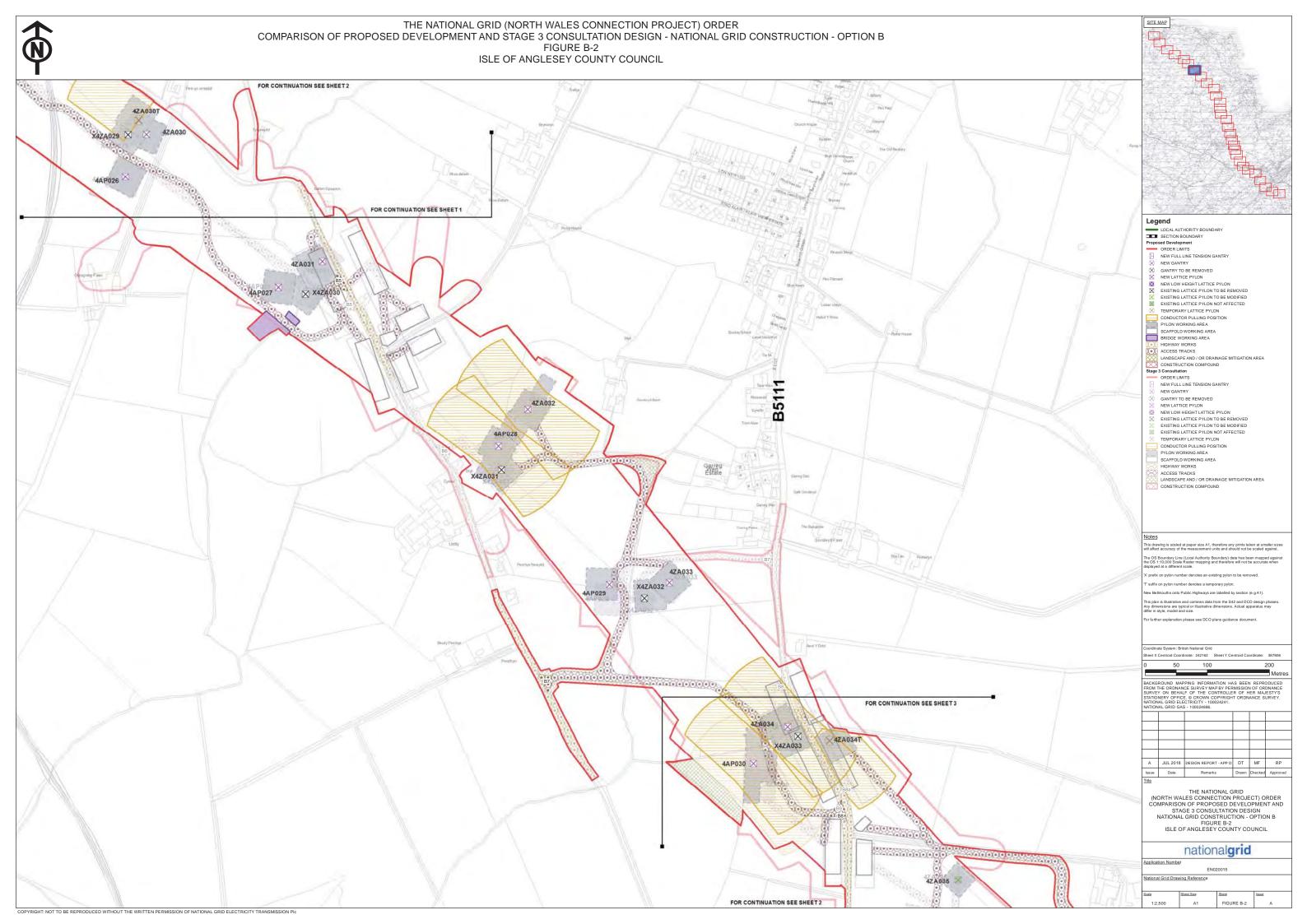


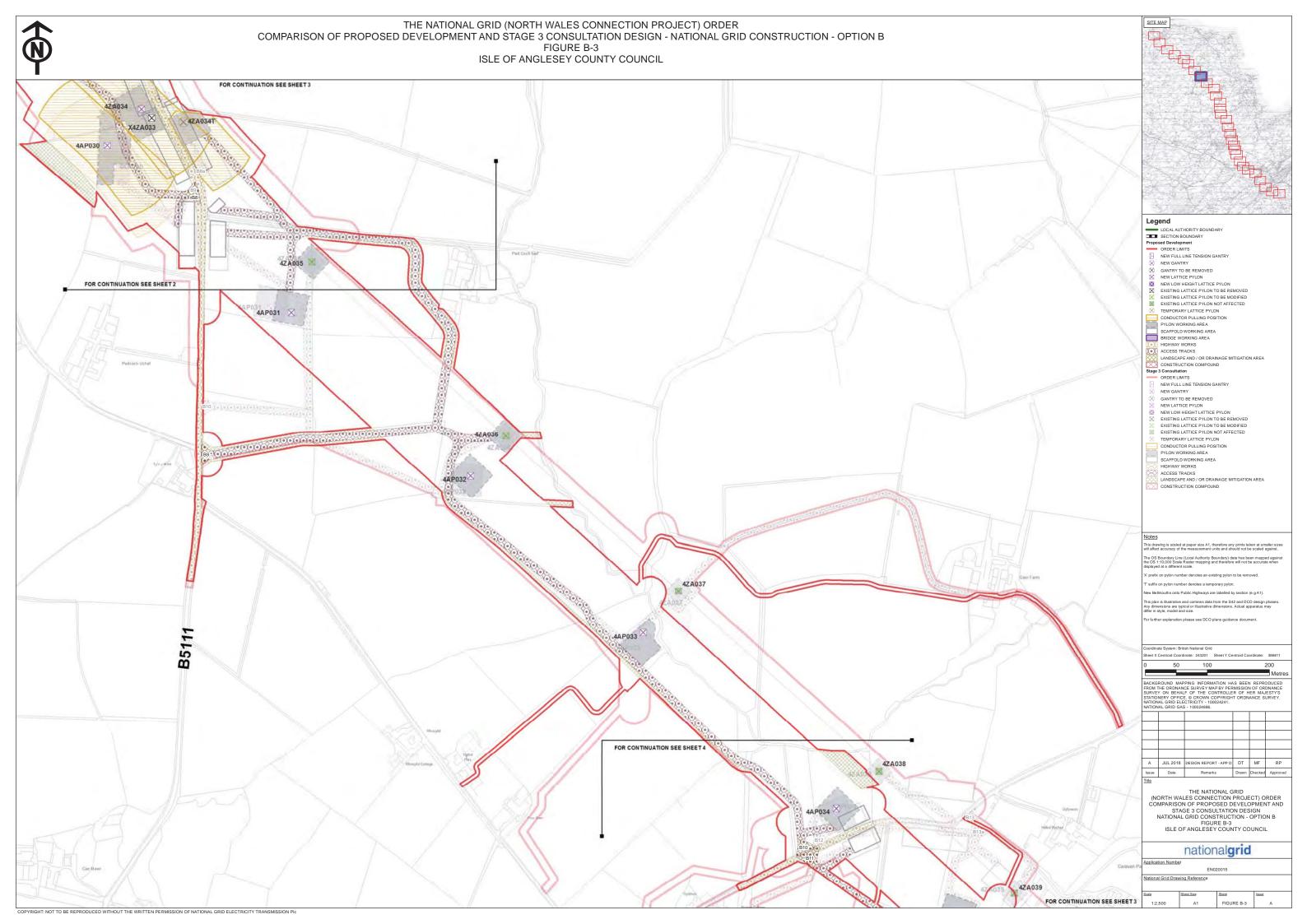


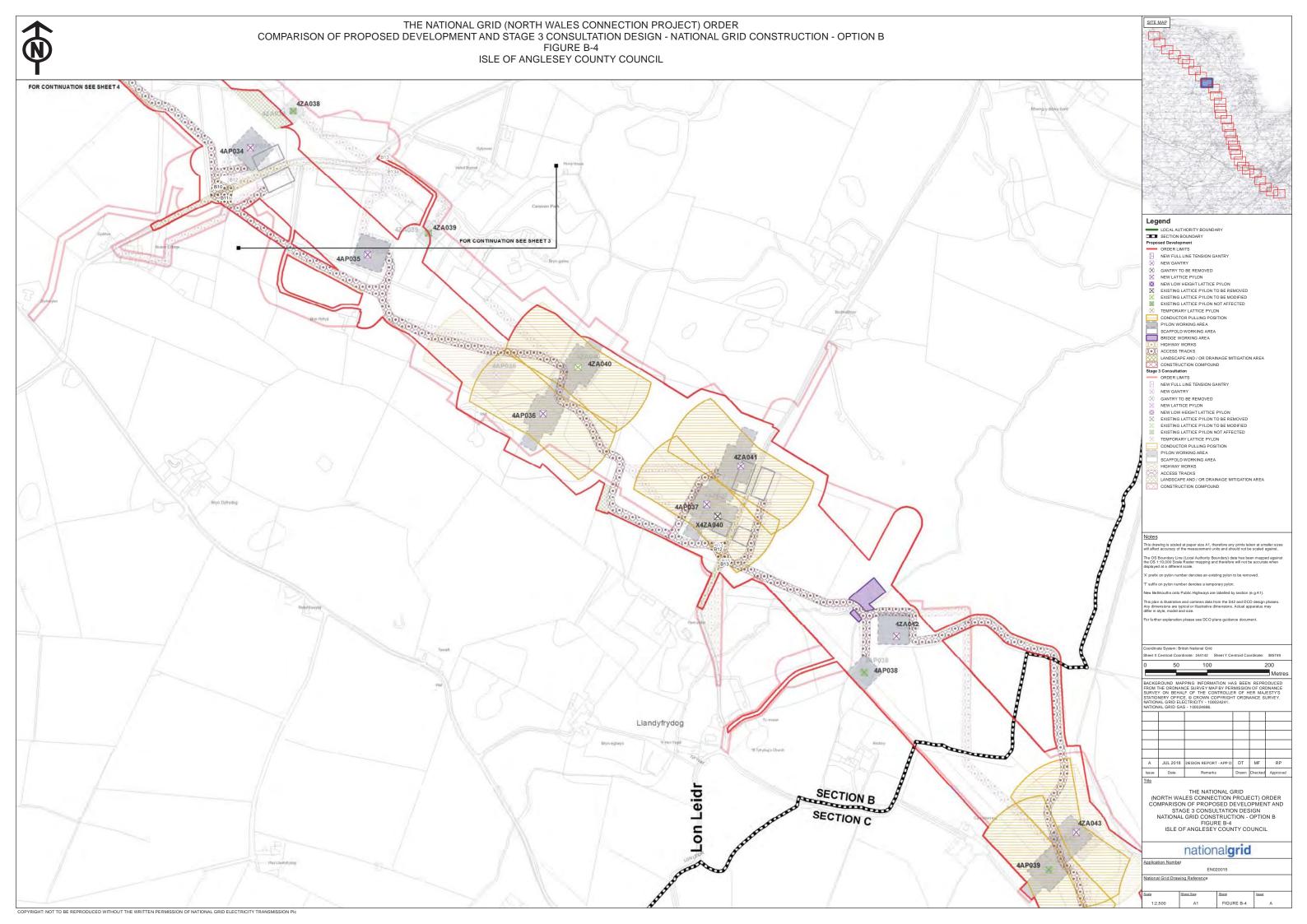


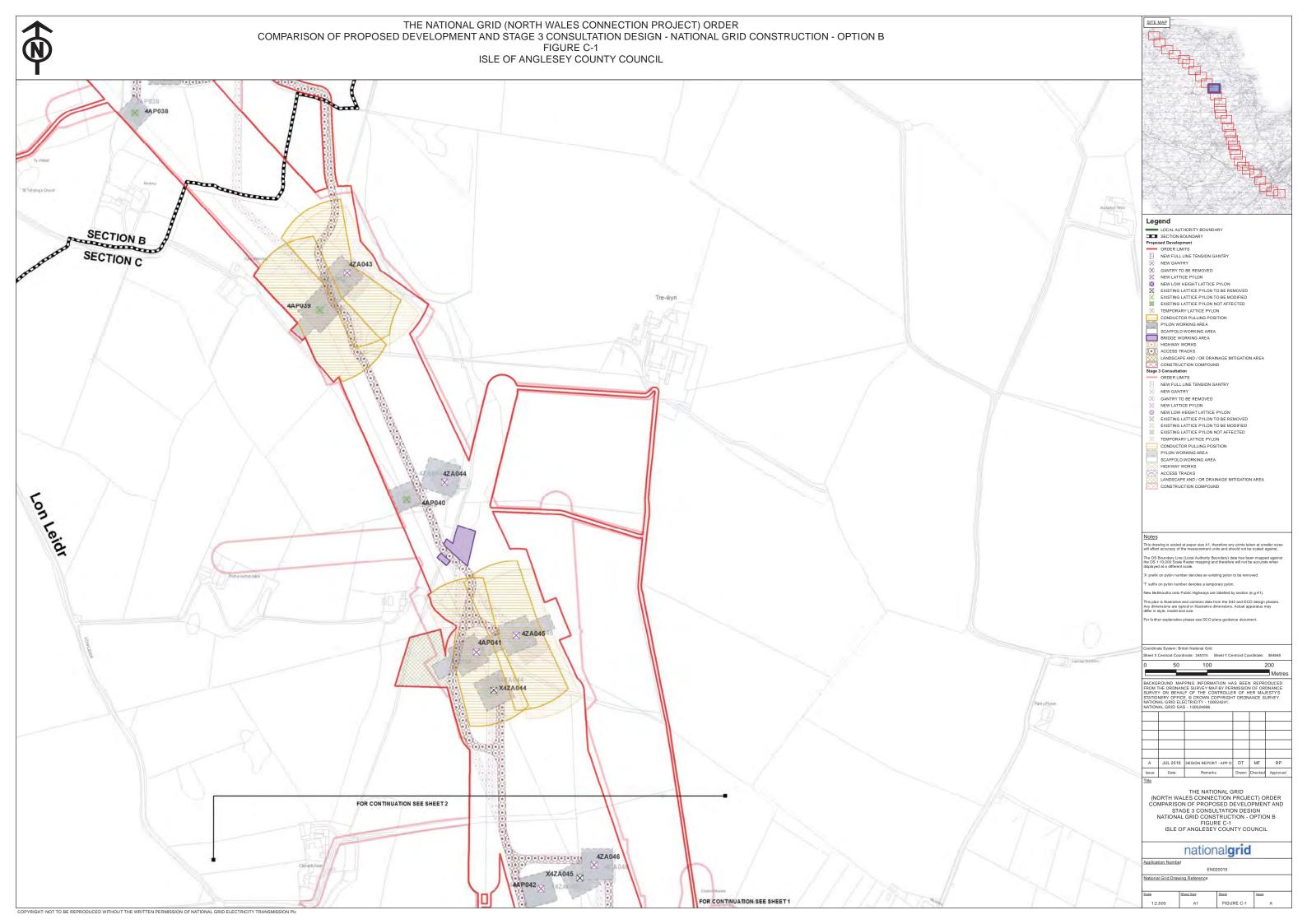


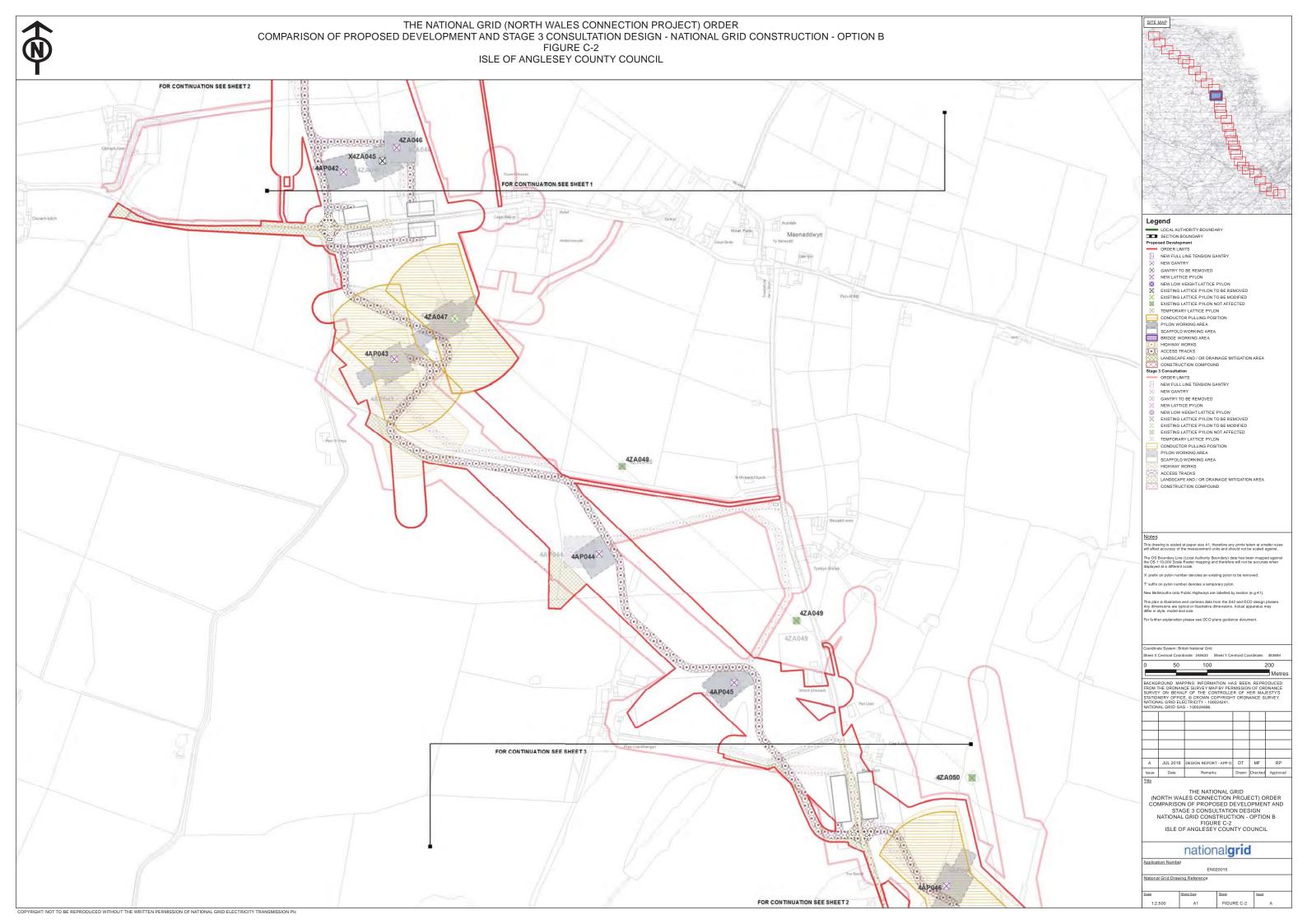


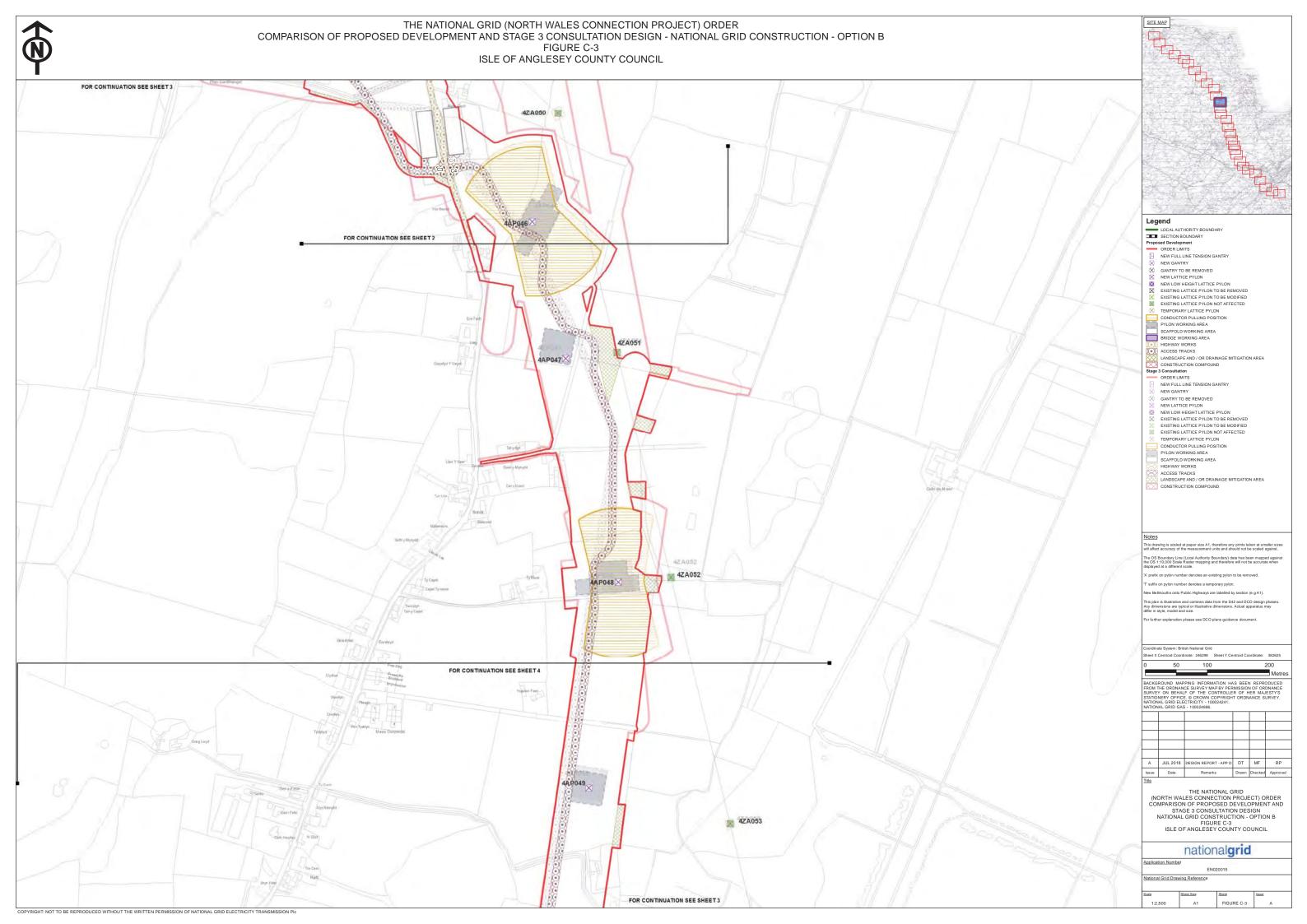


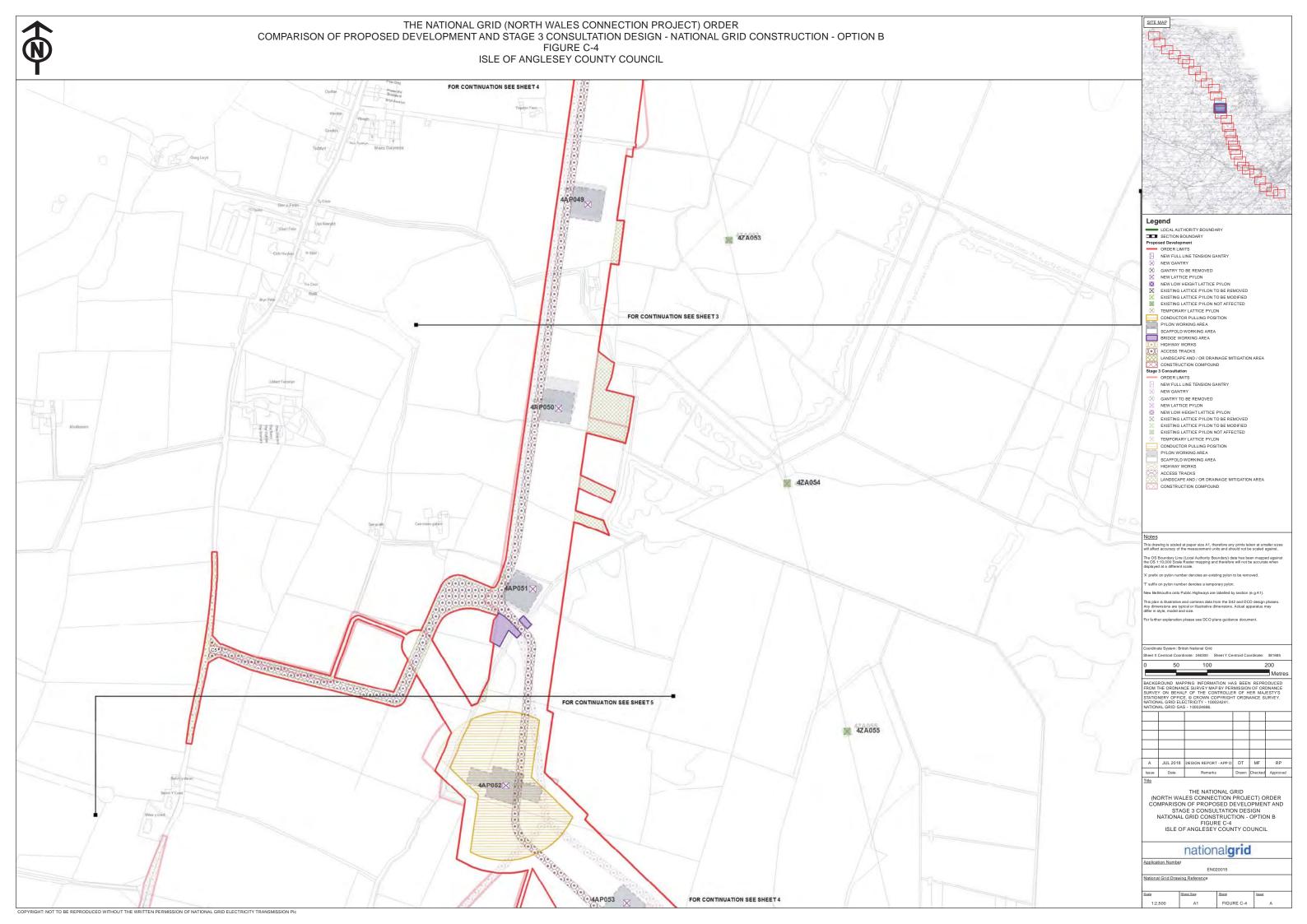


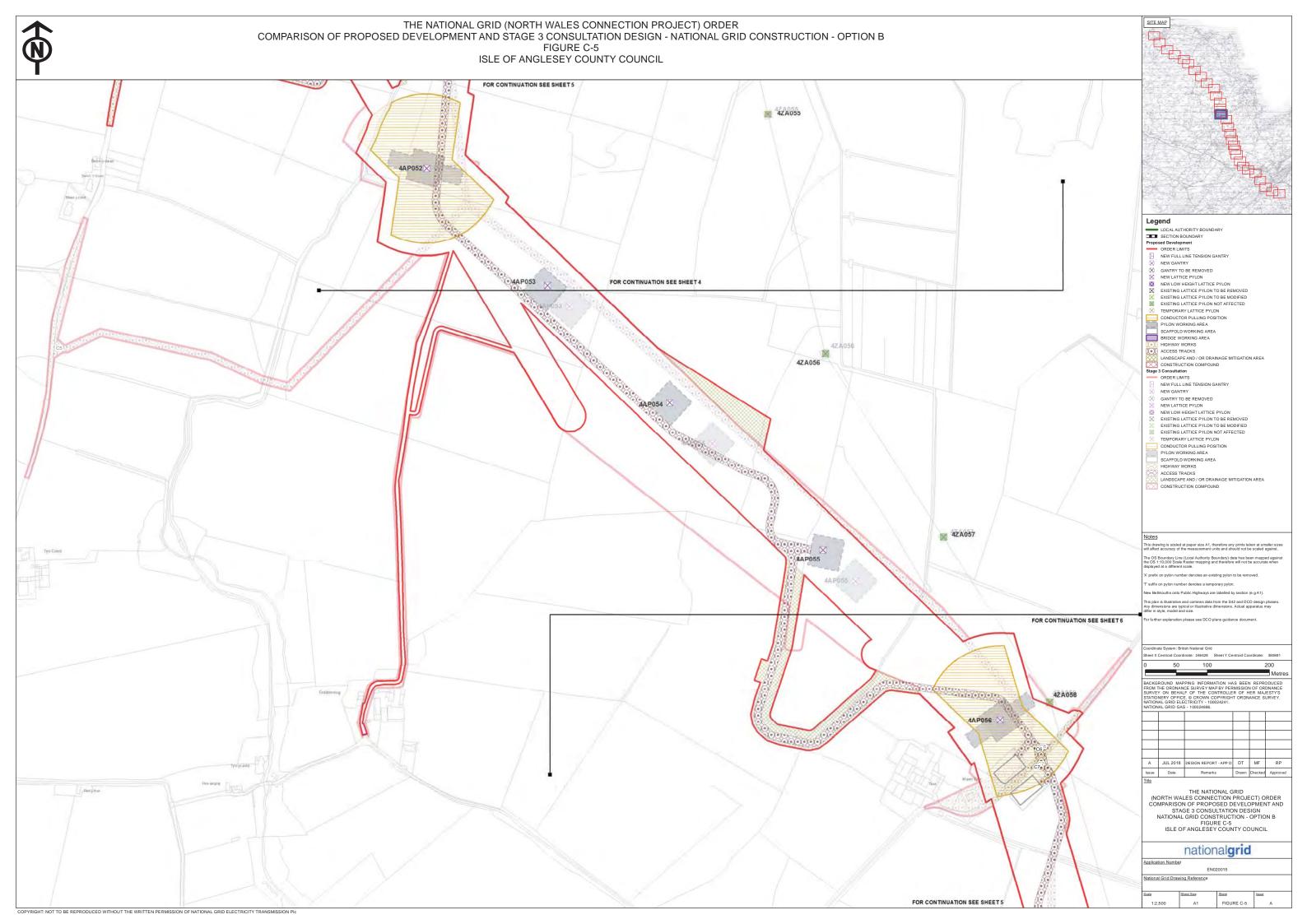


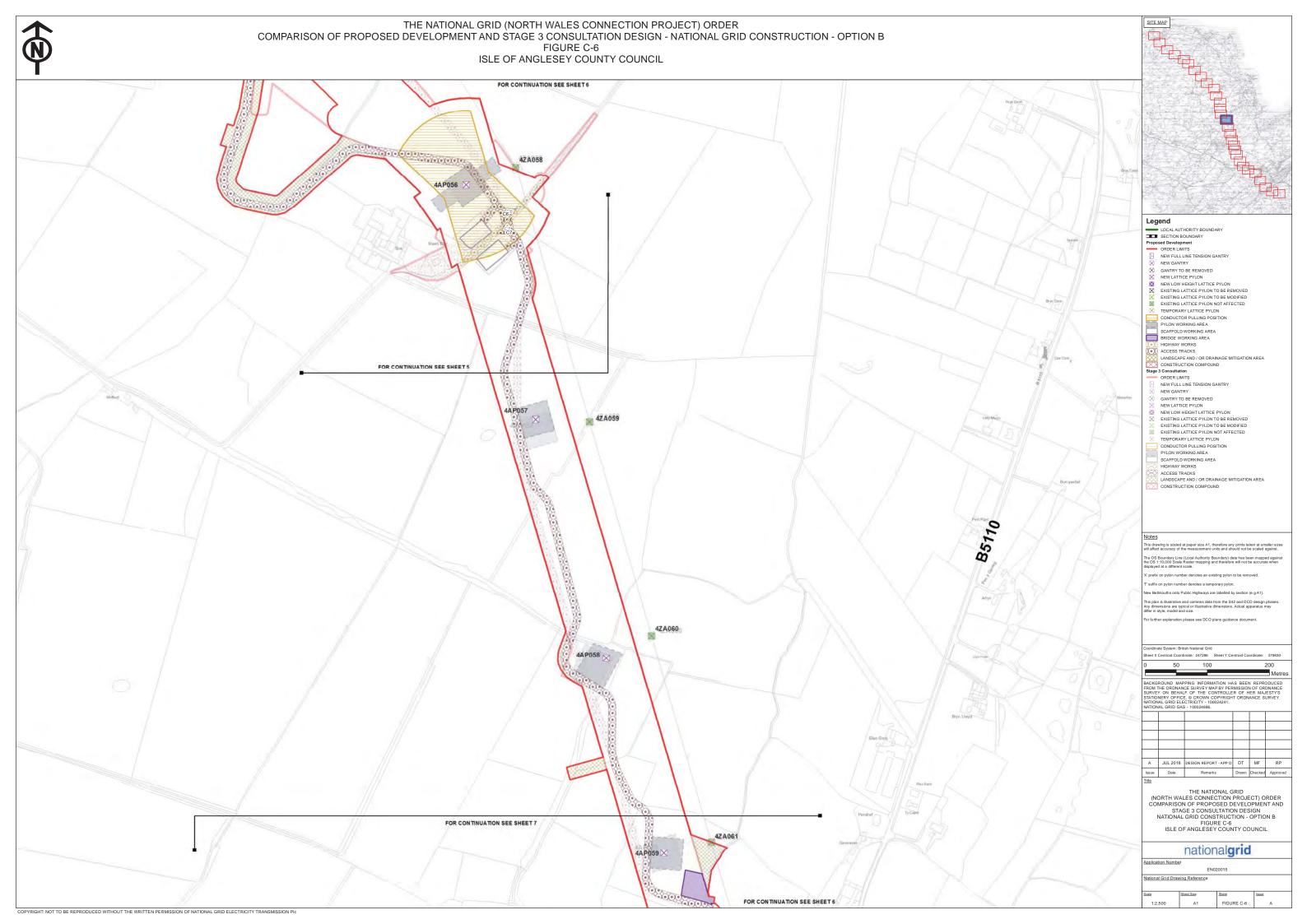


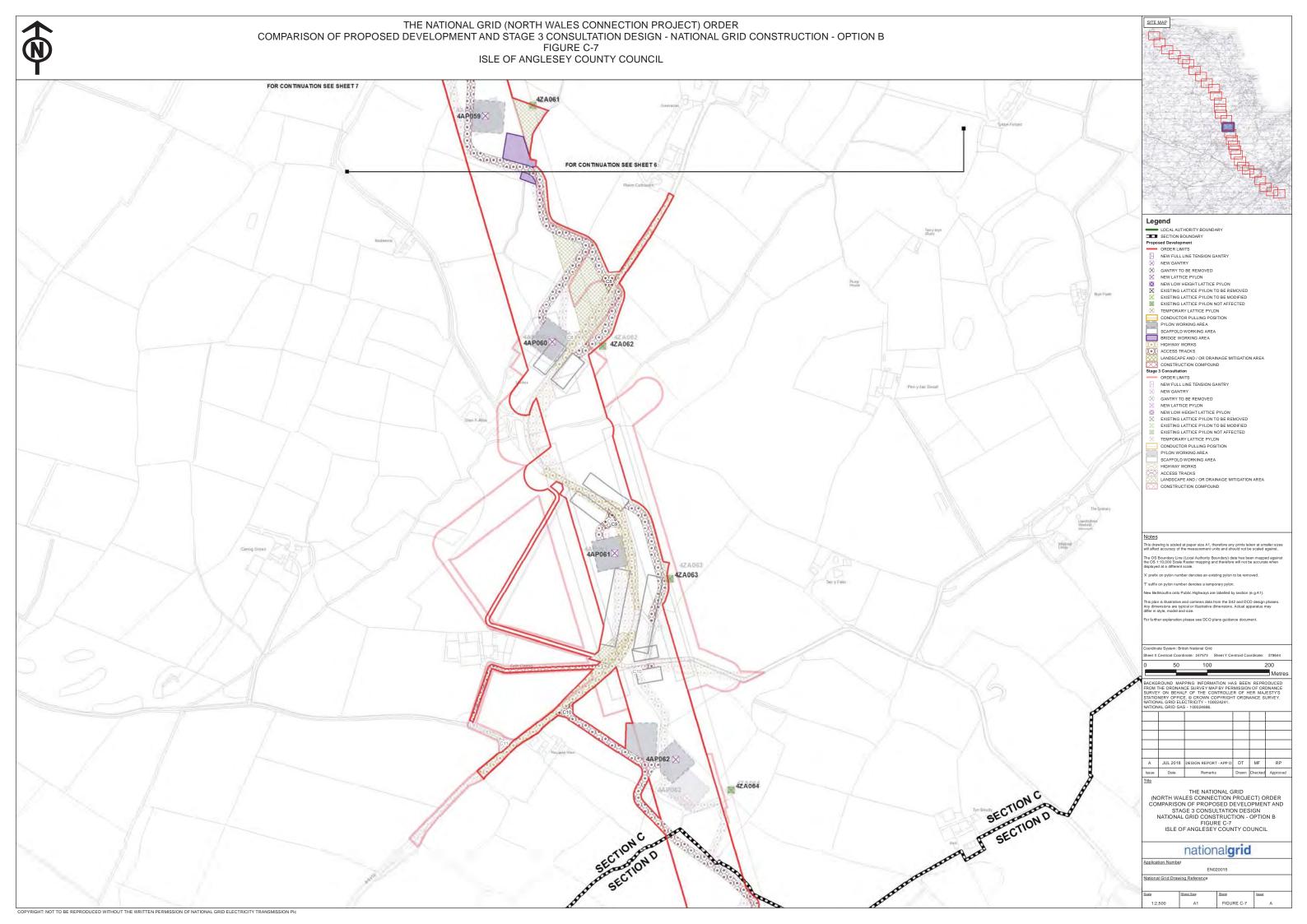


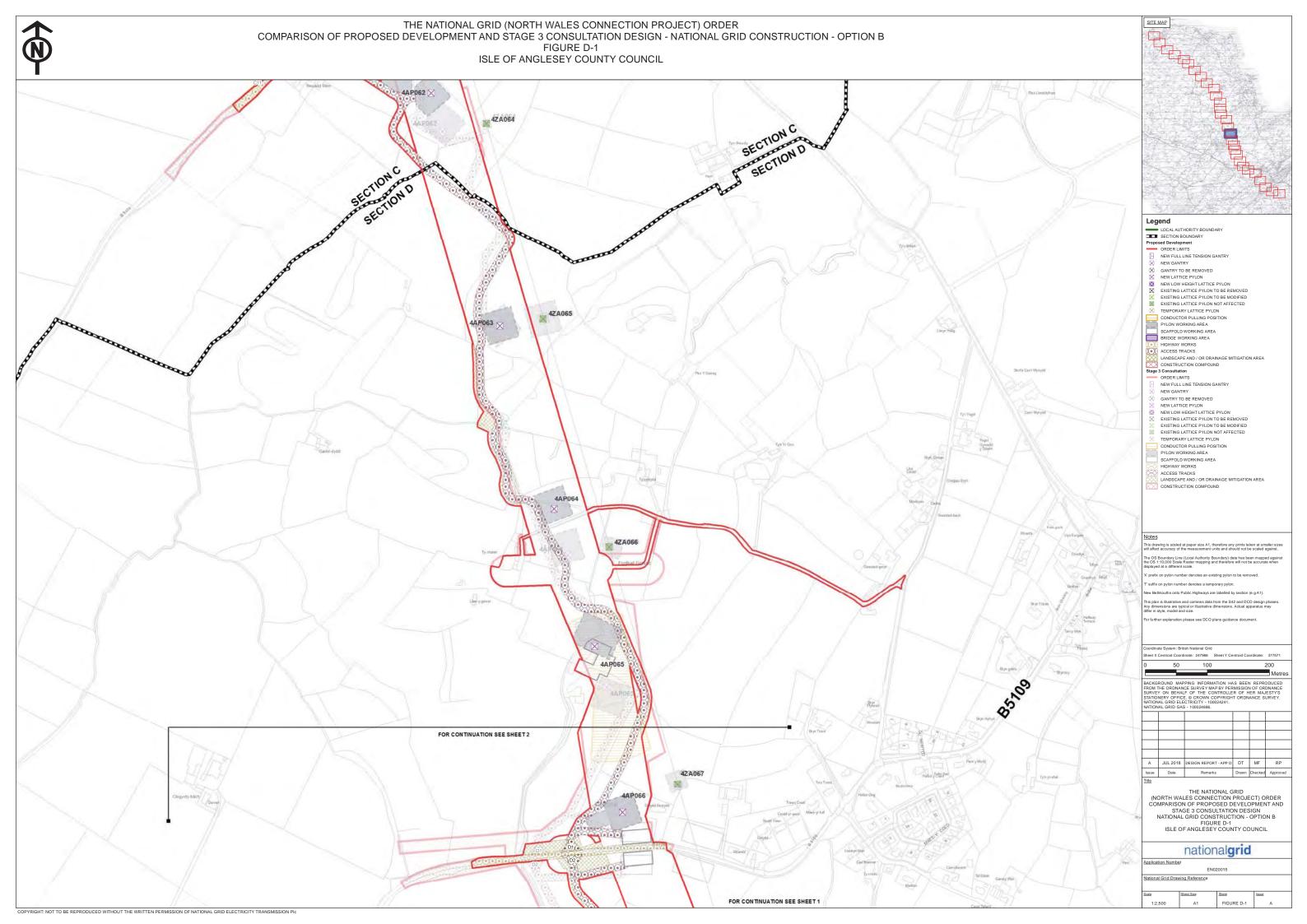


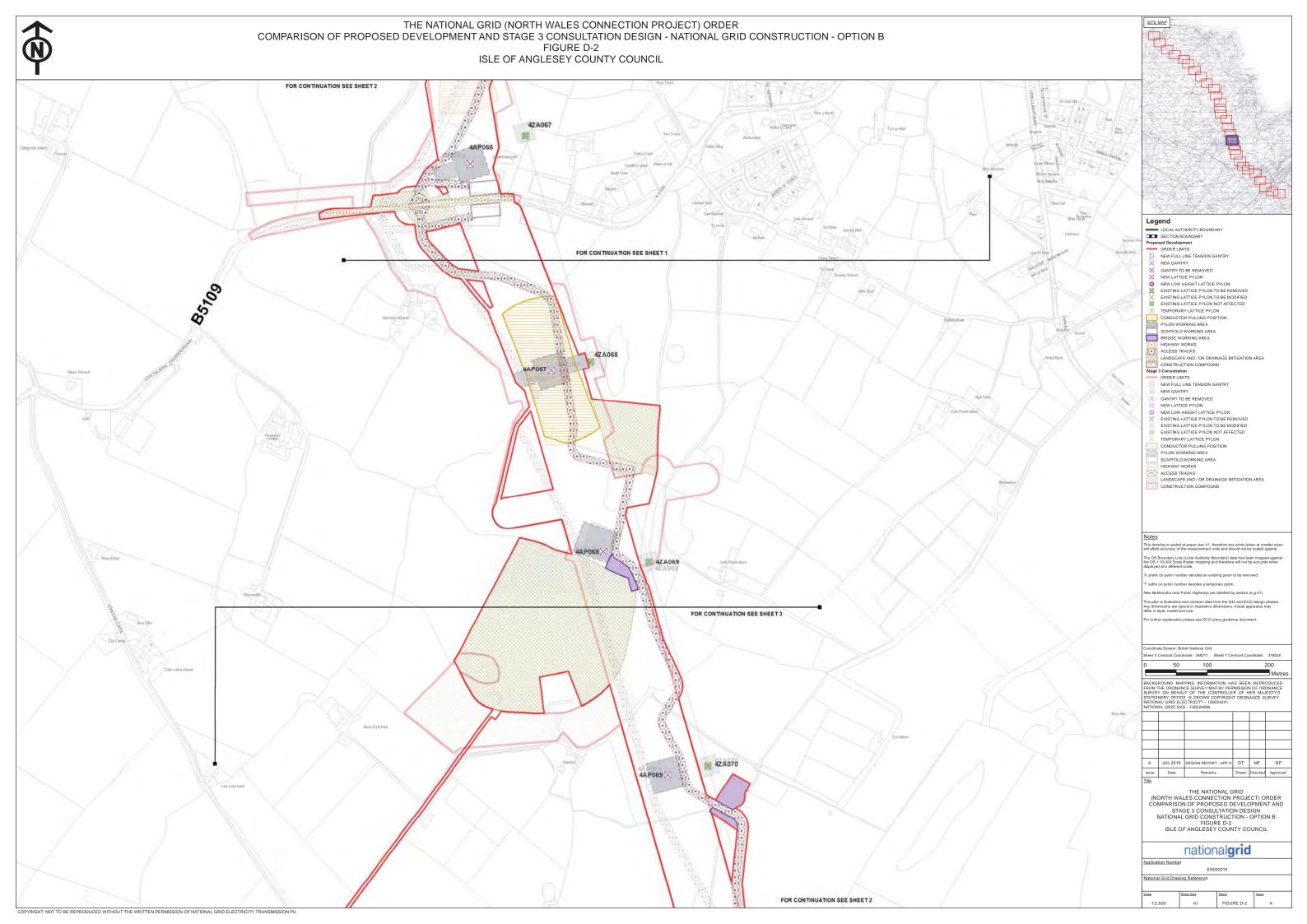


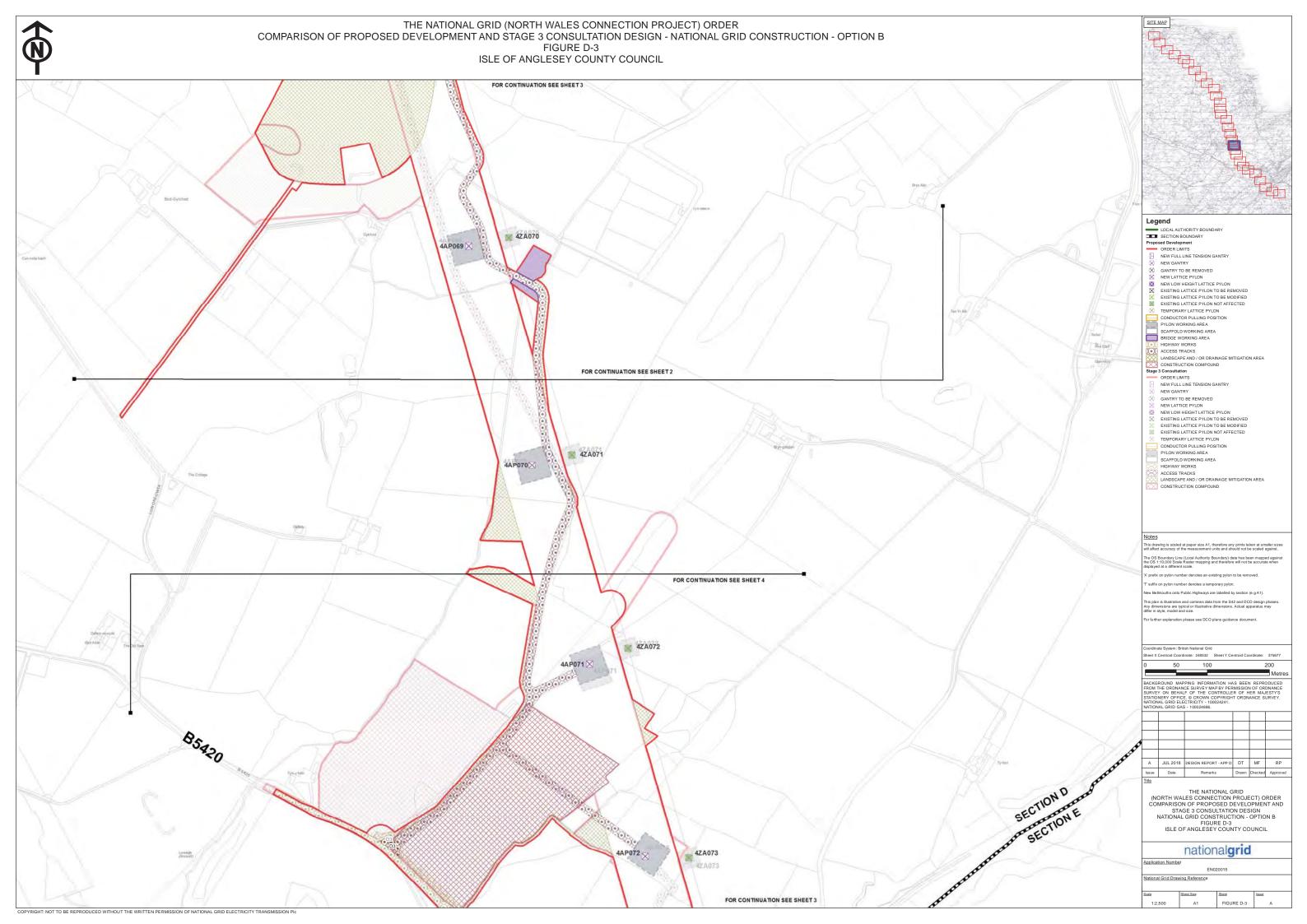


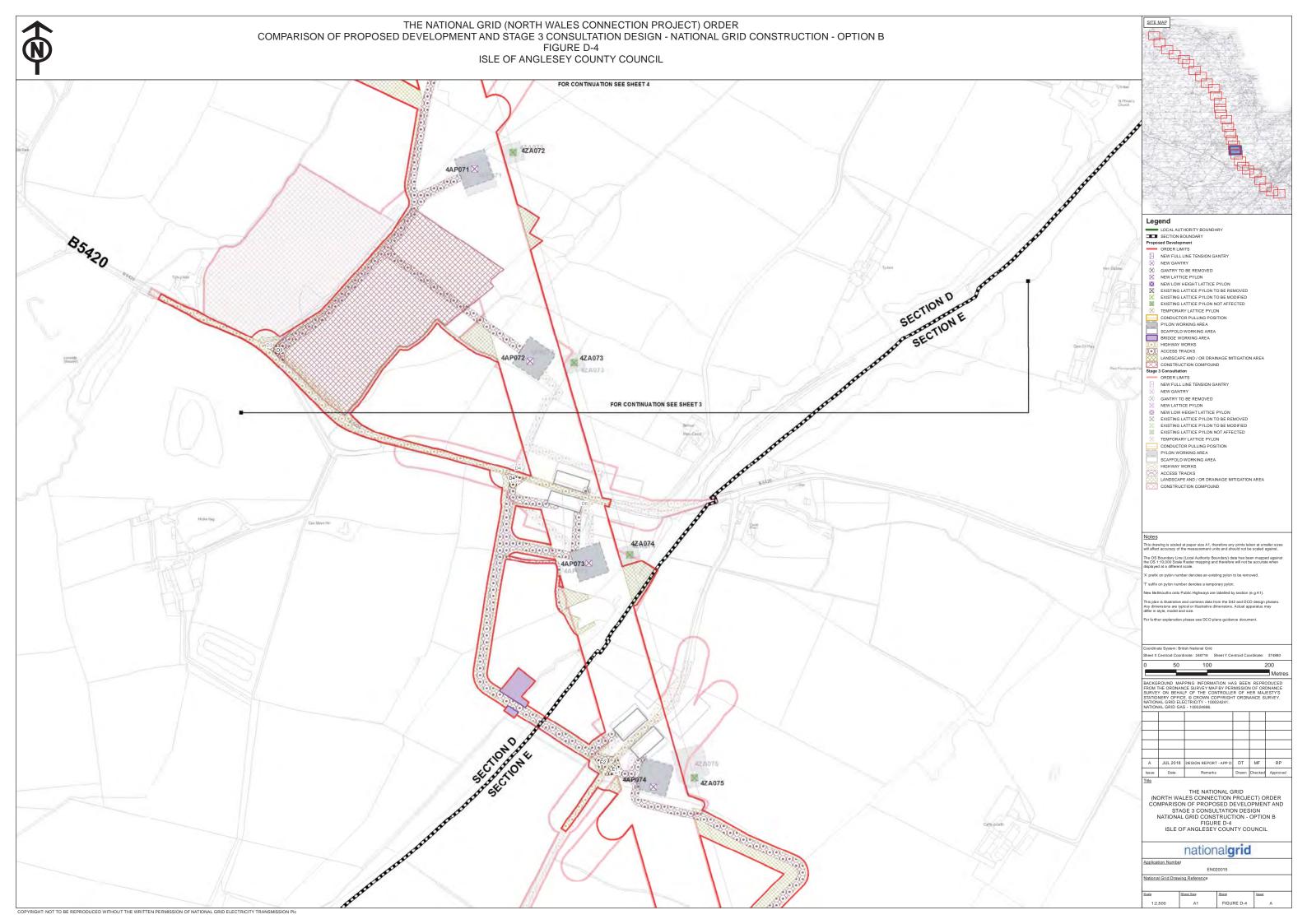


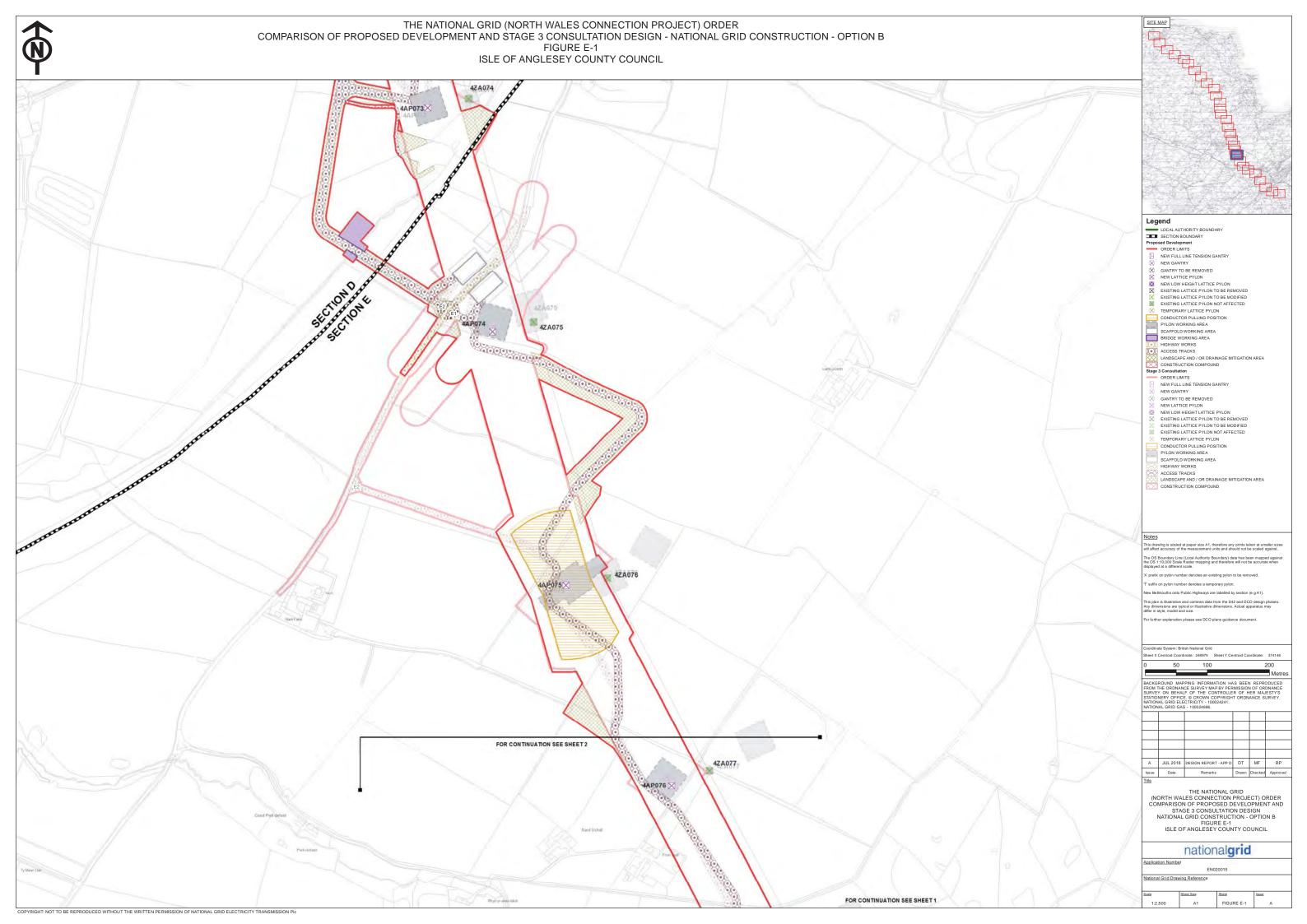






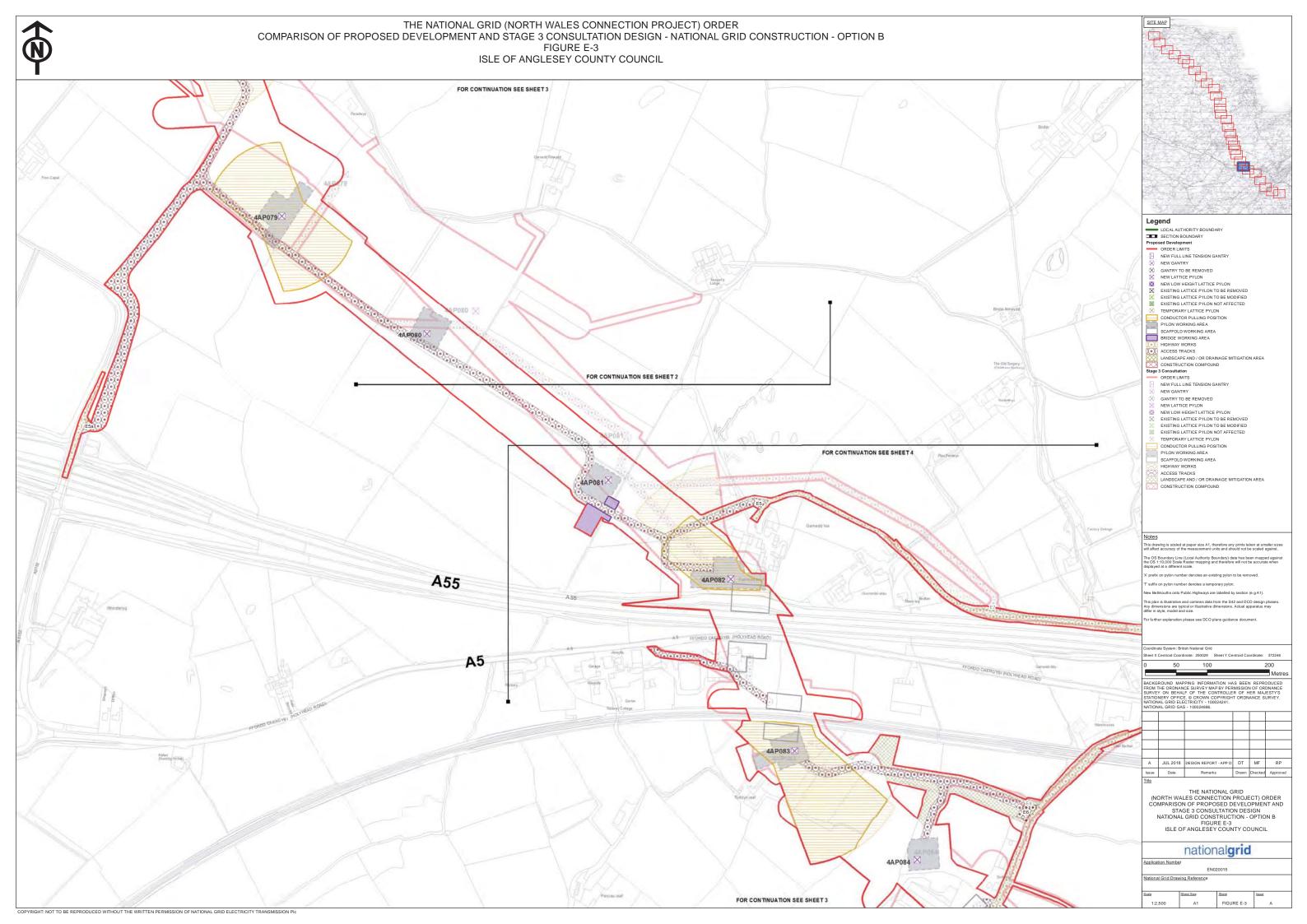


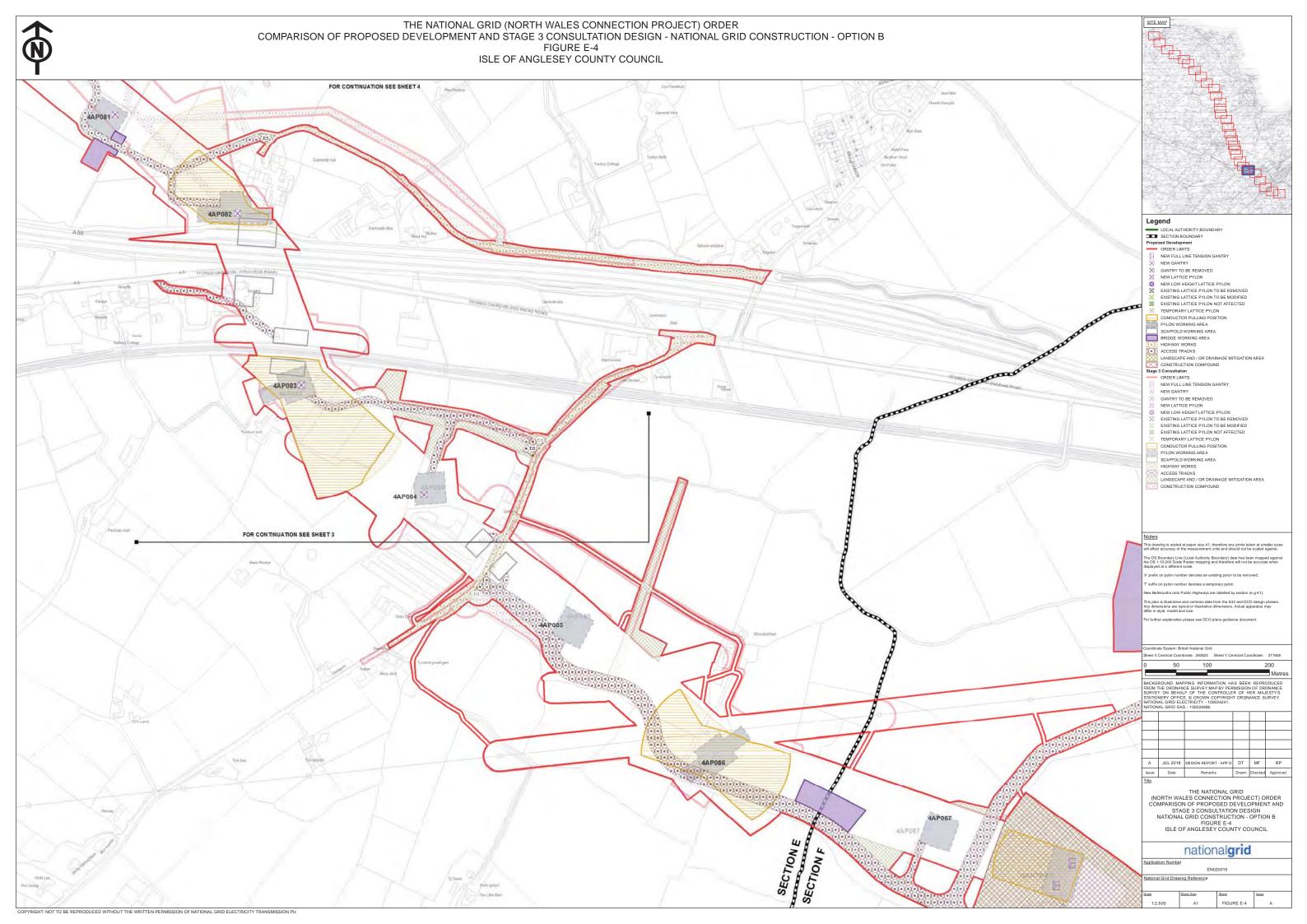


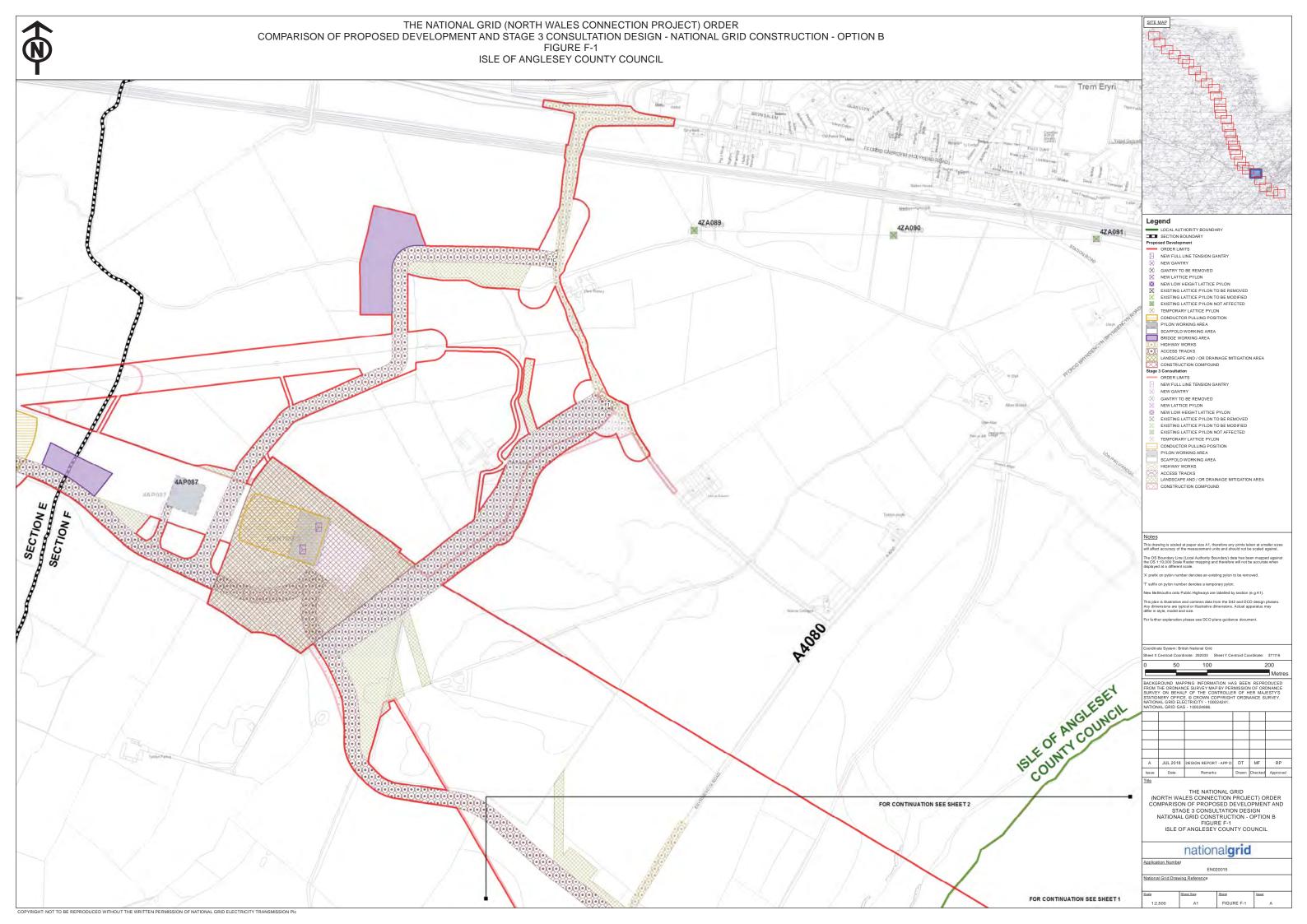


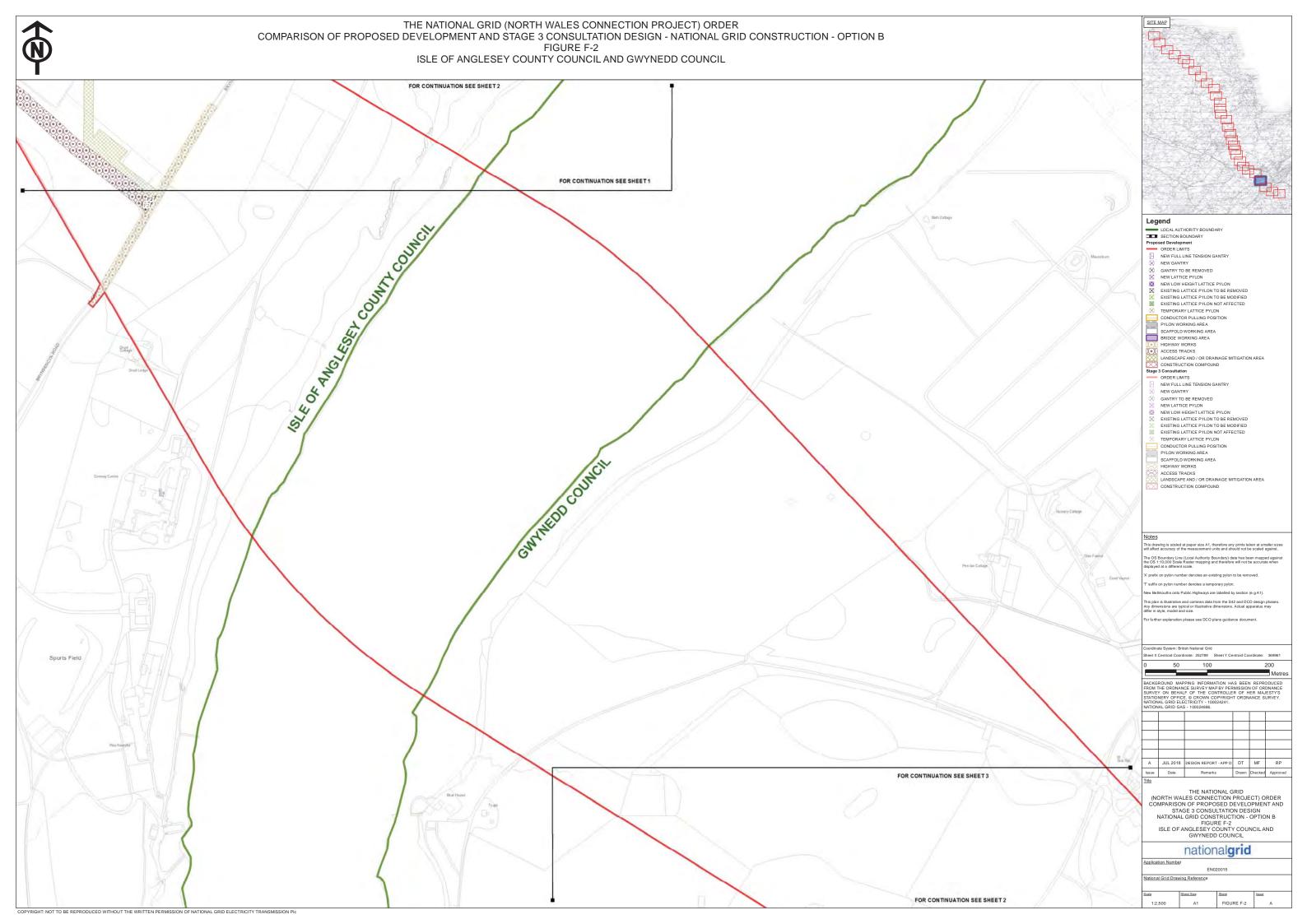
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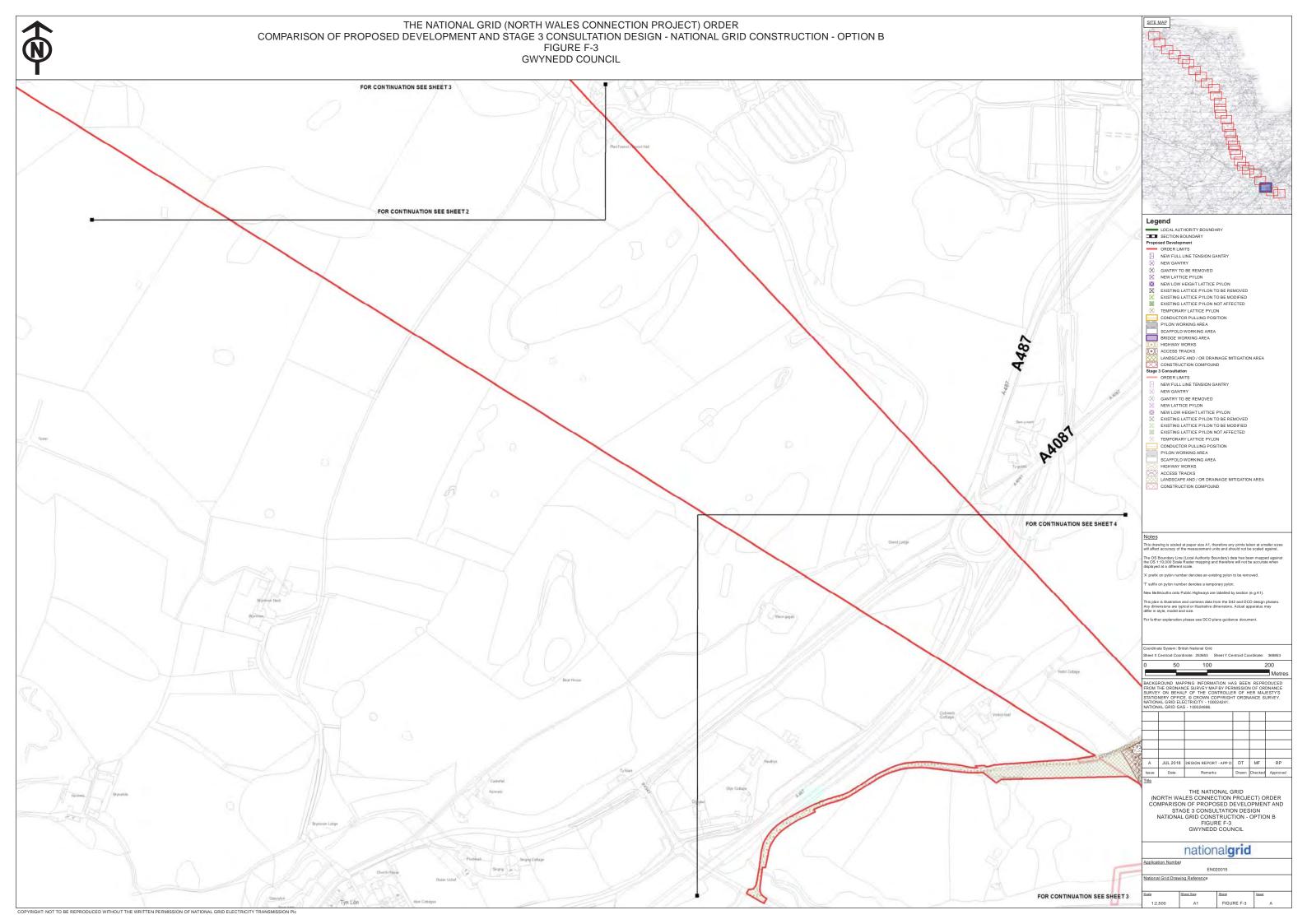
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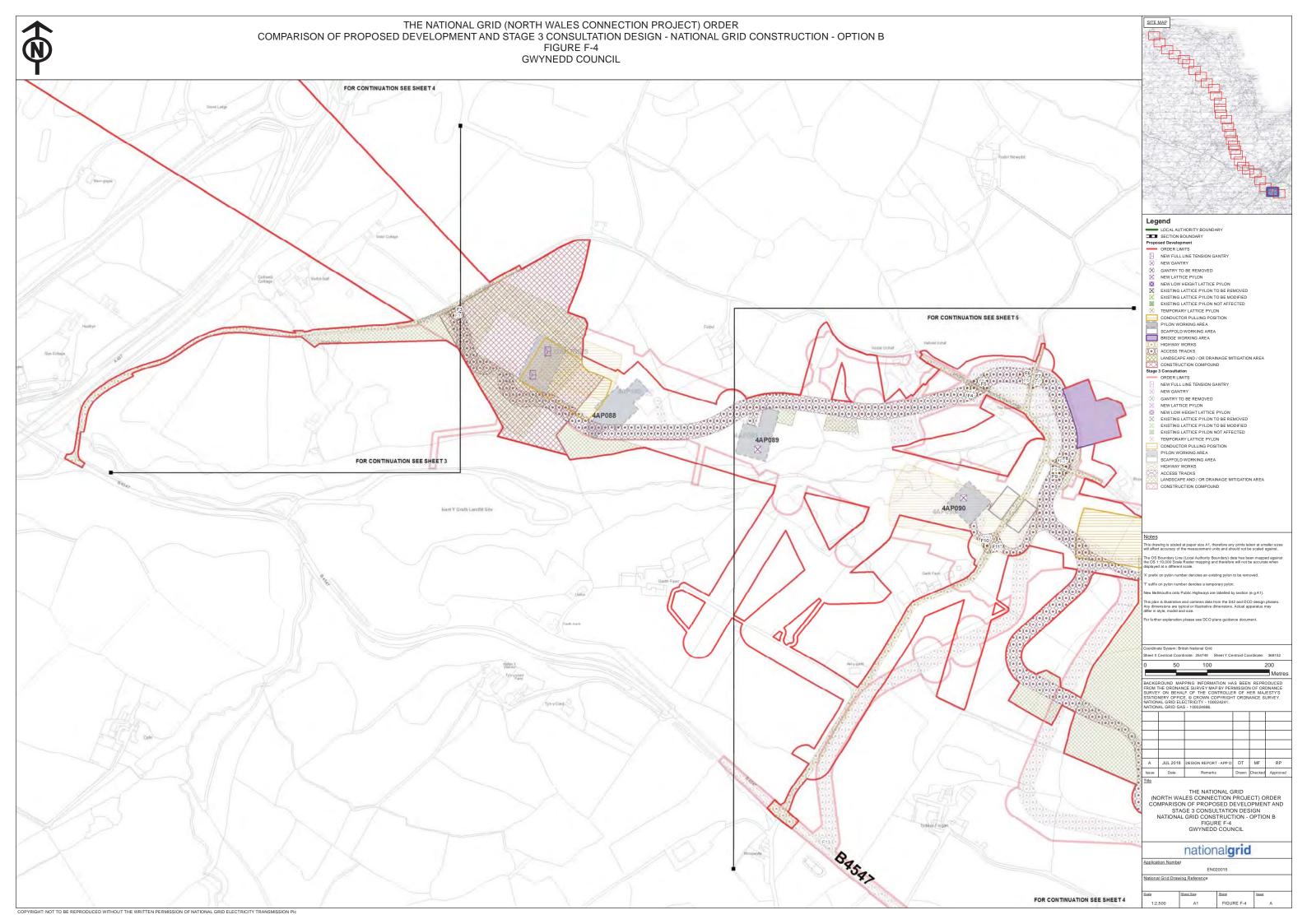








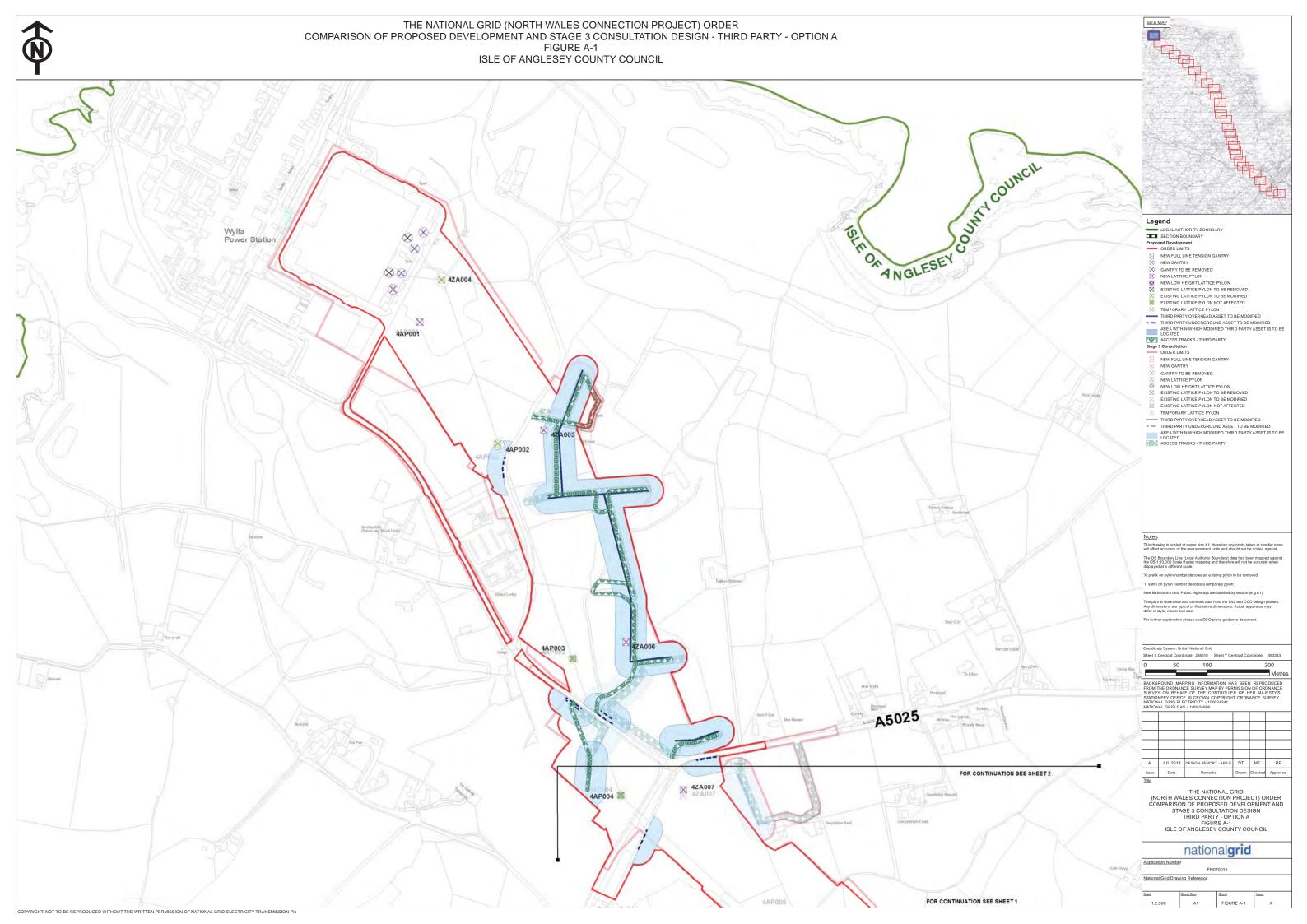


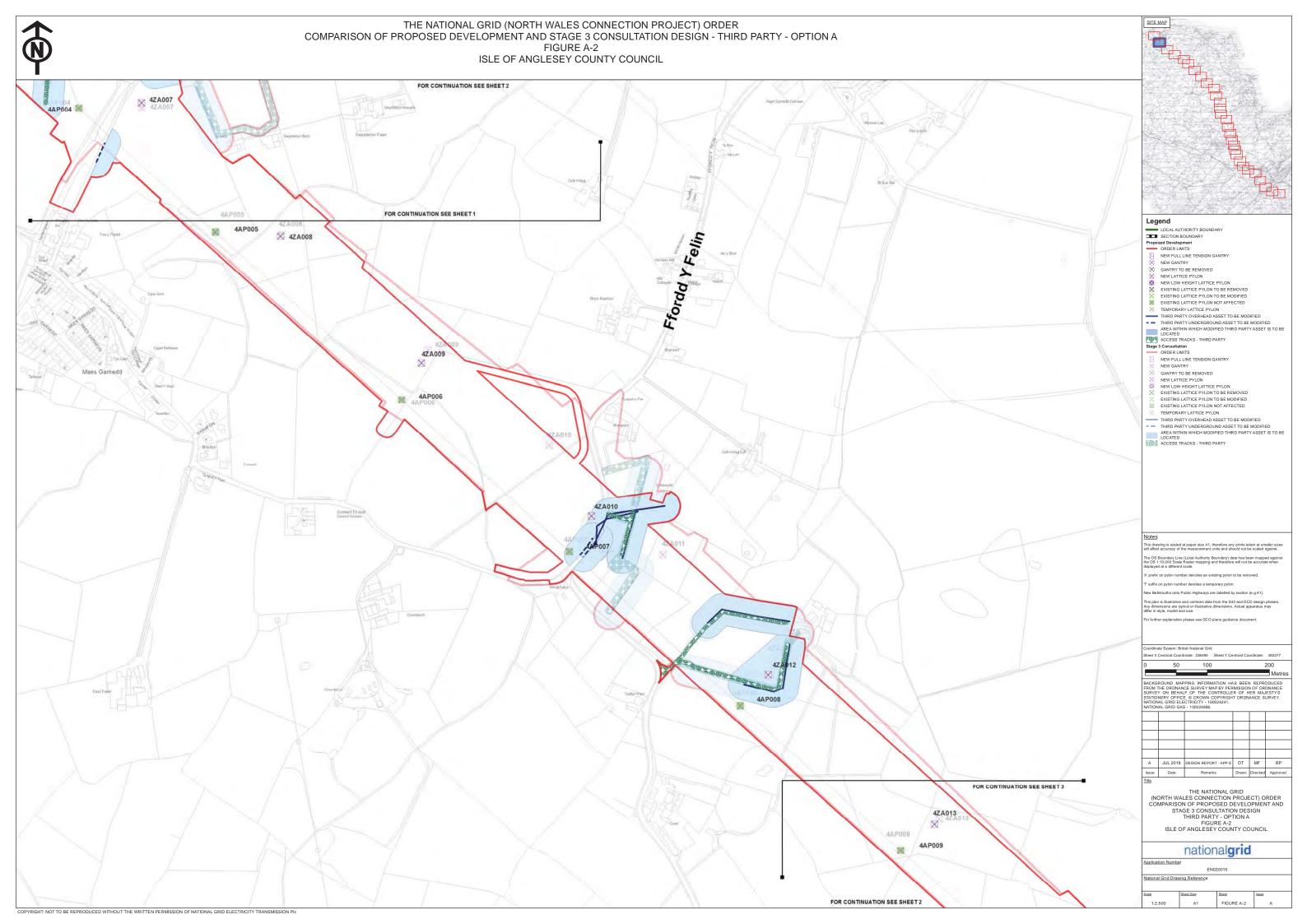


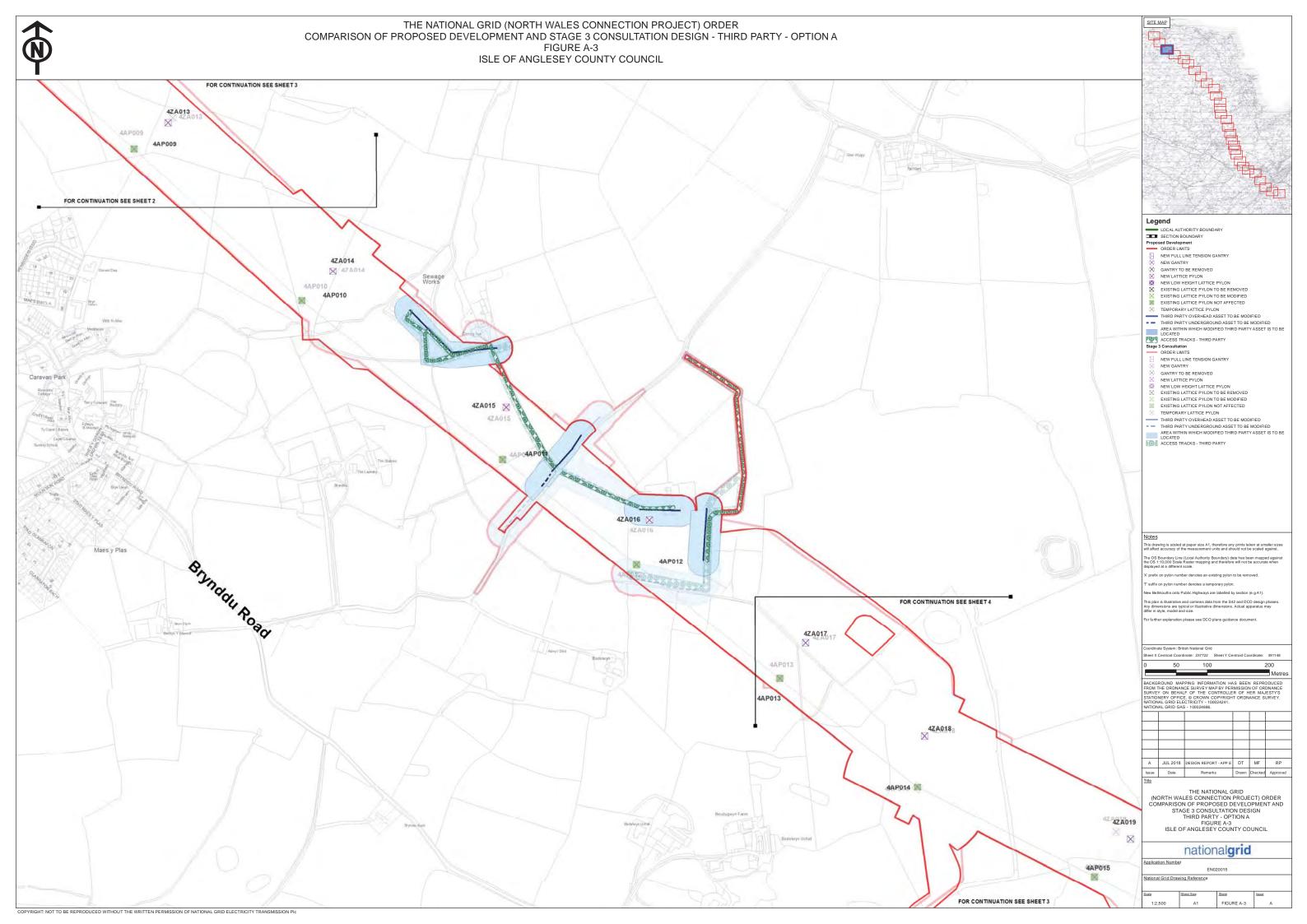
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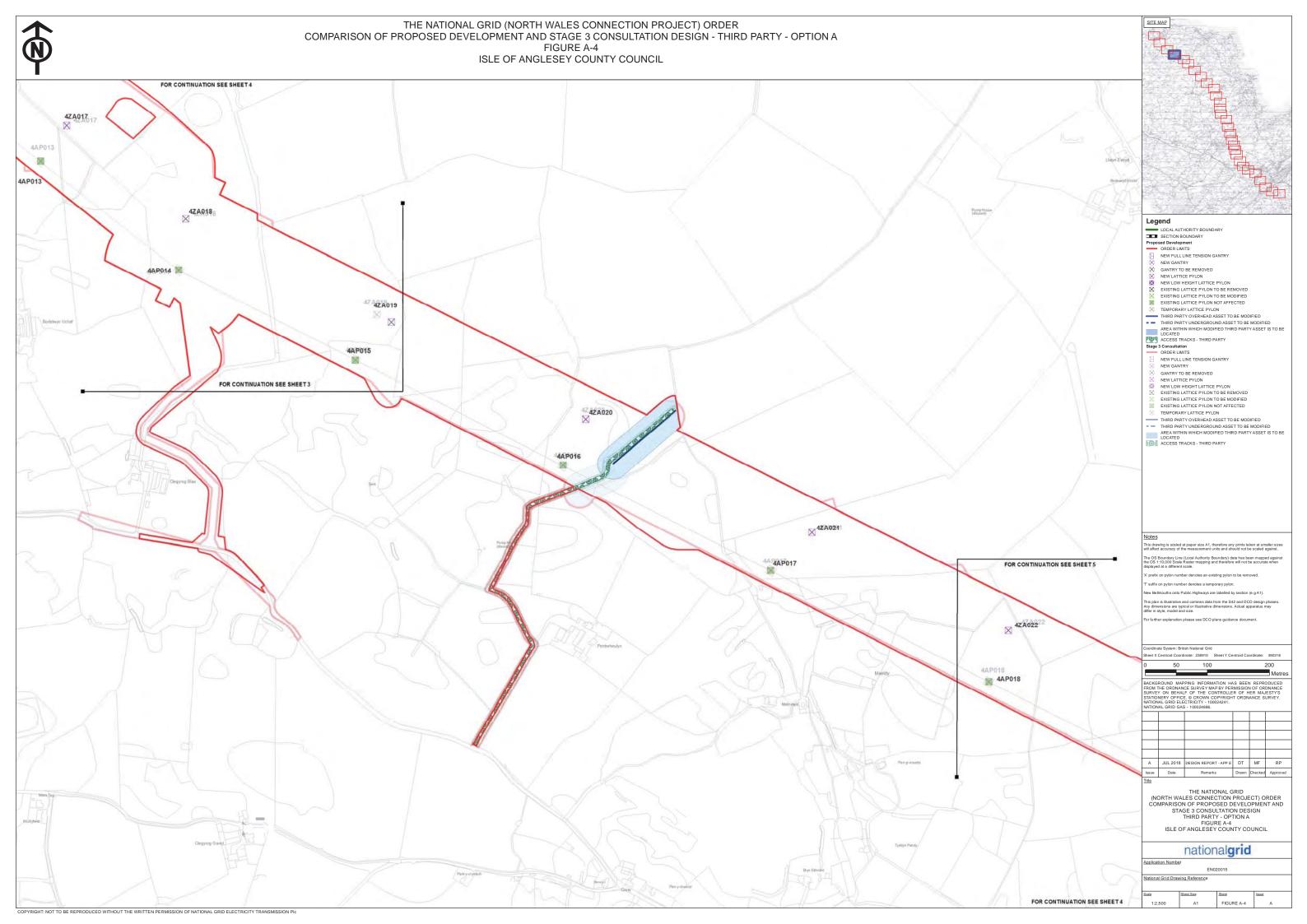
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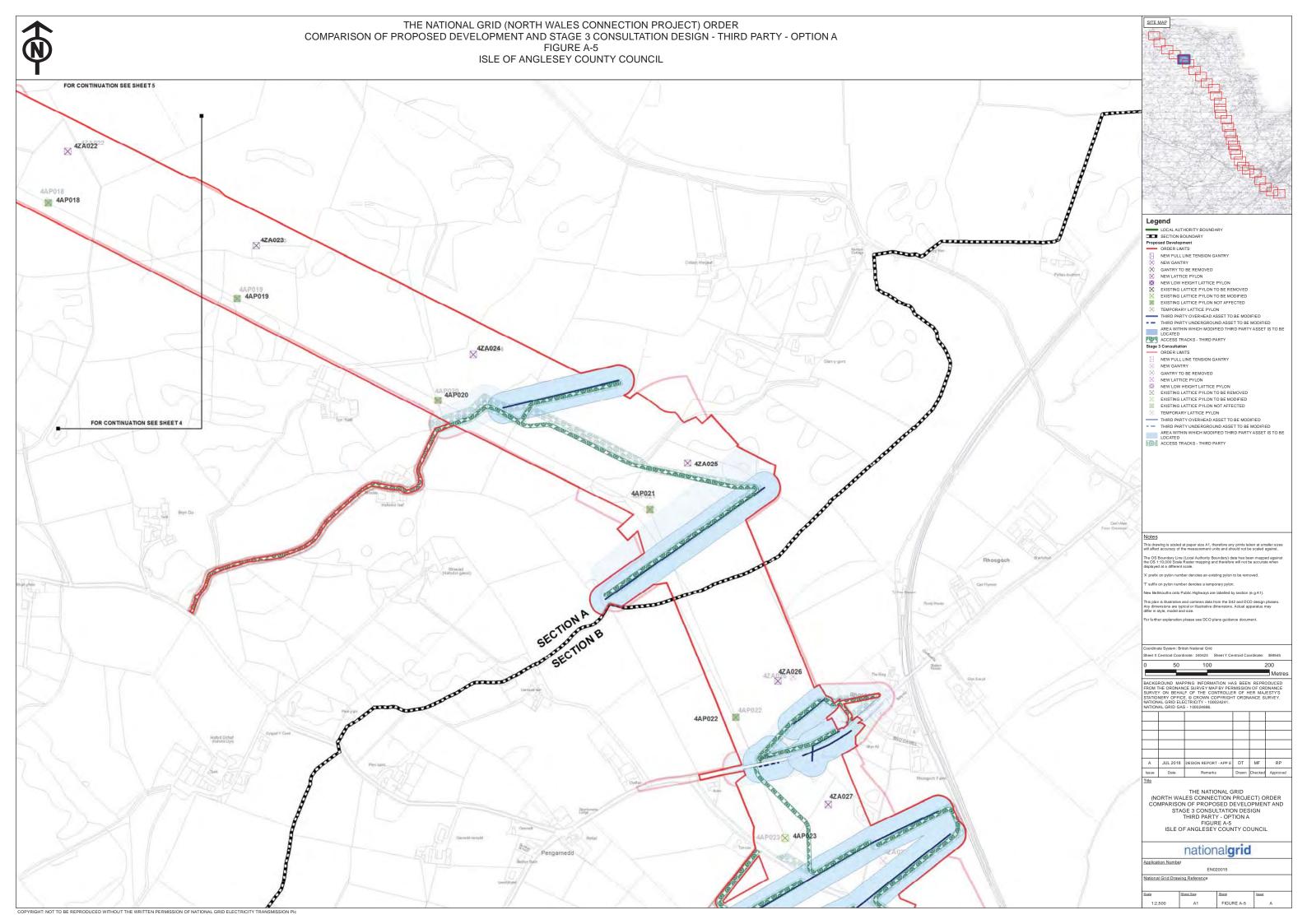


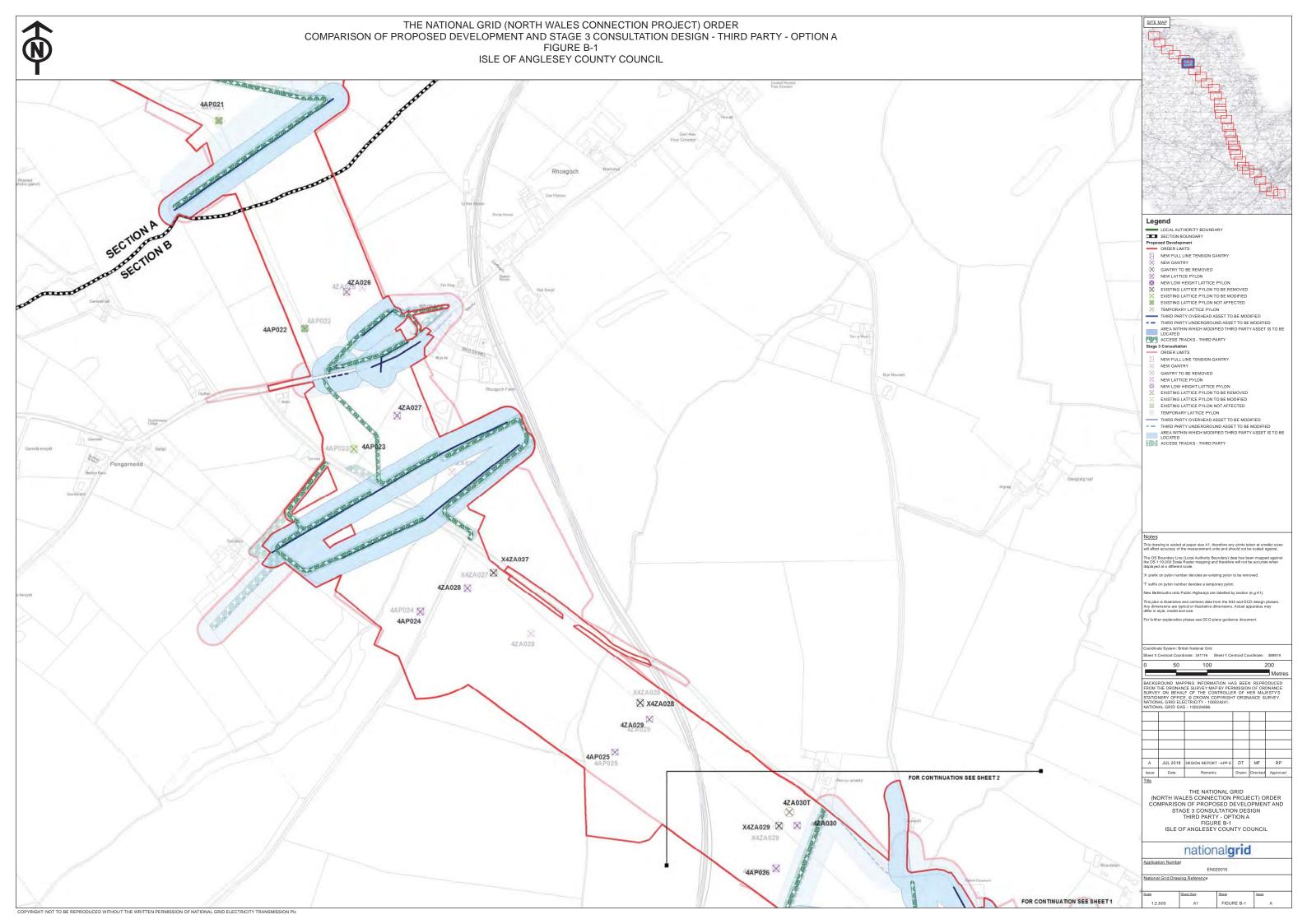


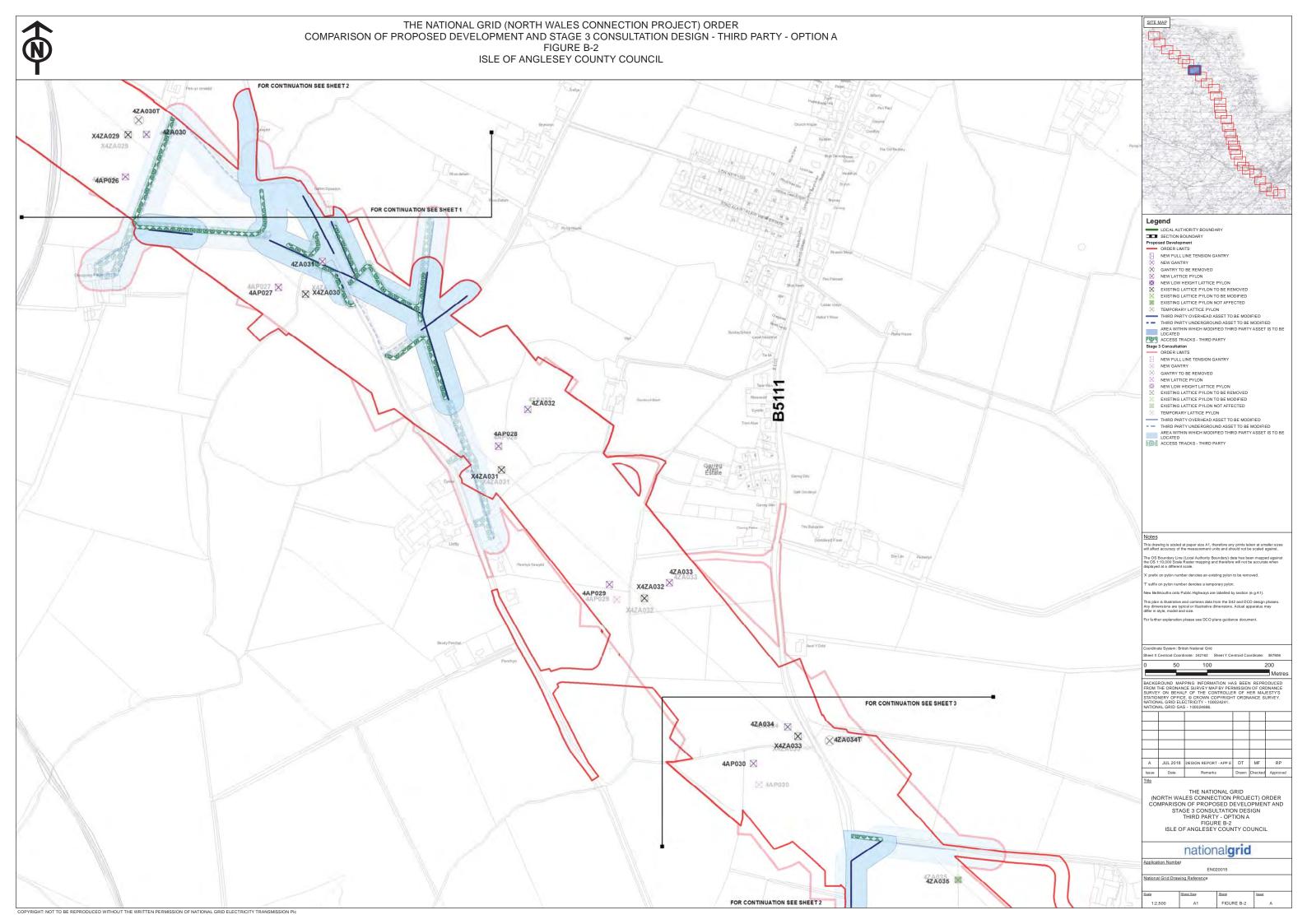


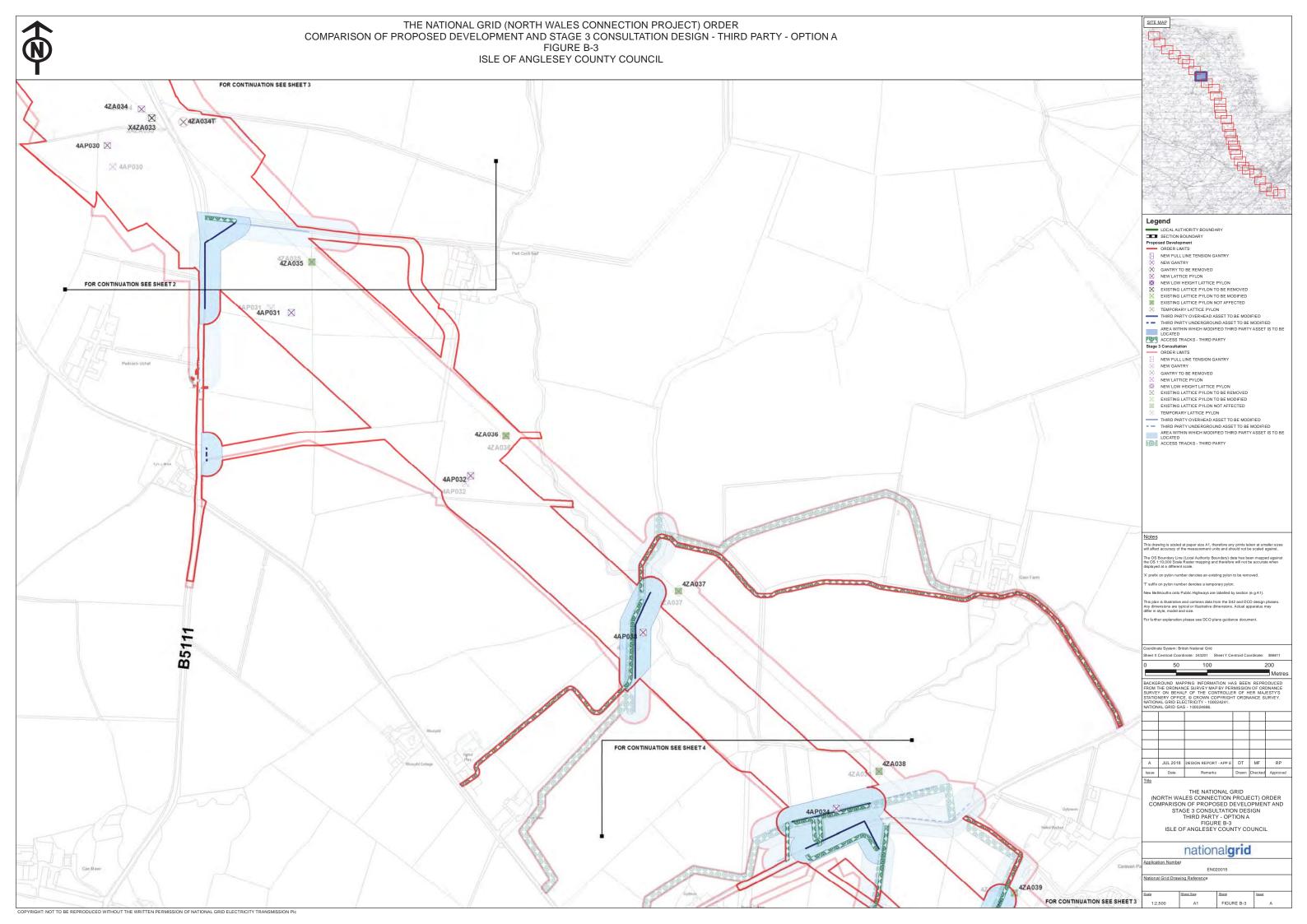




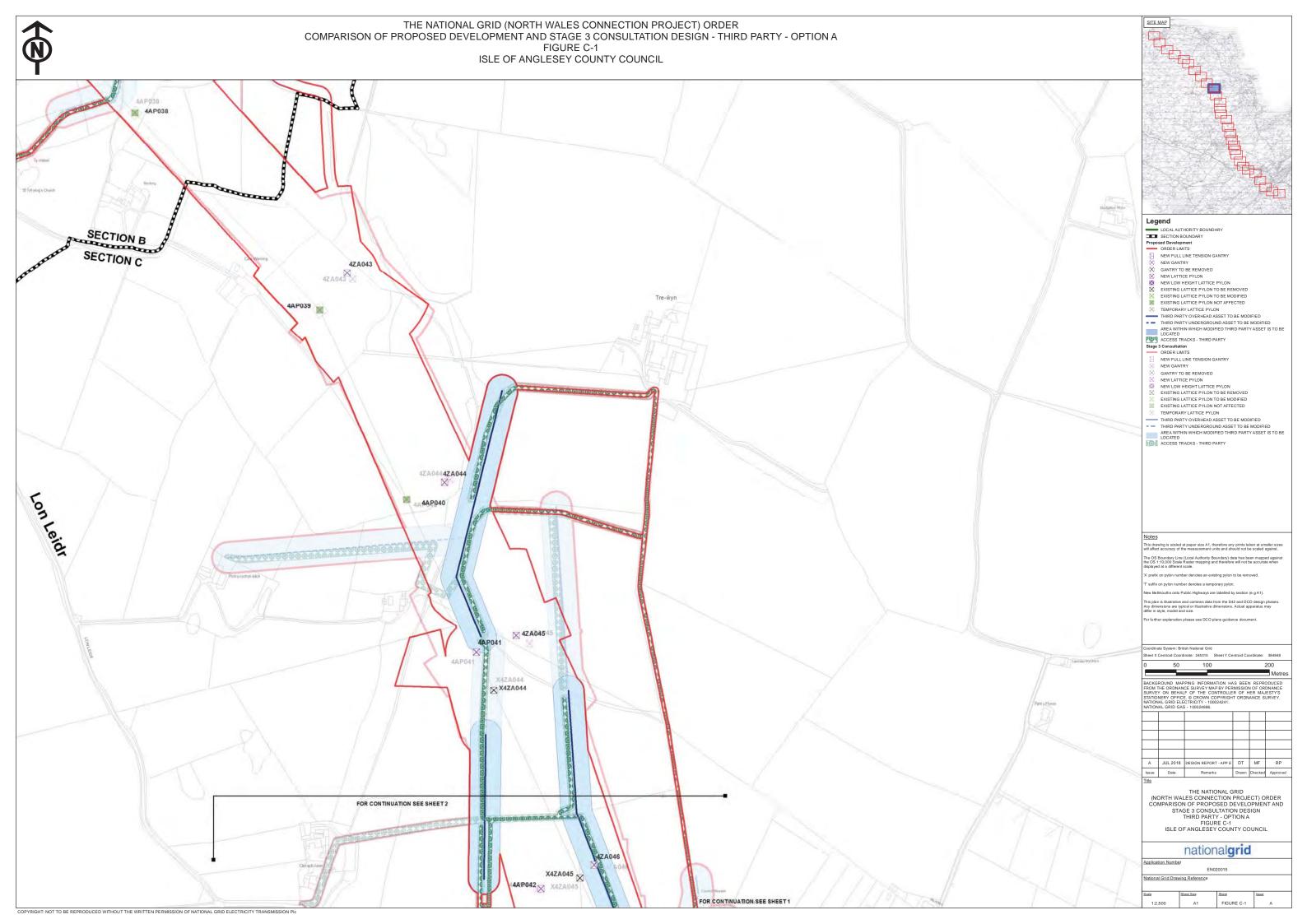


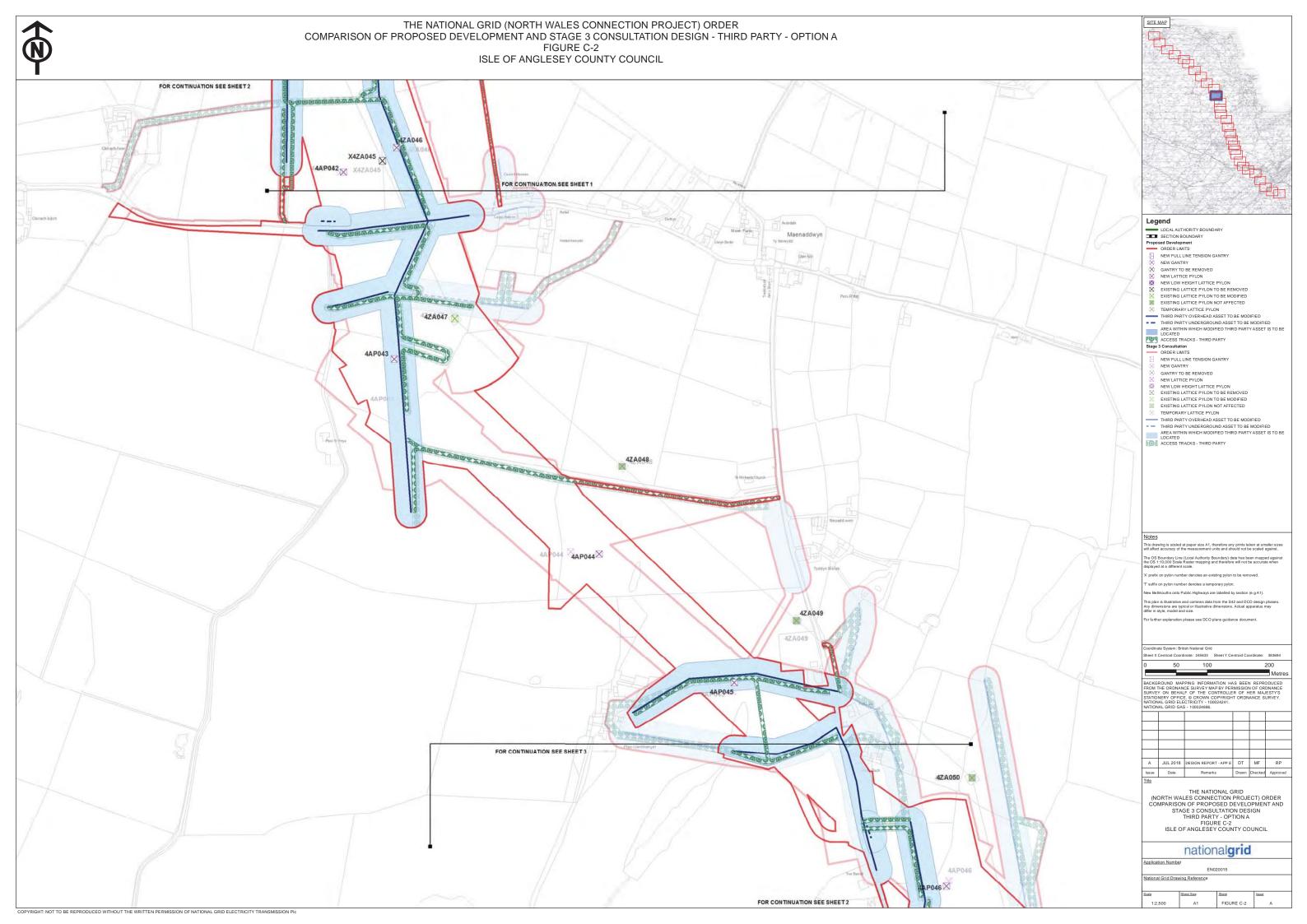


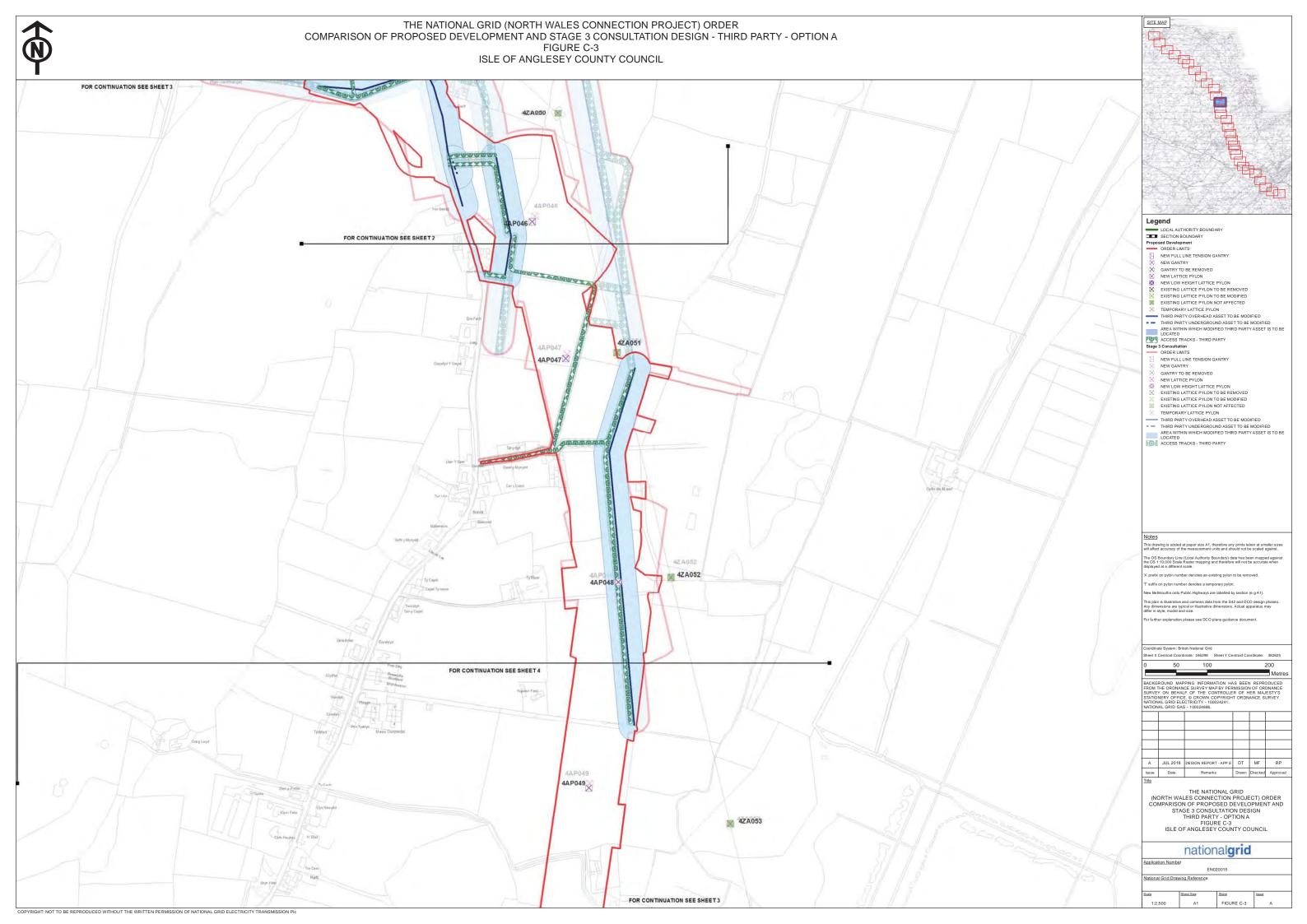


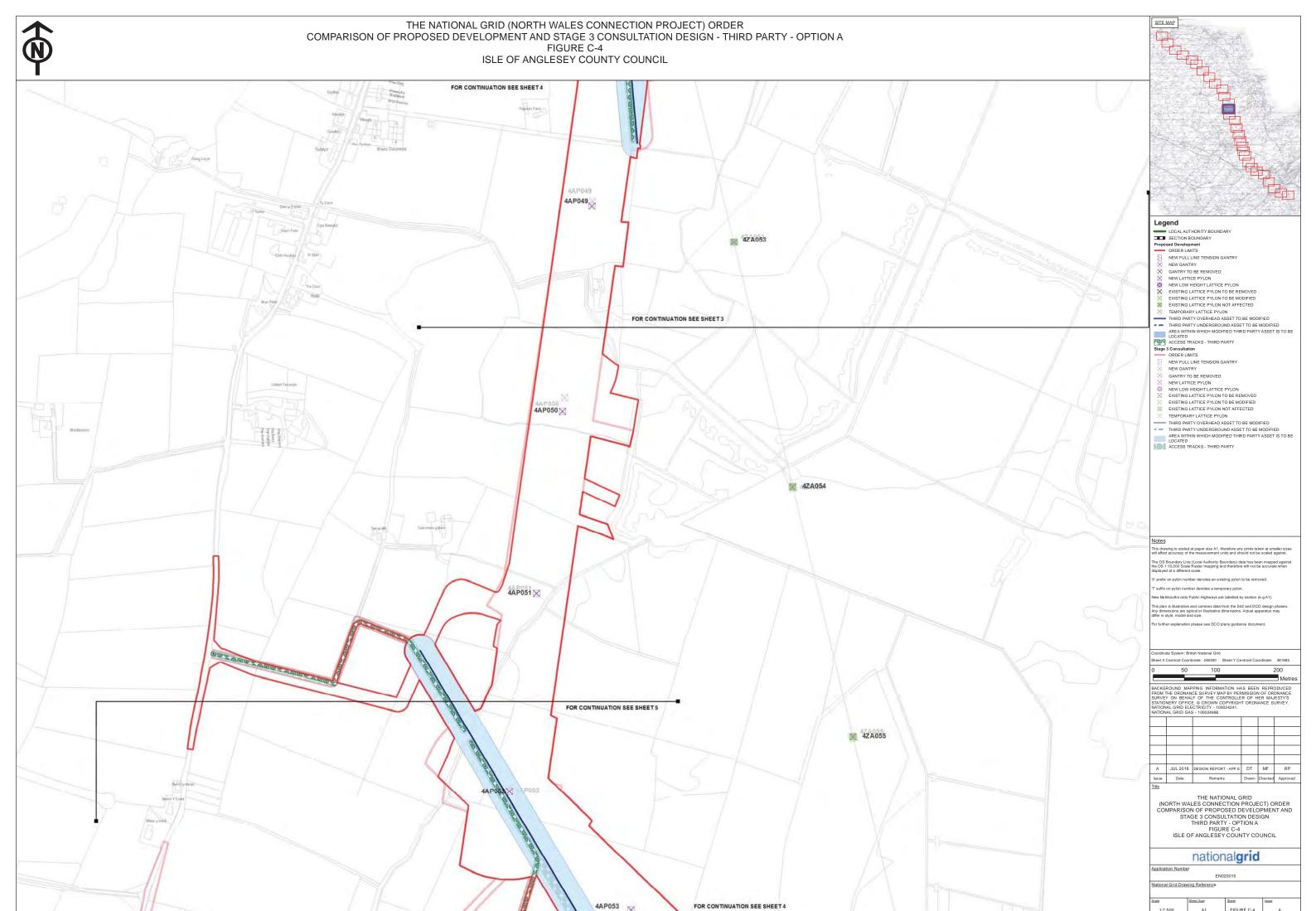


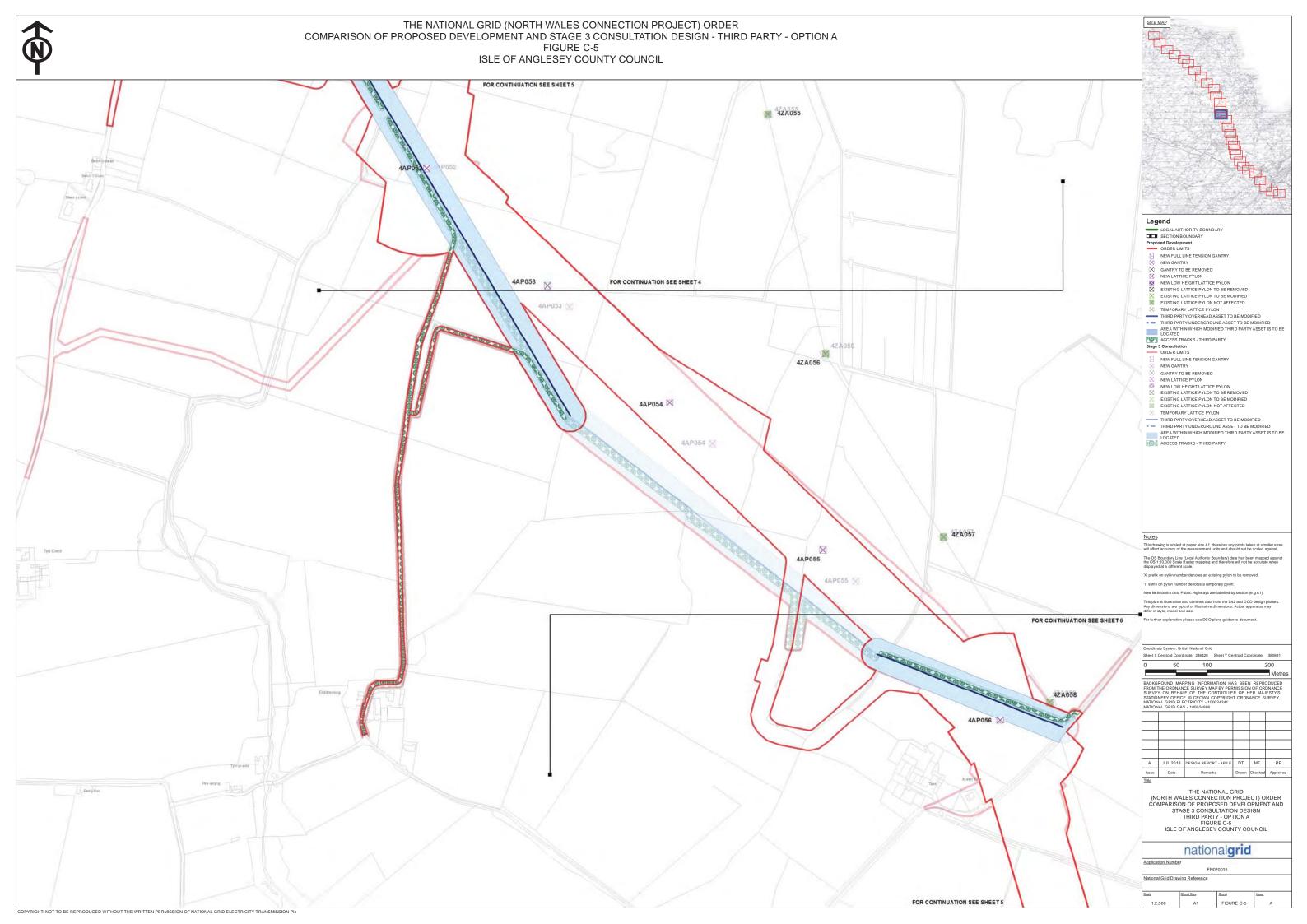
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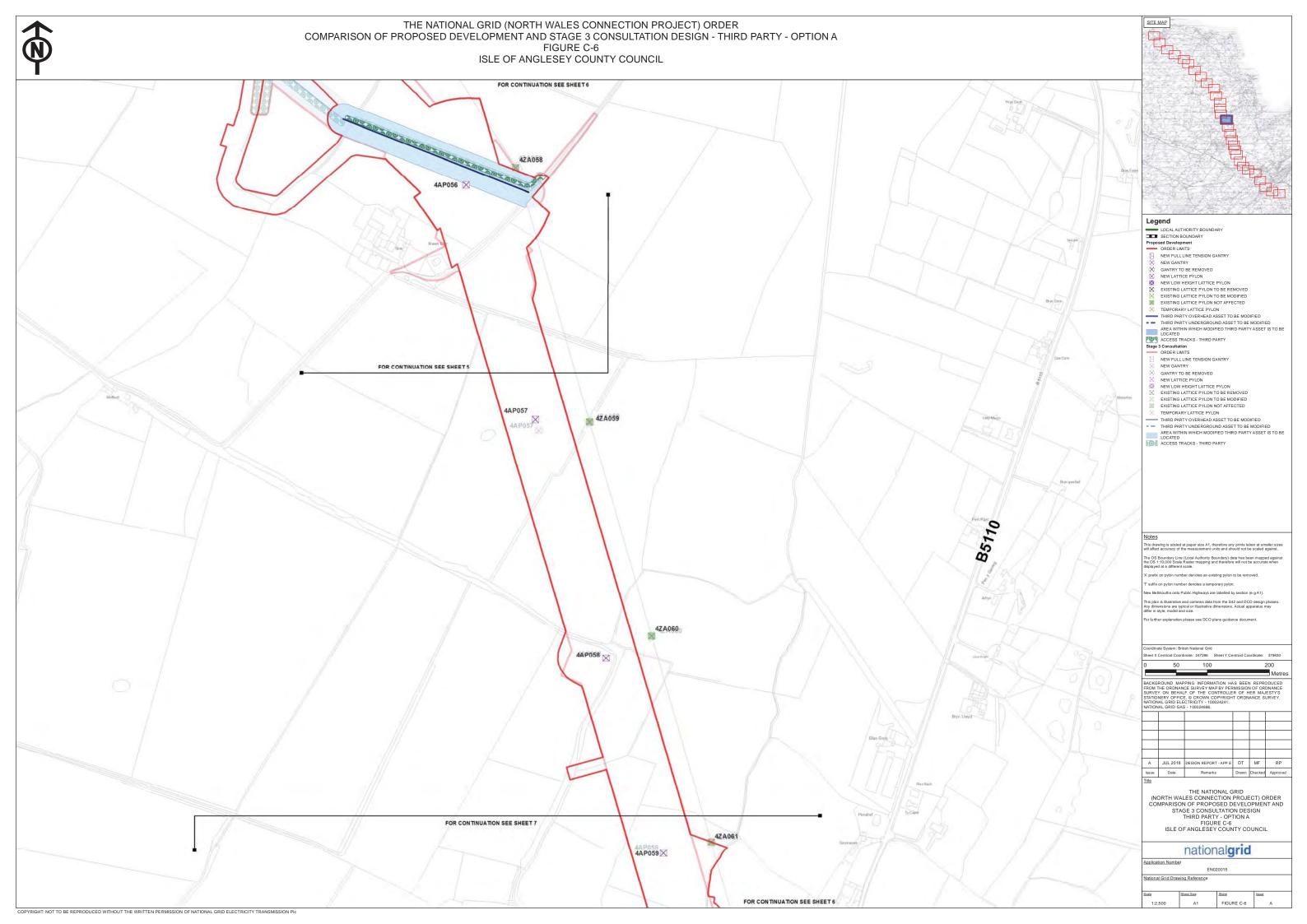


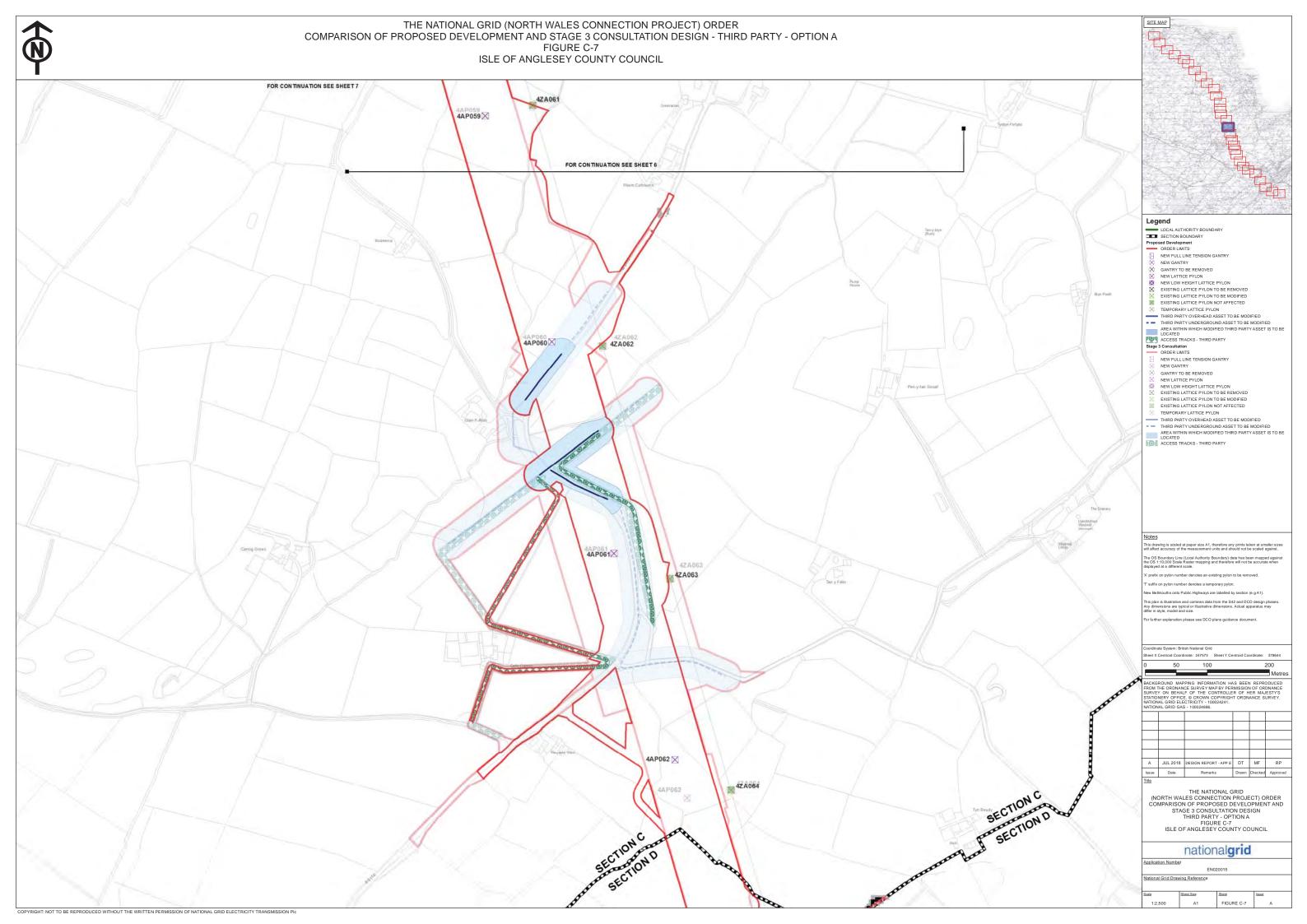


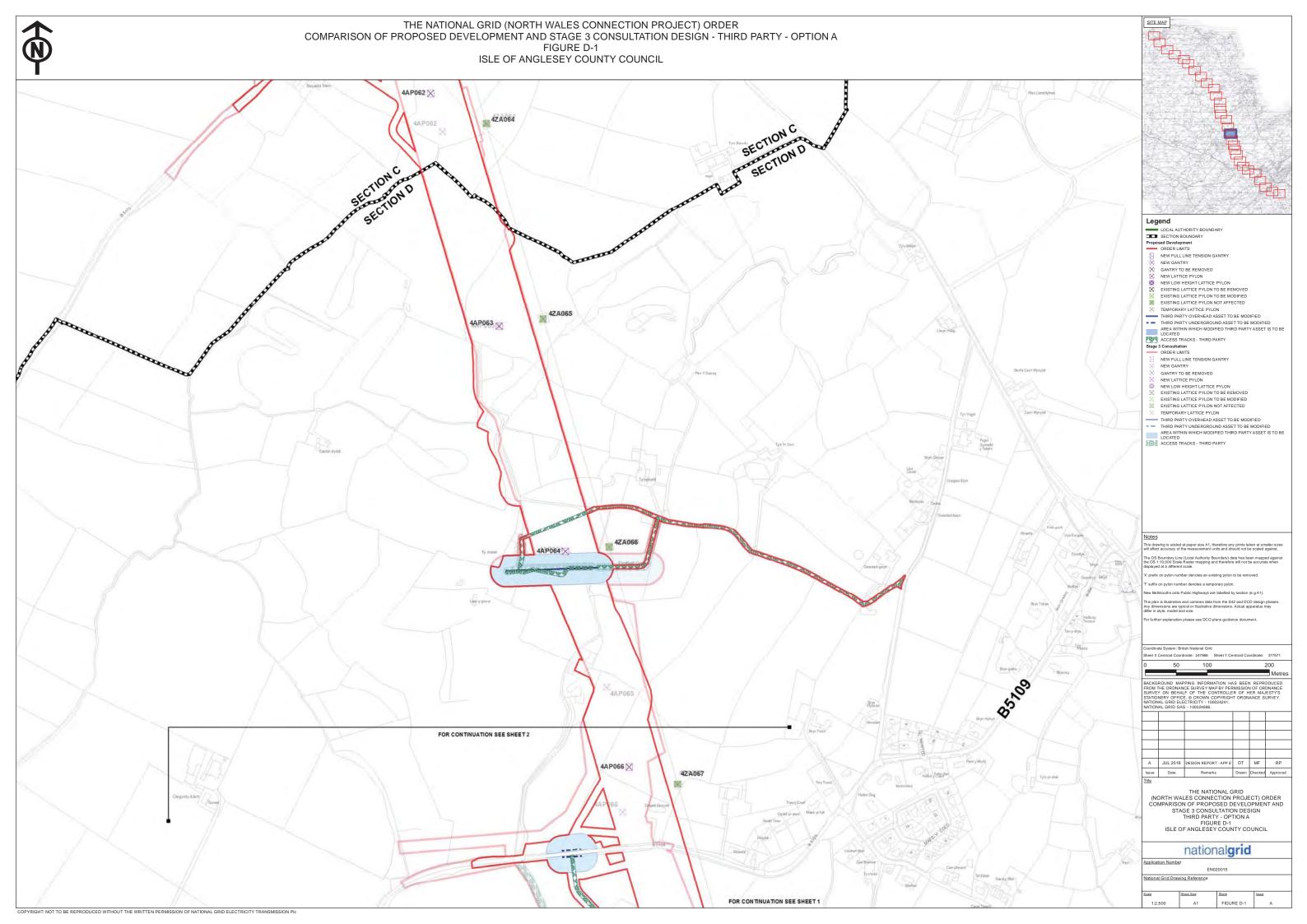




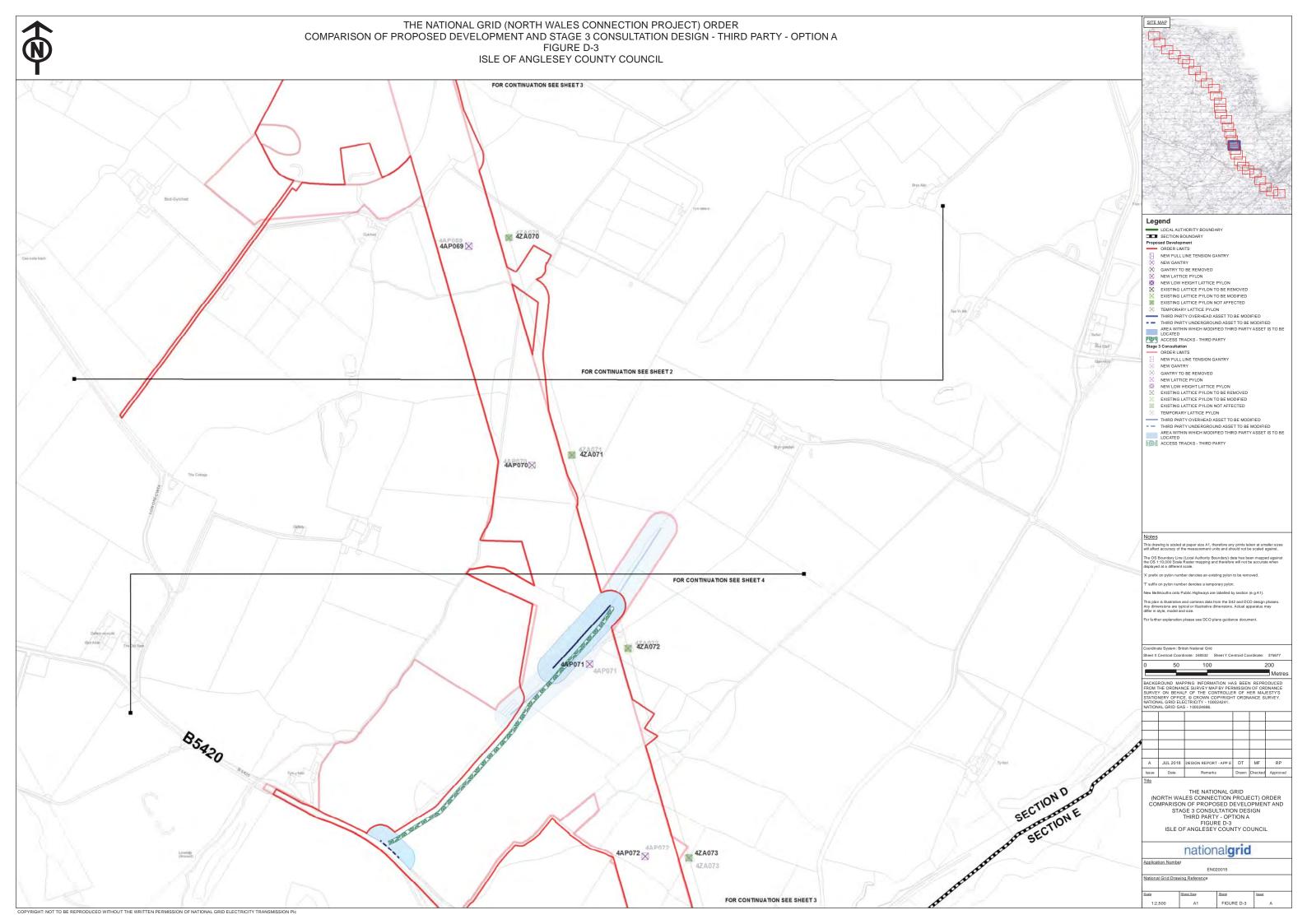


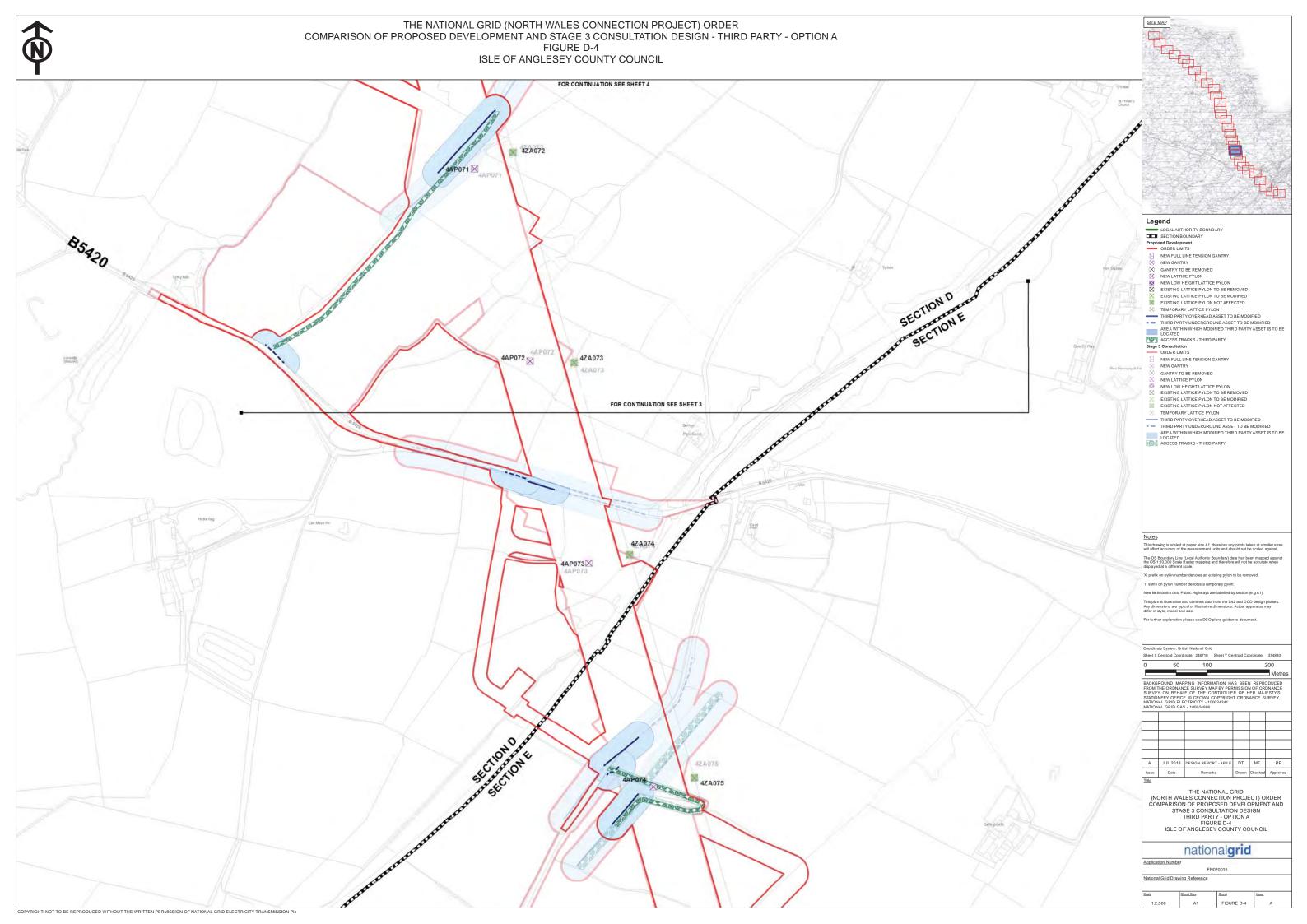


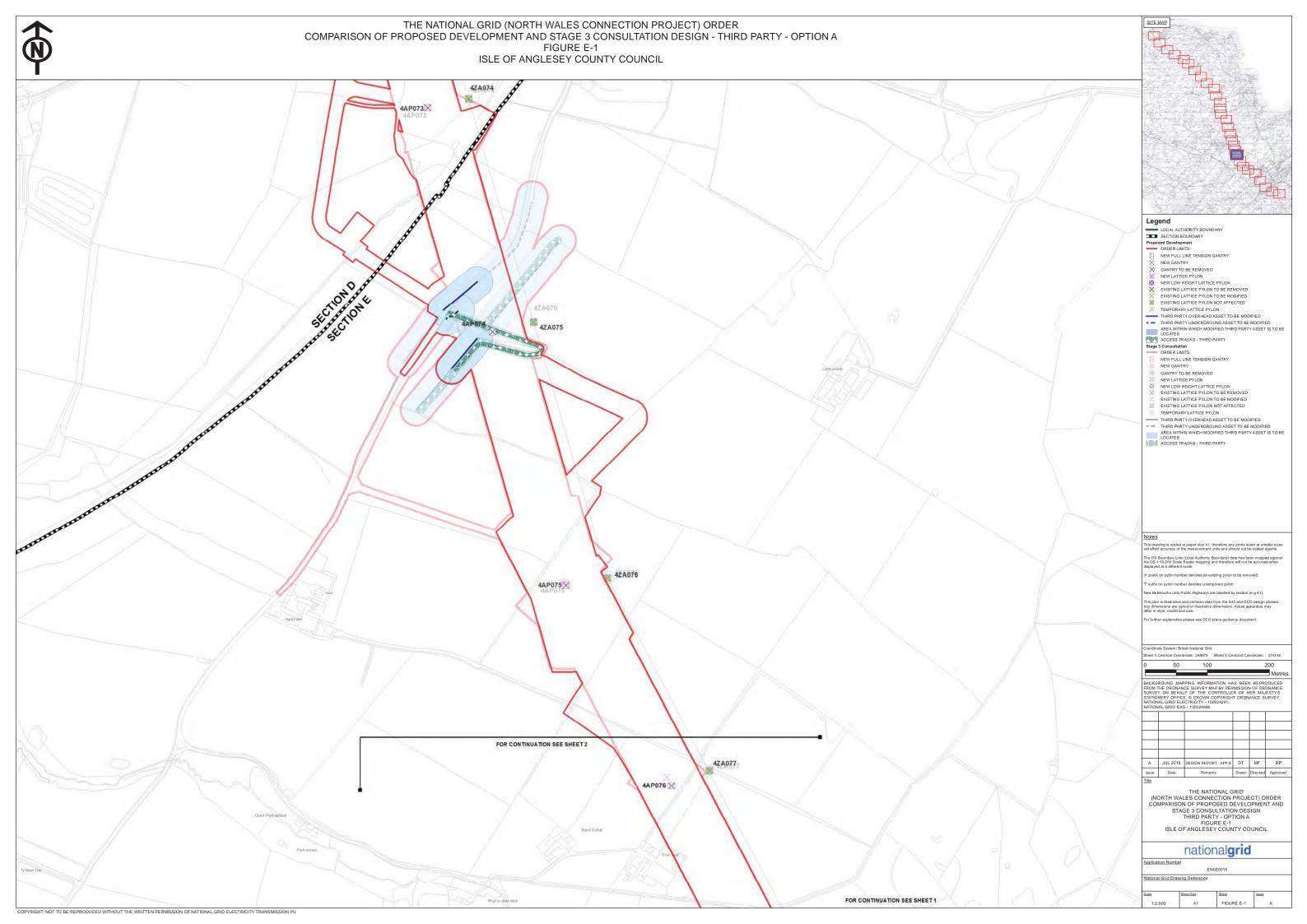




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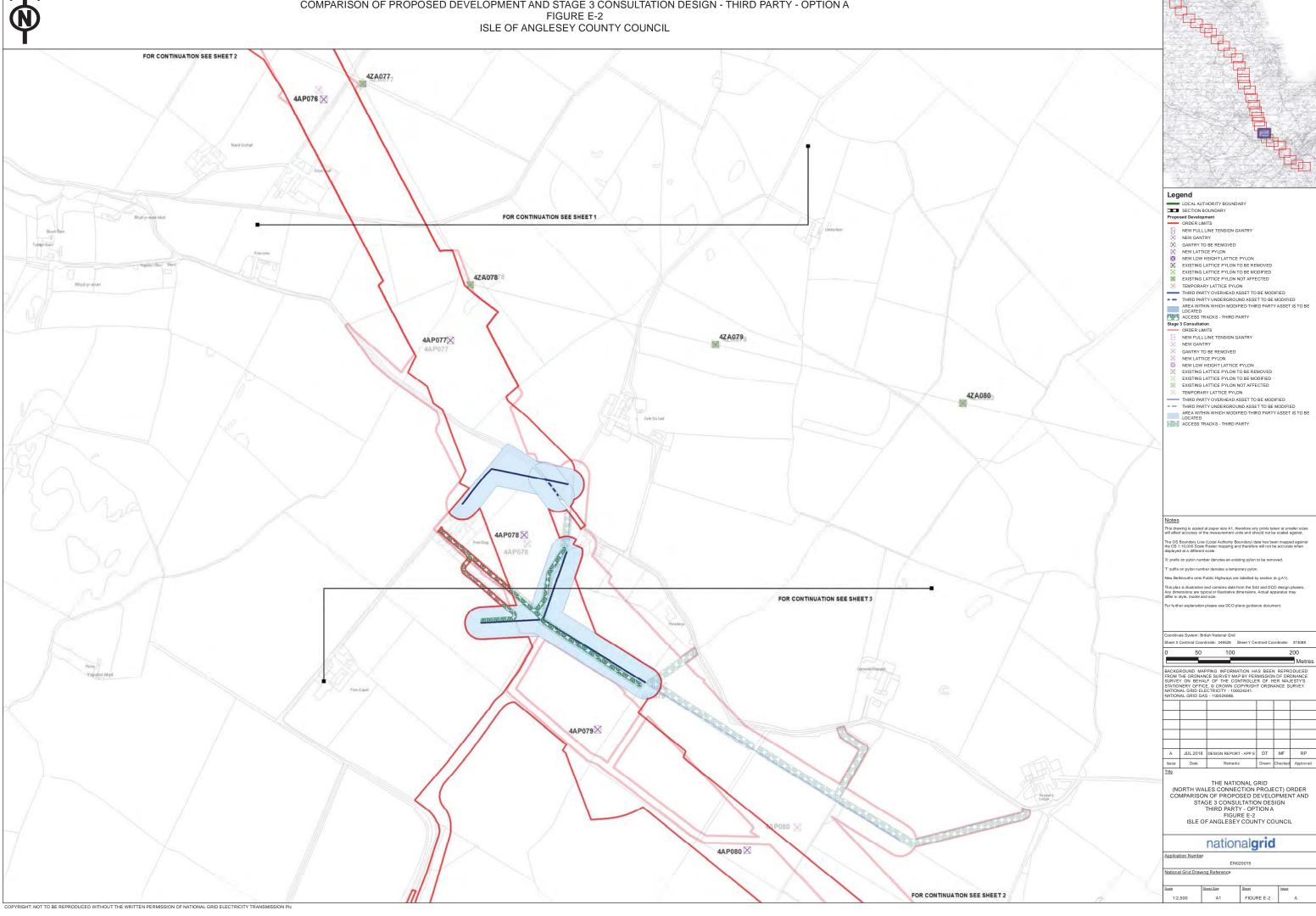


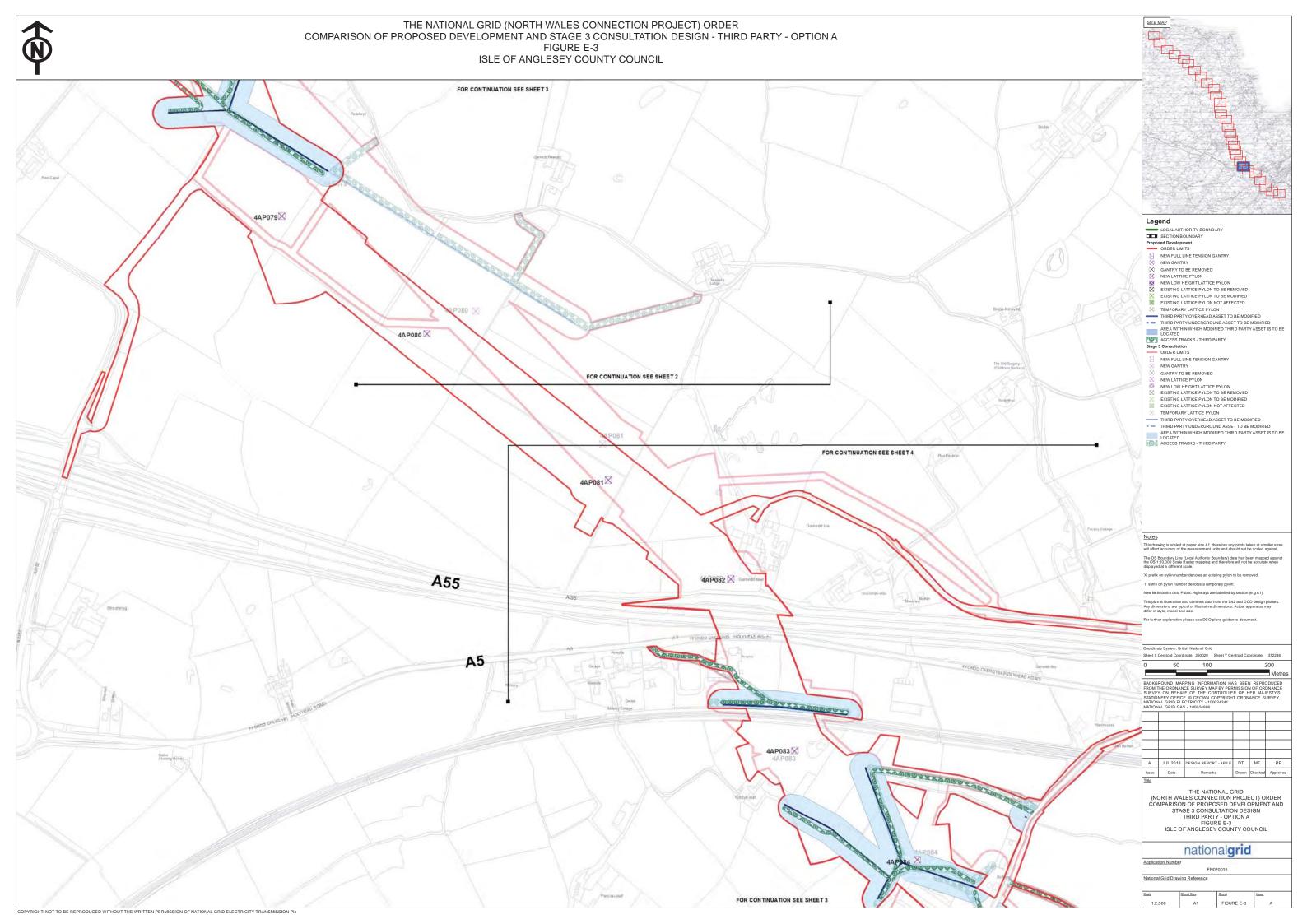


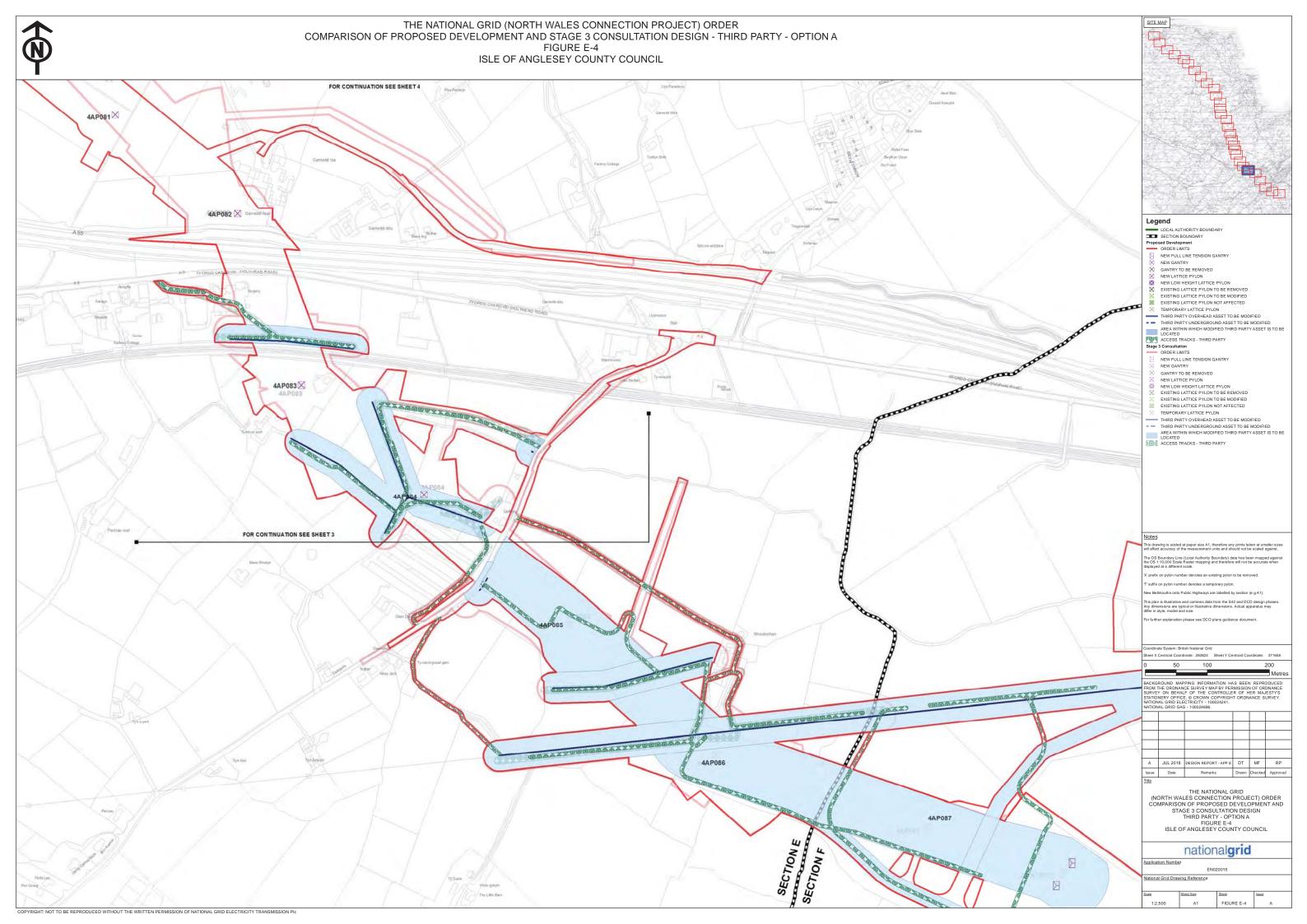


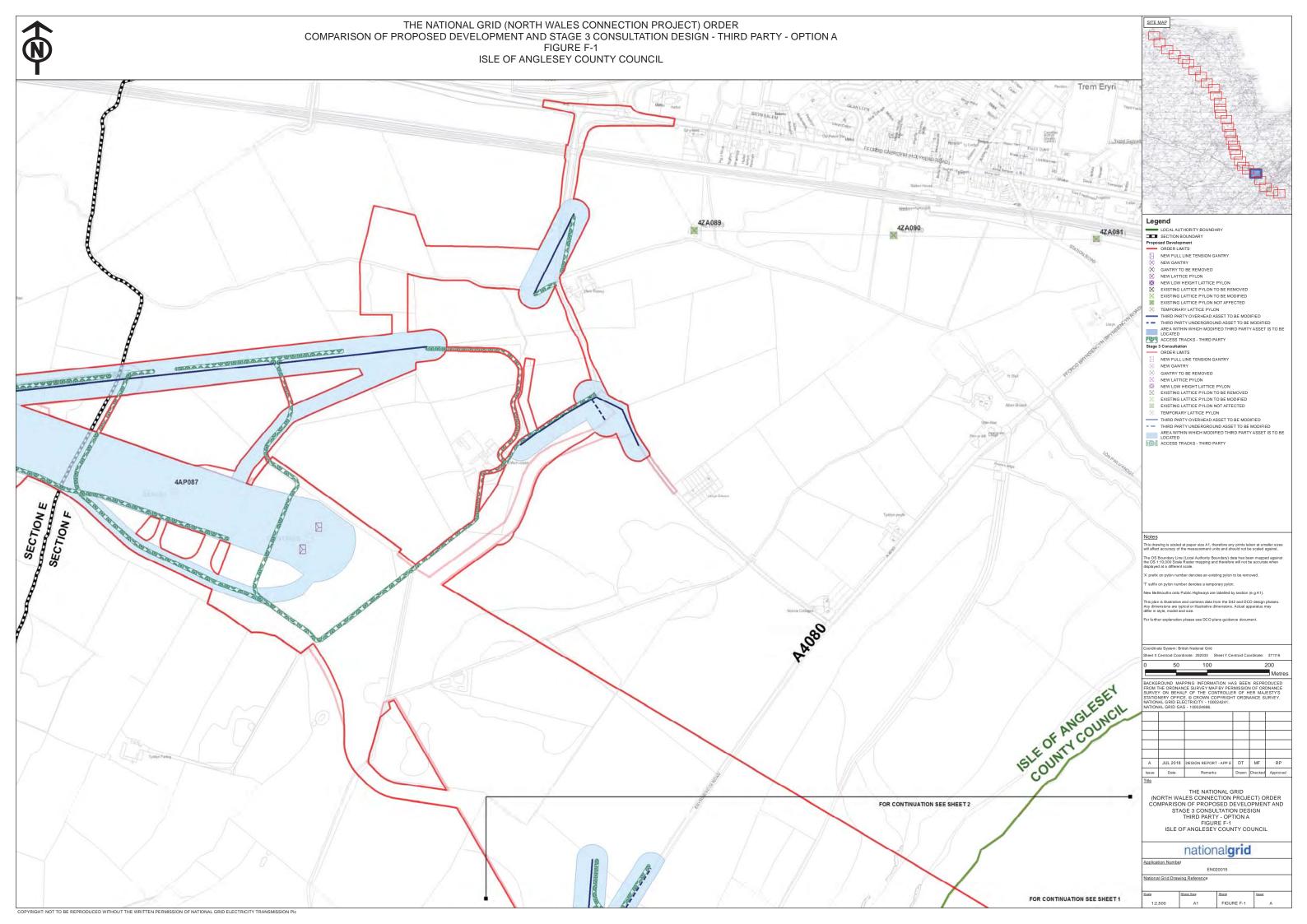


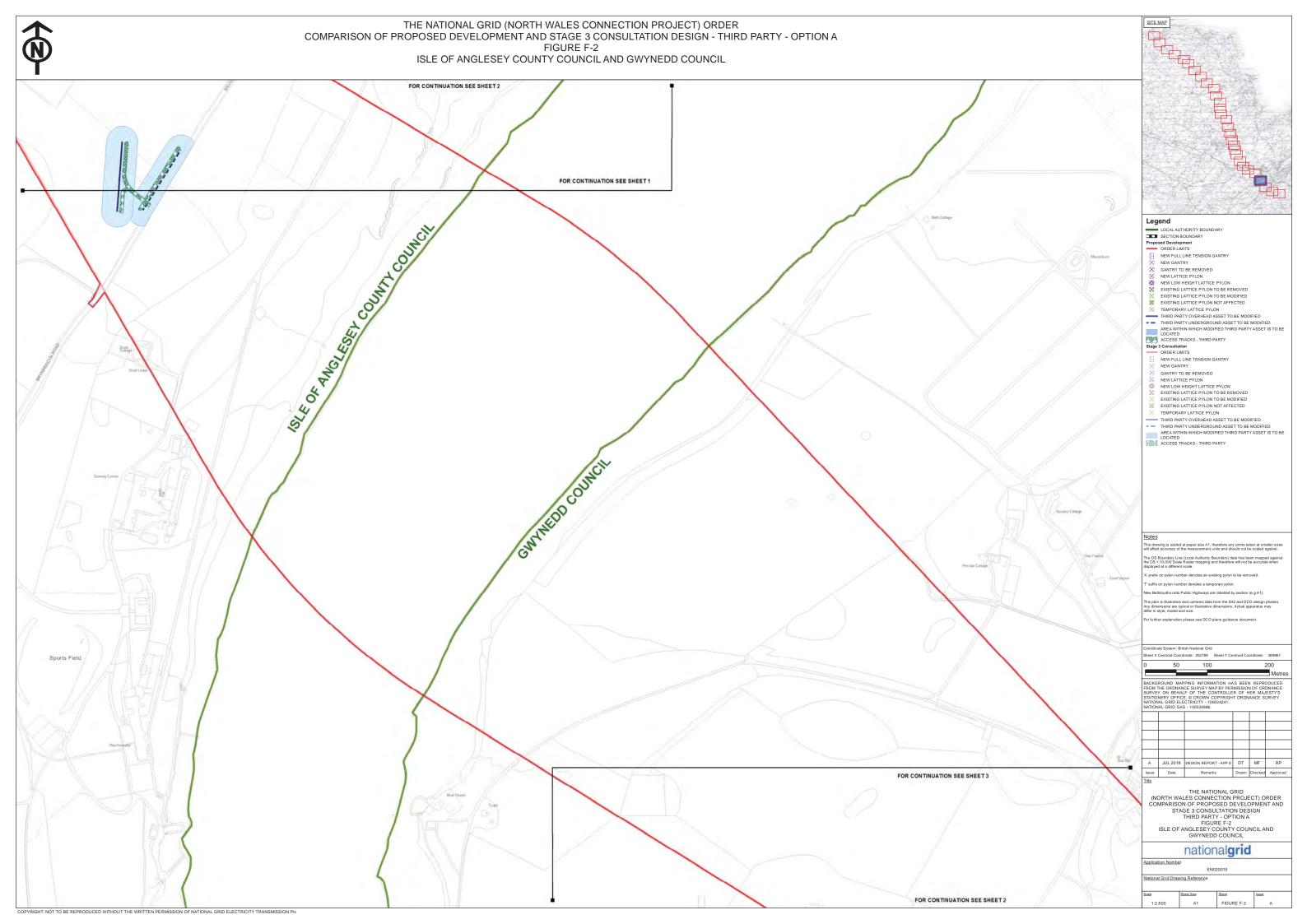
THE NATIONAL GRID (NORTH WALES CONNECTION PROJECT) ORDER COMPARISON OF PROPOSED DEVELOPMENT AND STAGE 3 CONSULTATION DESIGN - THIRD PARTY - OPTION A FIGURE E-2

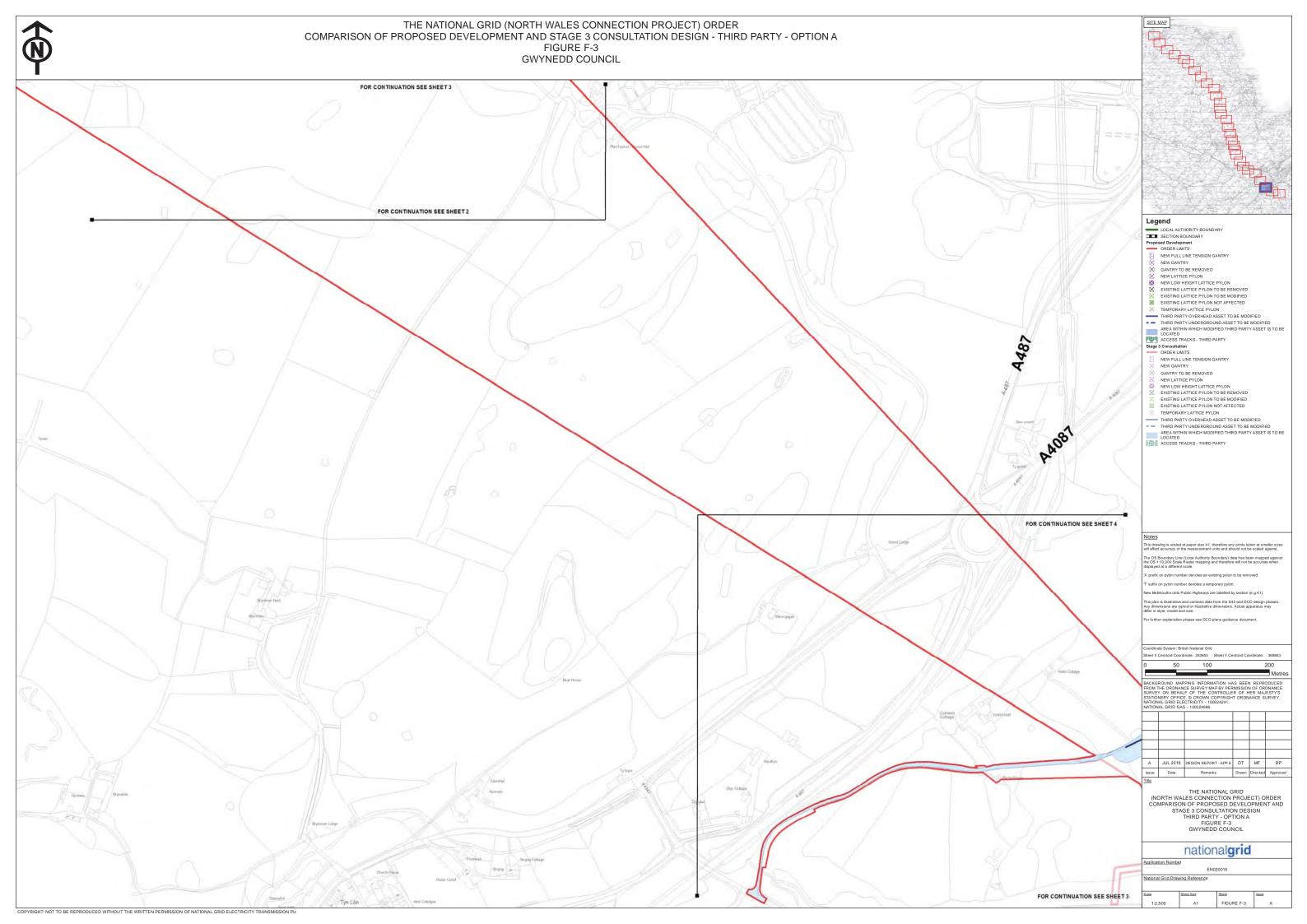


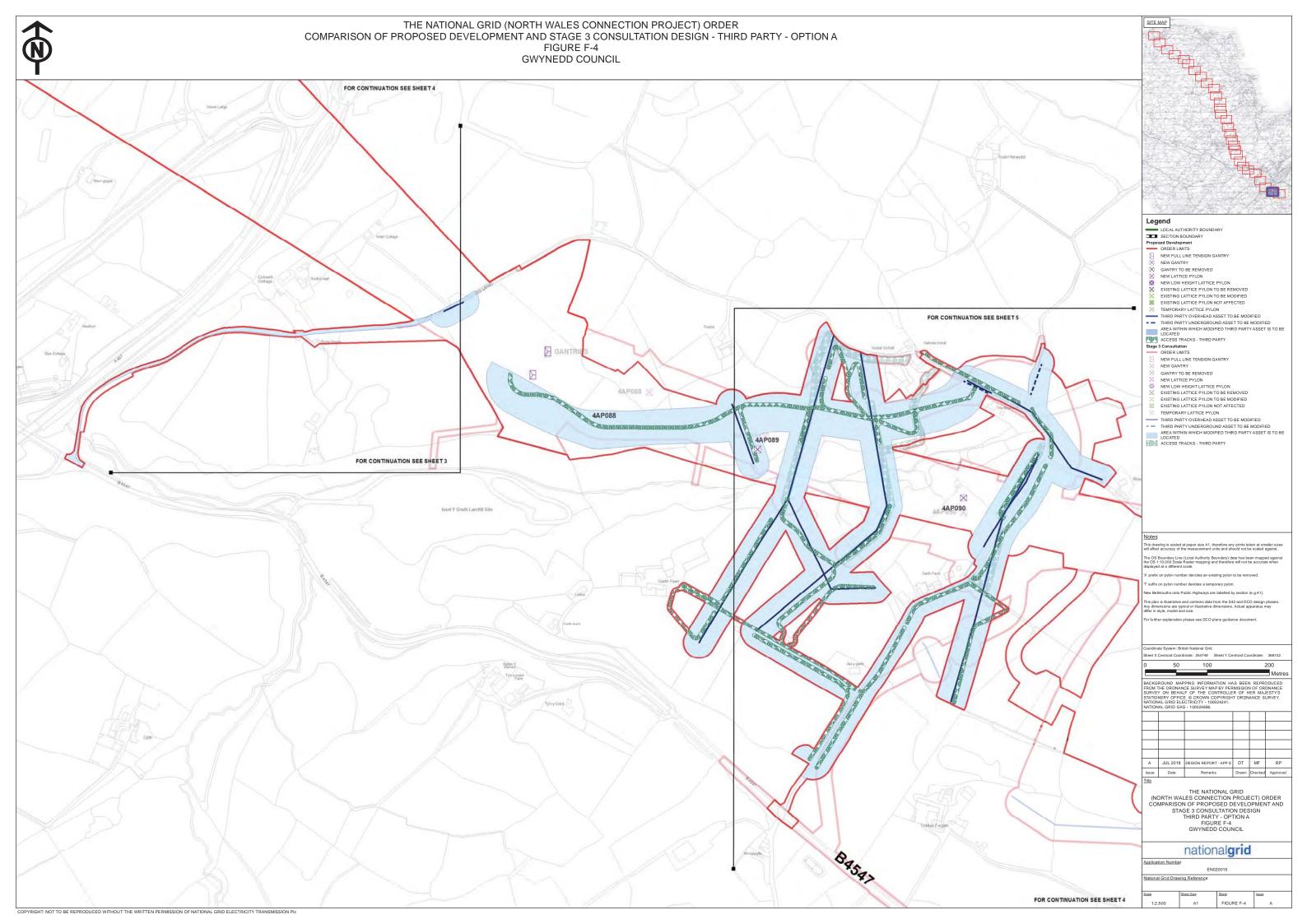






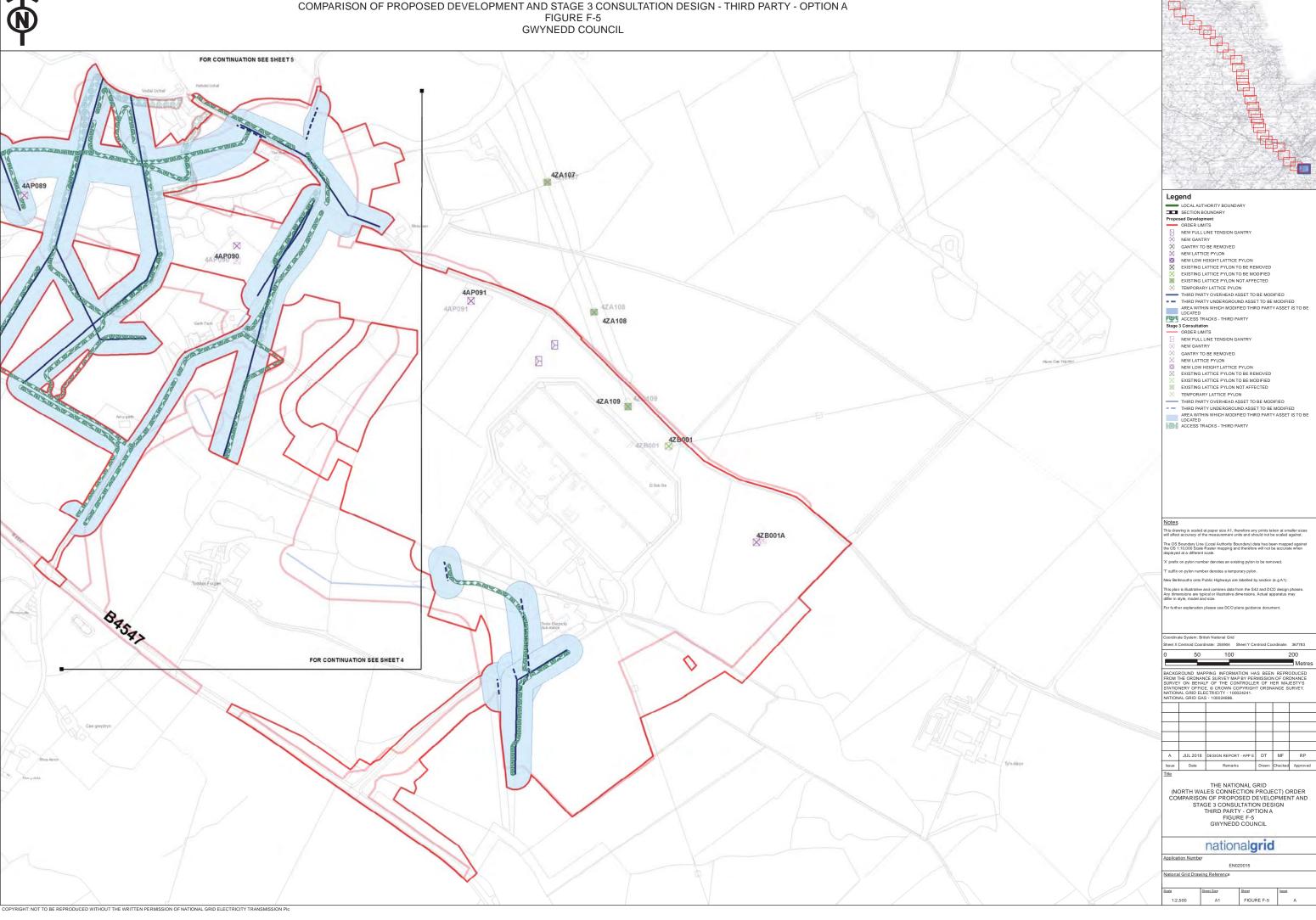






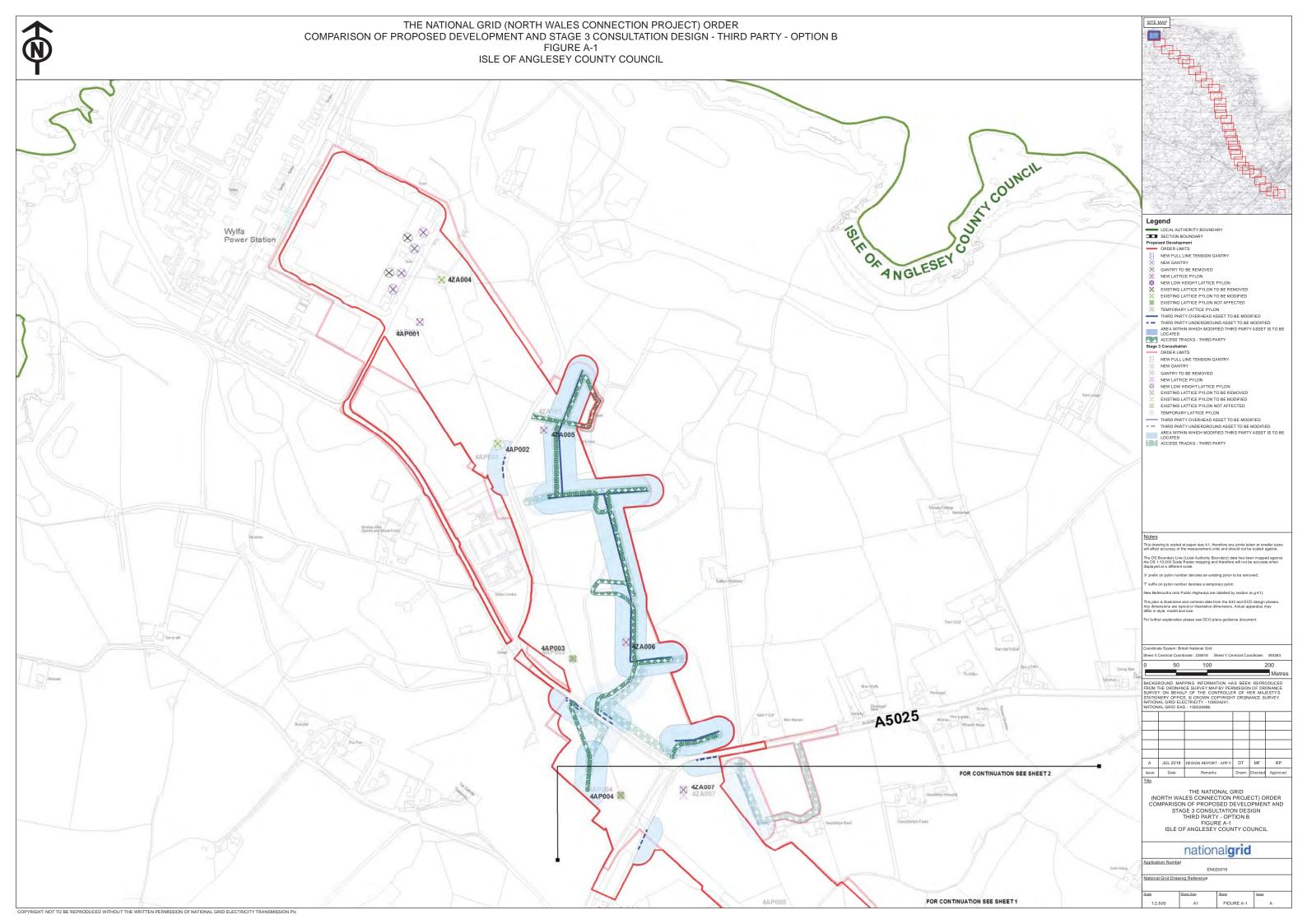


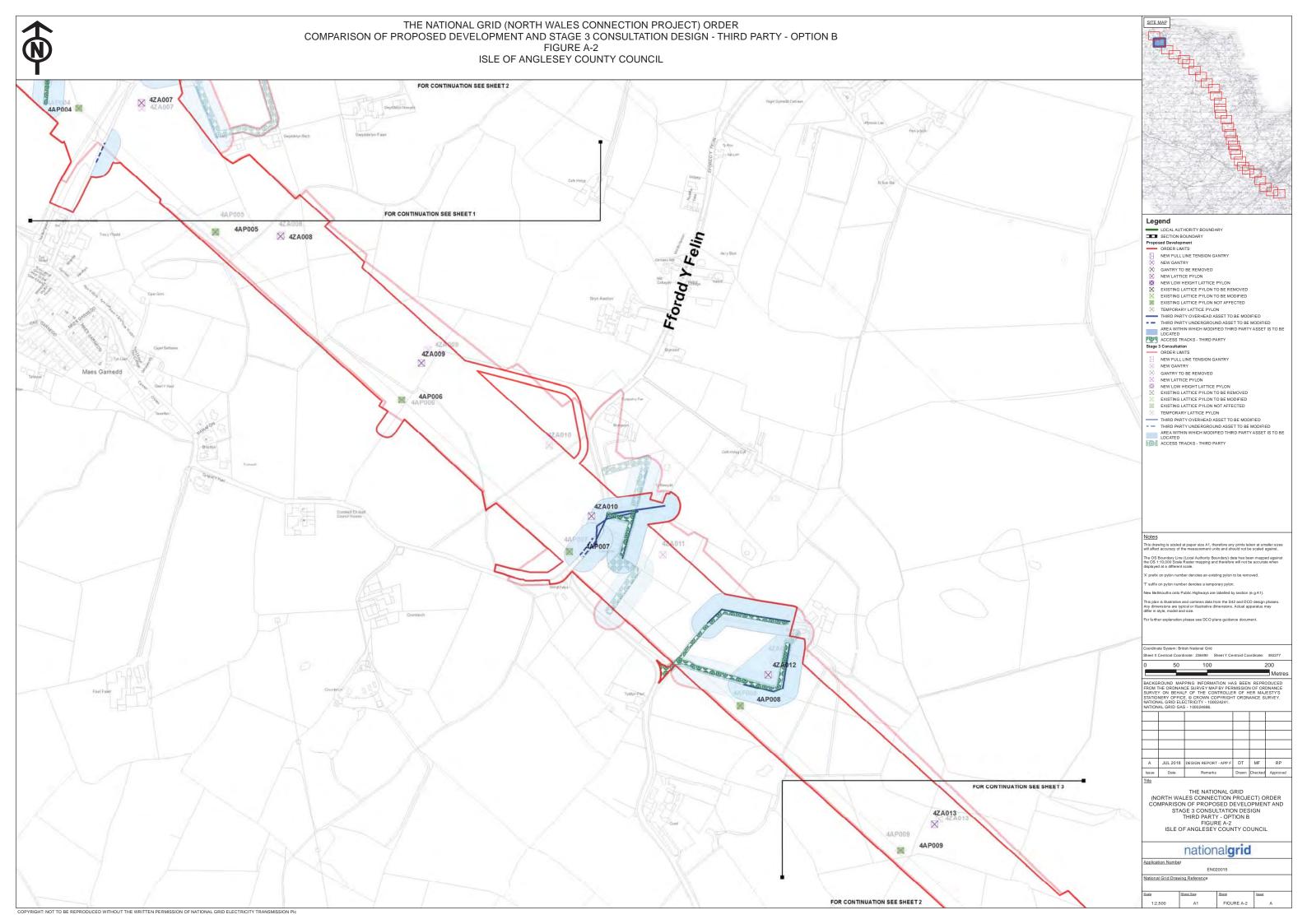
THE NATIONAL GRID (NORTH WALES CONNECTION PROJECT) ORDER COMPARISON OF PROPOSED DEVELOPMENT AND STAGE 3 CONSULTATION DESIGN - THIRD PARTY - OPTION A FIGURE F-5

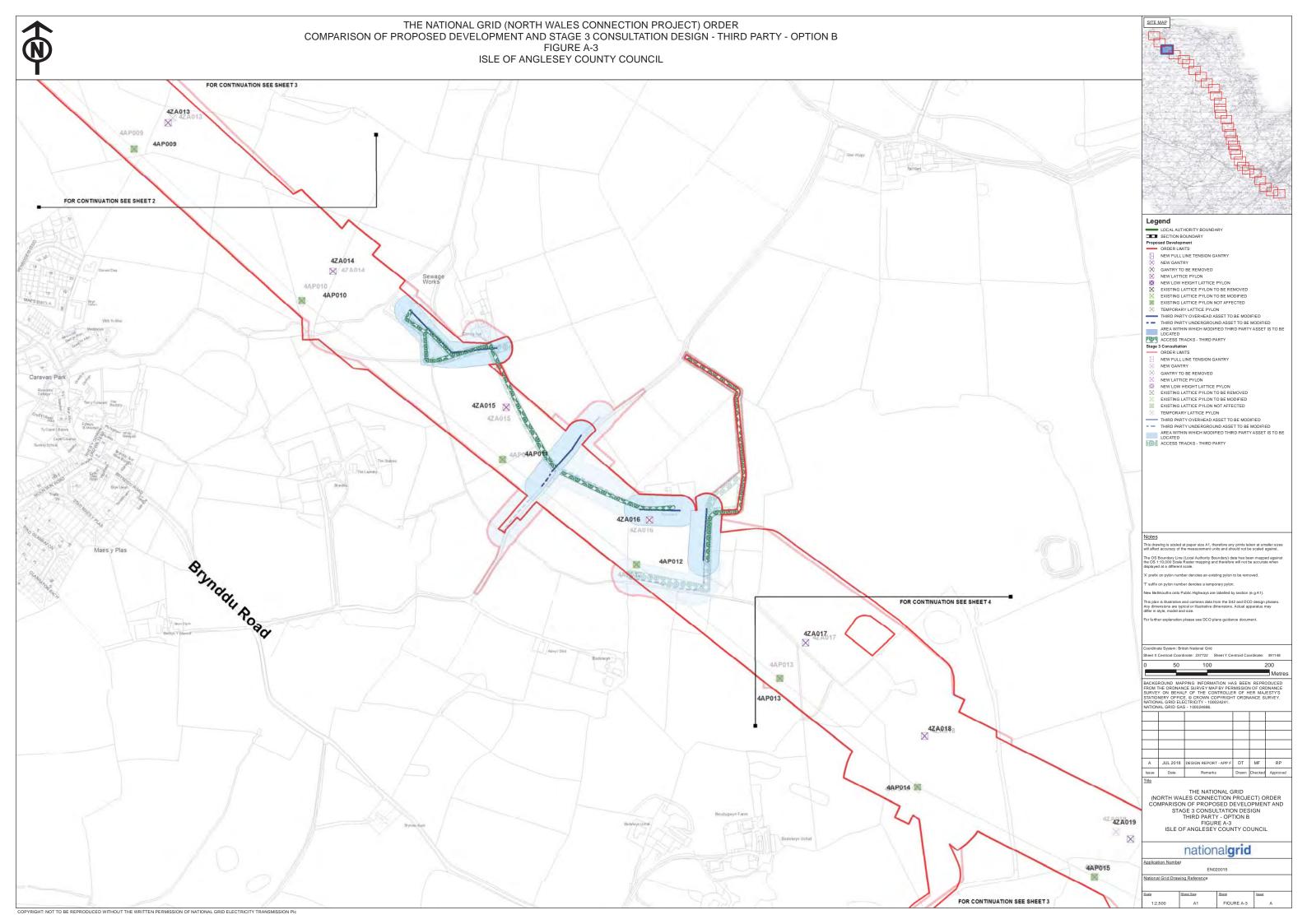


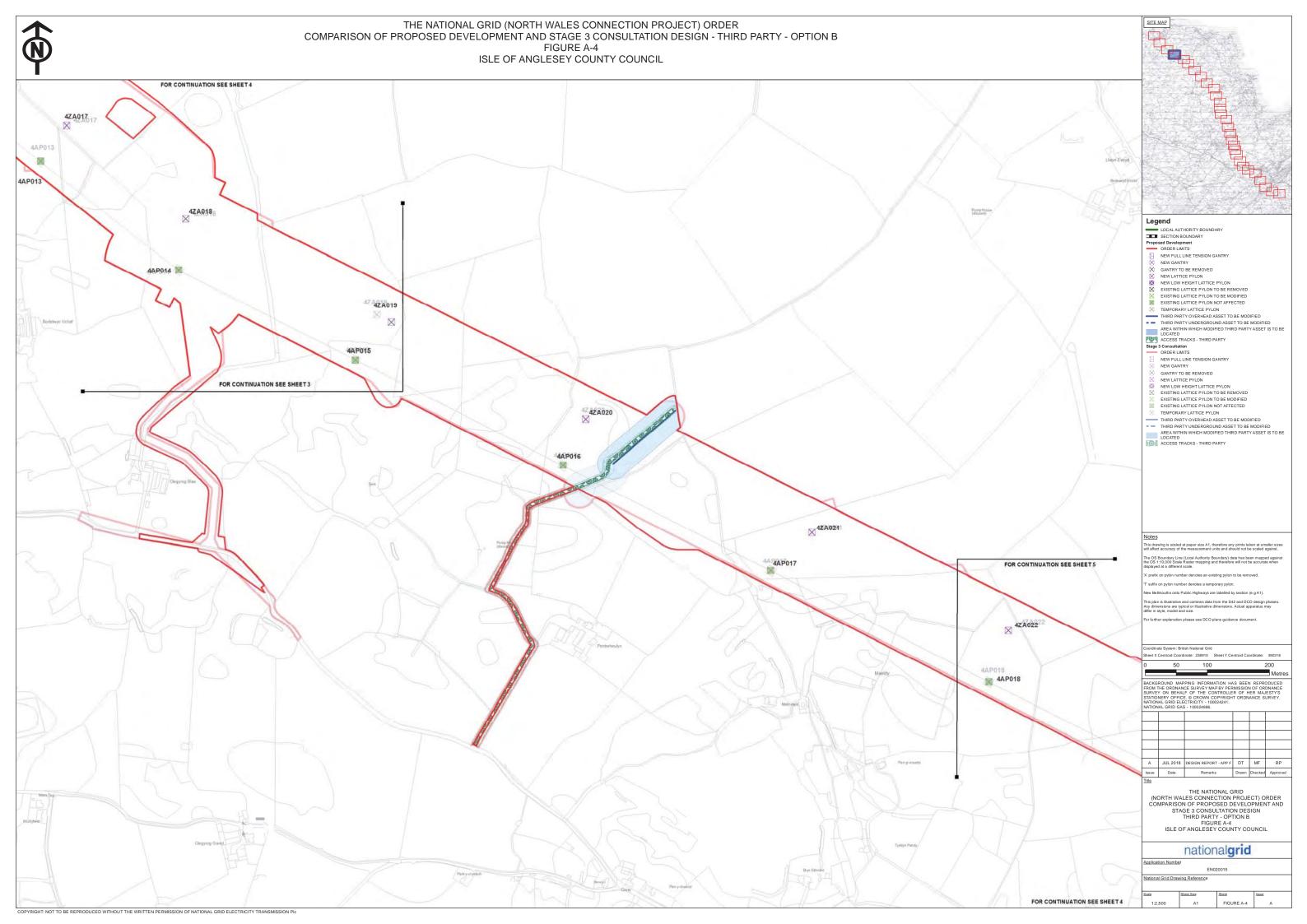
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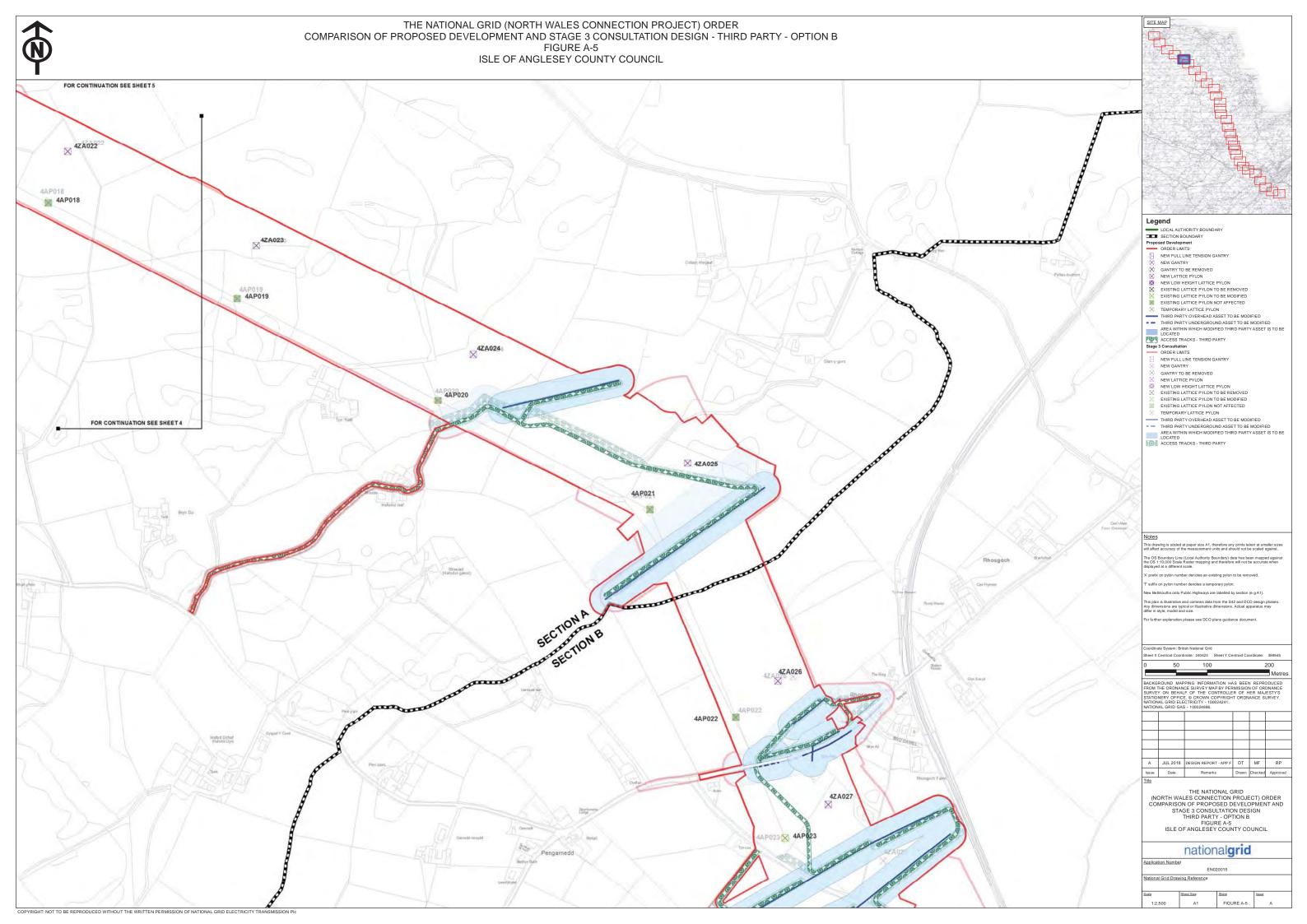


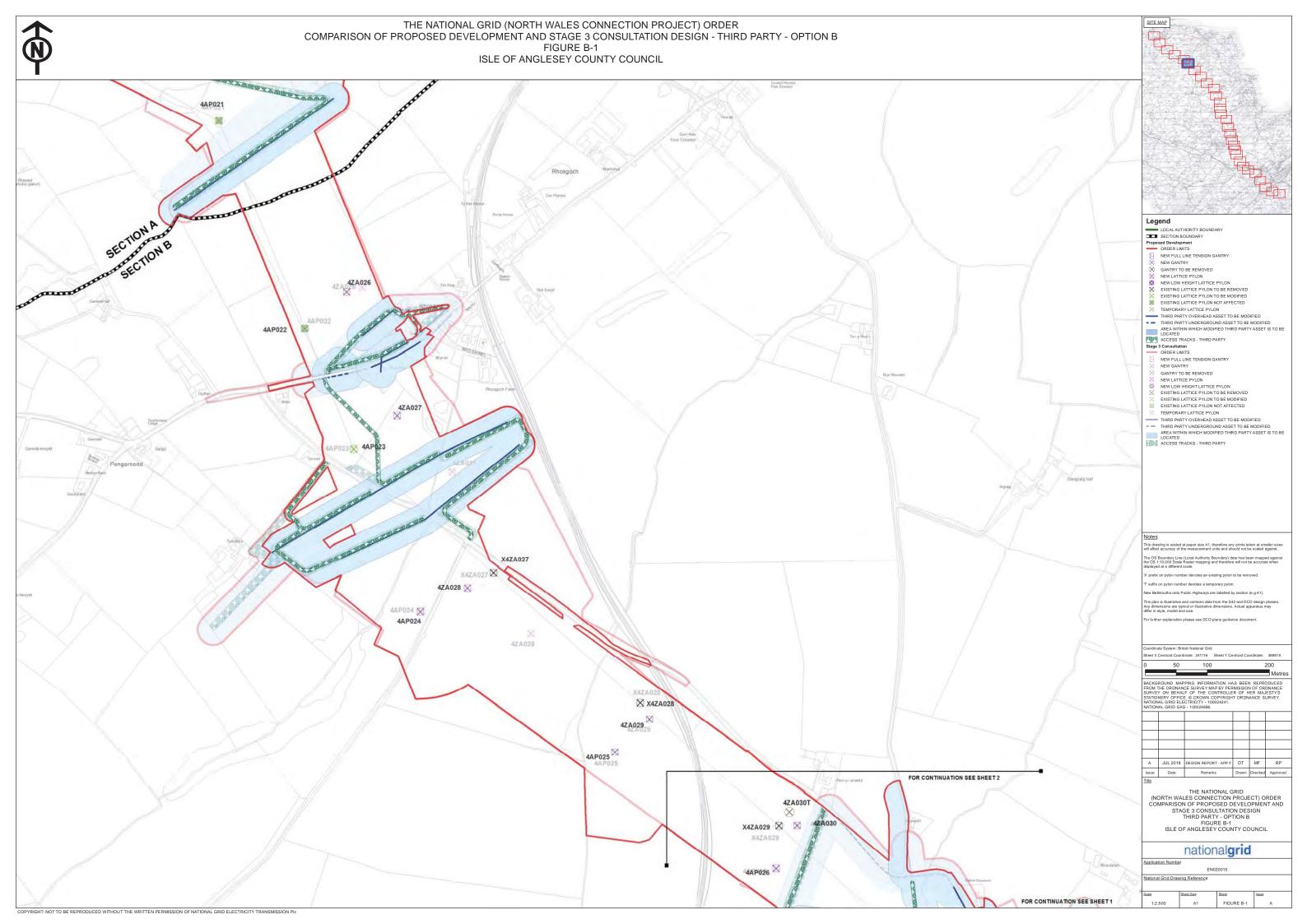


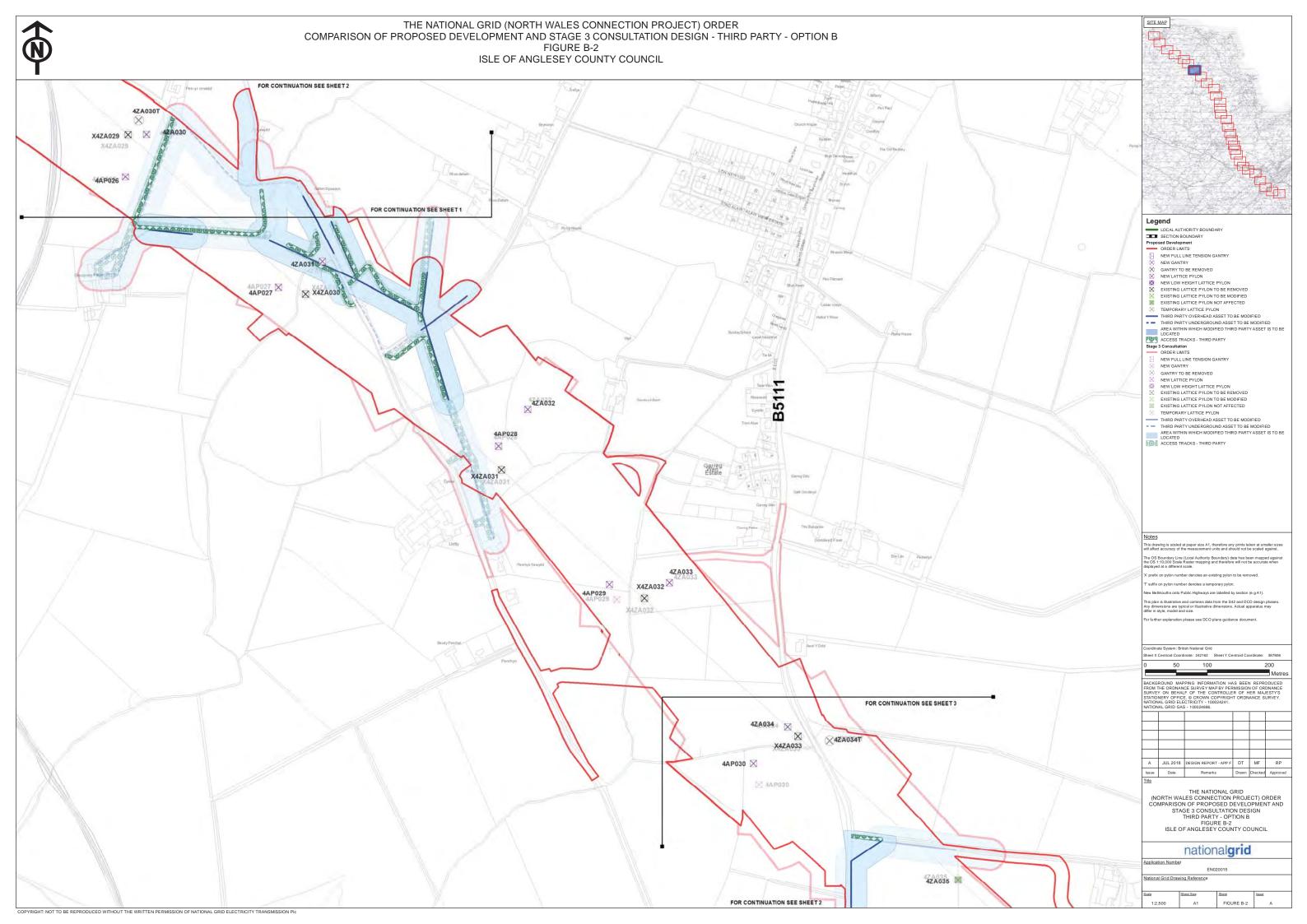






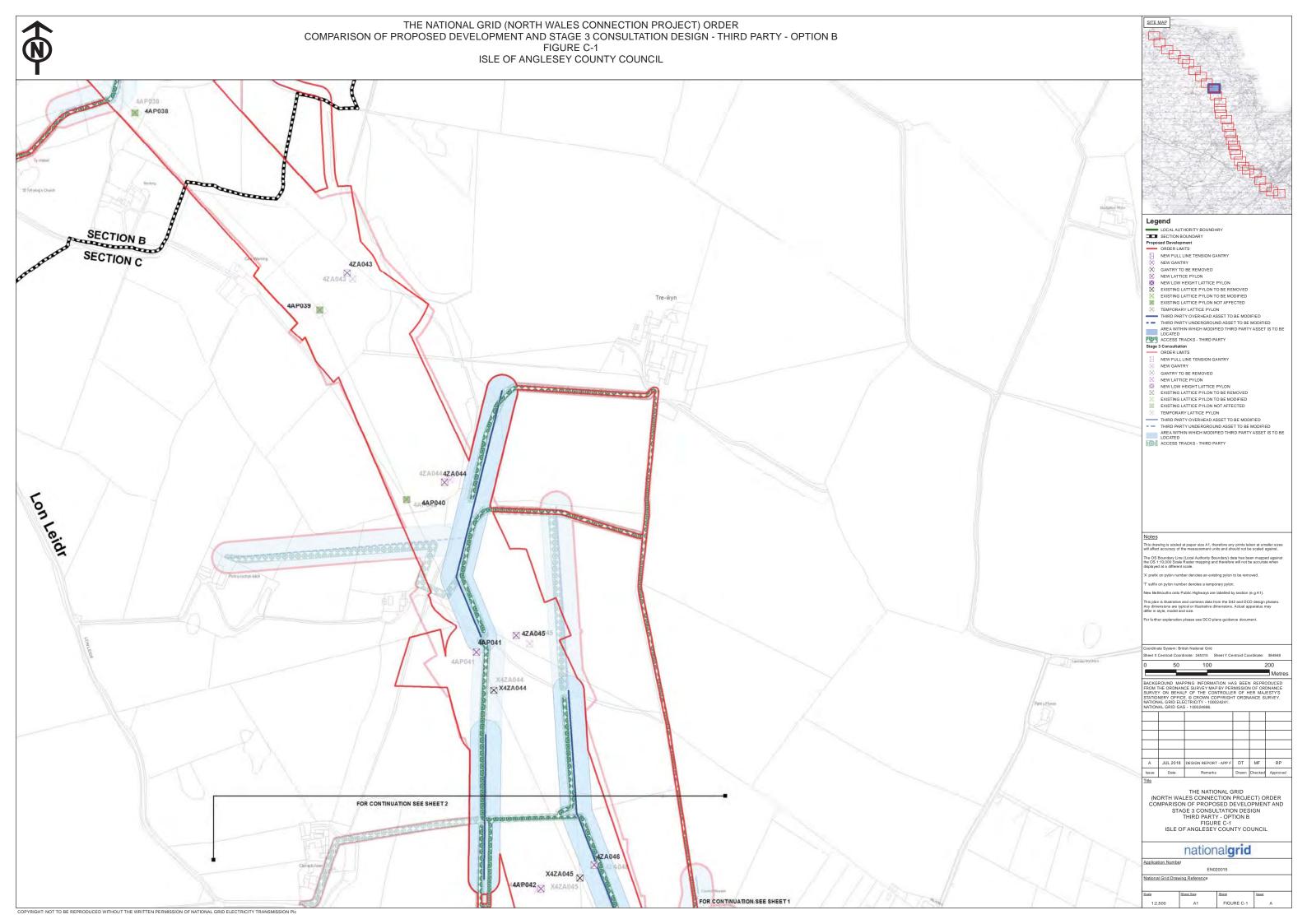


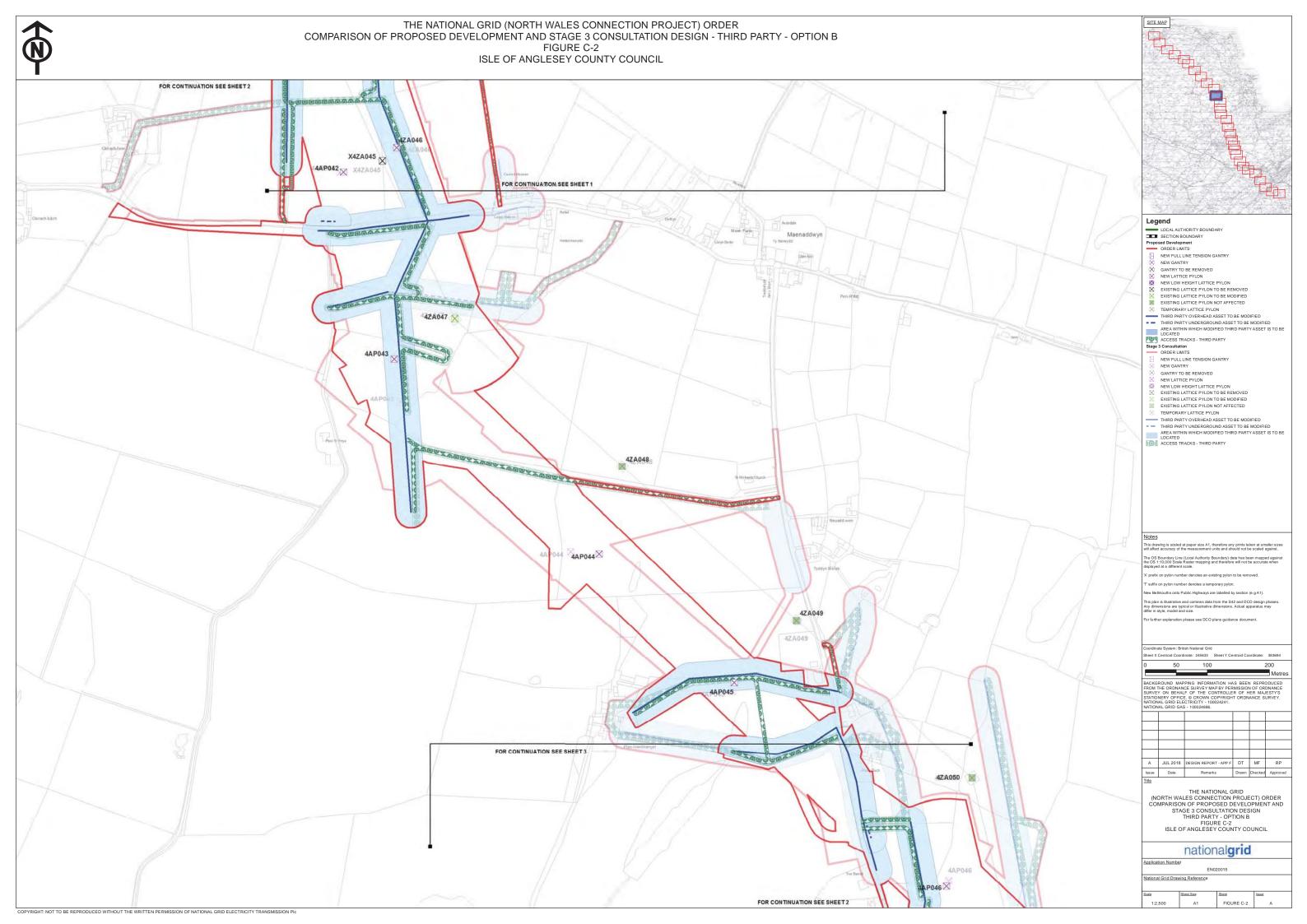


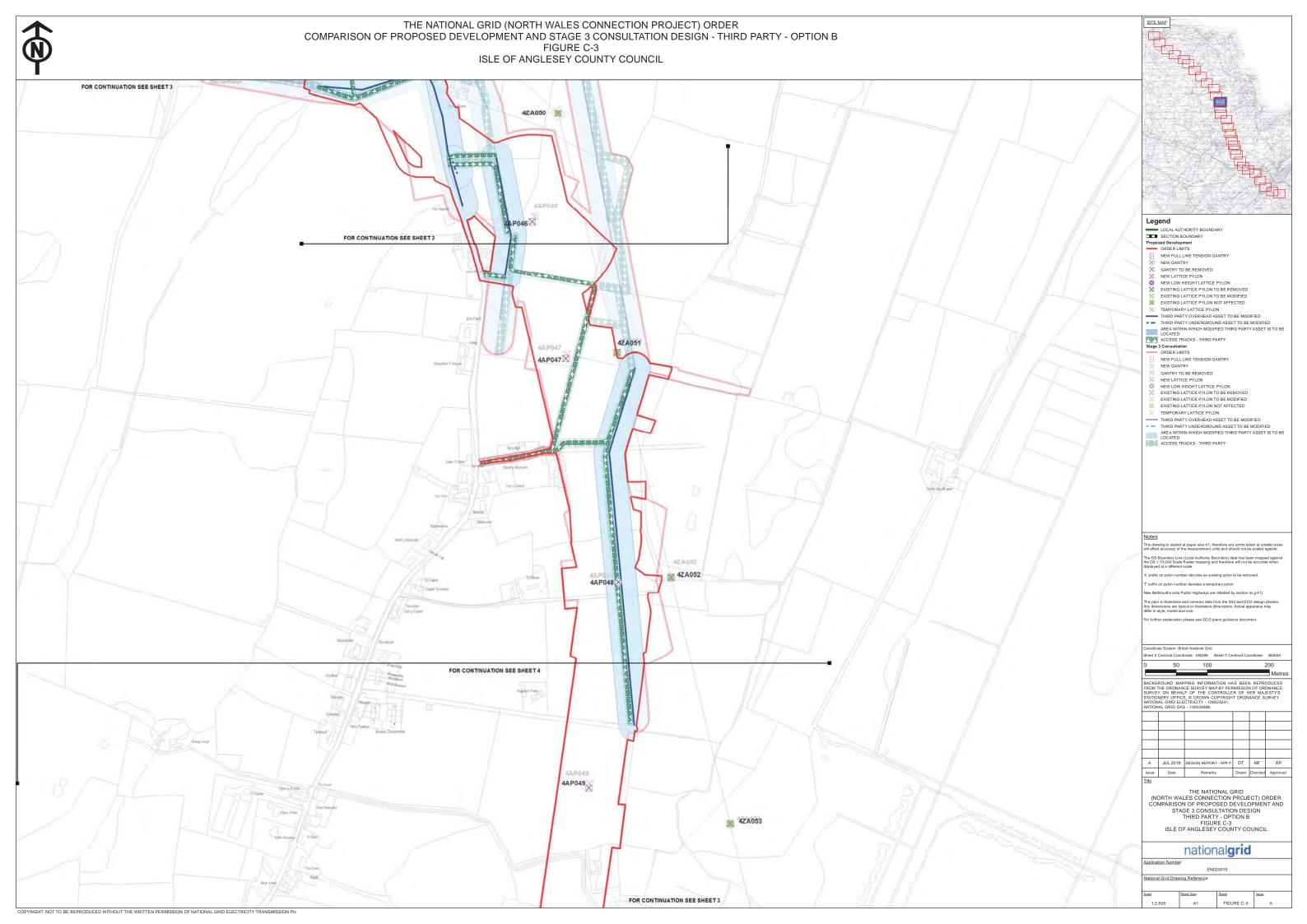


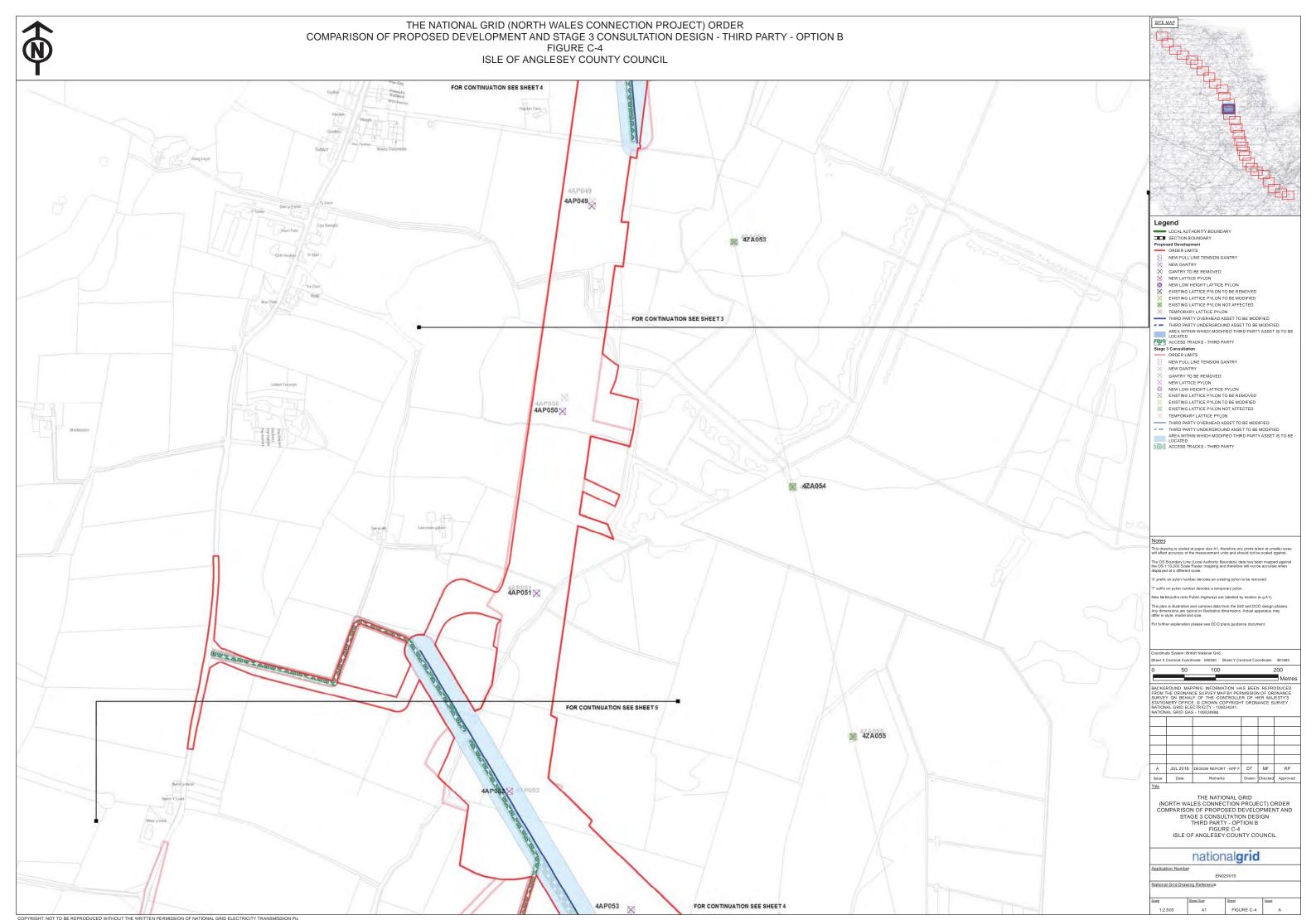
THE NATIONAL GRID (NORTH WALES CONNECTION PROJECT) ORDER COMPARISON OF PROPOSED DEVELOPMENT AND STAGE 3 CONSULTATION DESIGN - THIRD PARTY - OPTION B FIGURE B-3 ISLE OF ANGLESEY COUNTY COUNCIL FOR CONTINUATION SEE SHEET 3 4ZA034 🖂 X4ZA034T X4ZA033 4AP030 🖂 X 4AP030 LOCAL AUTHORITY BOUNDARY SECTION BOUNDARY Proposed Development ORDER LIMITS ORDER LIMITS NEW FULL LINE TENSION GANTRY NEW GANTRY GANTRY GANTRY TO BE REMOVED NEW LATTICE PYLON EXISTING LATTICE PYLON EXISTING LATTICE PYLON TO BE REMOVED EXISTING LATTICE PYLON TO BE MODIFIED EXISTING LATTICE PYLON TO BE MODIFIED THIRD PARTY VINDERGAD ASSET TO BE MODIFIED THIRD PARTY VINDERGROUND ASSET TO BE MODIFIED AREA WITHIN WHICH MODIFIED THIRD PARTY ASSET IS TO BE LOCATED ACCESS TRACKS - THIRD PARTY Stage 3 CONSUMATION 4ZA035 FOR CONTINUATION SEE SHEET 2 4AP031 🔀 Stage 3 Consultation ORDER LIMITS ORDER LIMITS NEW FULL LINE TENSION GANTRY NEW GANTRY GANTRY TO BE REMOVED NEW LATTICE PYLON EXISTING LATTICE PYLON TO BE REMOVED EXISTING LATTICE PYLON TO BE MODIFIED EXISTING LATTICE PYLON TO BE MODIFIED EXISTING LATTICE PYLON TO BE MODIFIED TEMPORARY LATTICE PYLON THIRD PARTY OVERHEAD ASSET TO BE MODIFIED THIRD PARTY UNDERGROUND ASSET TO BE MODIFIED AREA WITHIN WHICH MODIFIED THIRD PARTY ASSET IS TO BE LOCATED ACCESS TRACKS - THIRD PARTY 4ZA036 💥 4ZA03 4AP032[™] 4ZA037 B5111 FOR CONTINUATION SEE SHEET 4 4ZA038 THE NATIONAL GRID (NORTH WALES CONNECTION PROJECT) ORDER COMPARISON OF PROPOSED DEVELOPMENT AND STAGE 3 CONSULTATION DESIGN THIRD PARTY - OPTION B FIGURE B-3 ISLE OF ANGLESEY COUNTY COUNCIL nationalgrid FOR CONTINUATION SEE SHEET 3

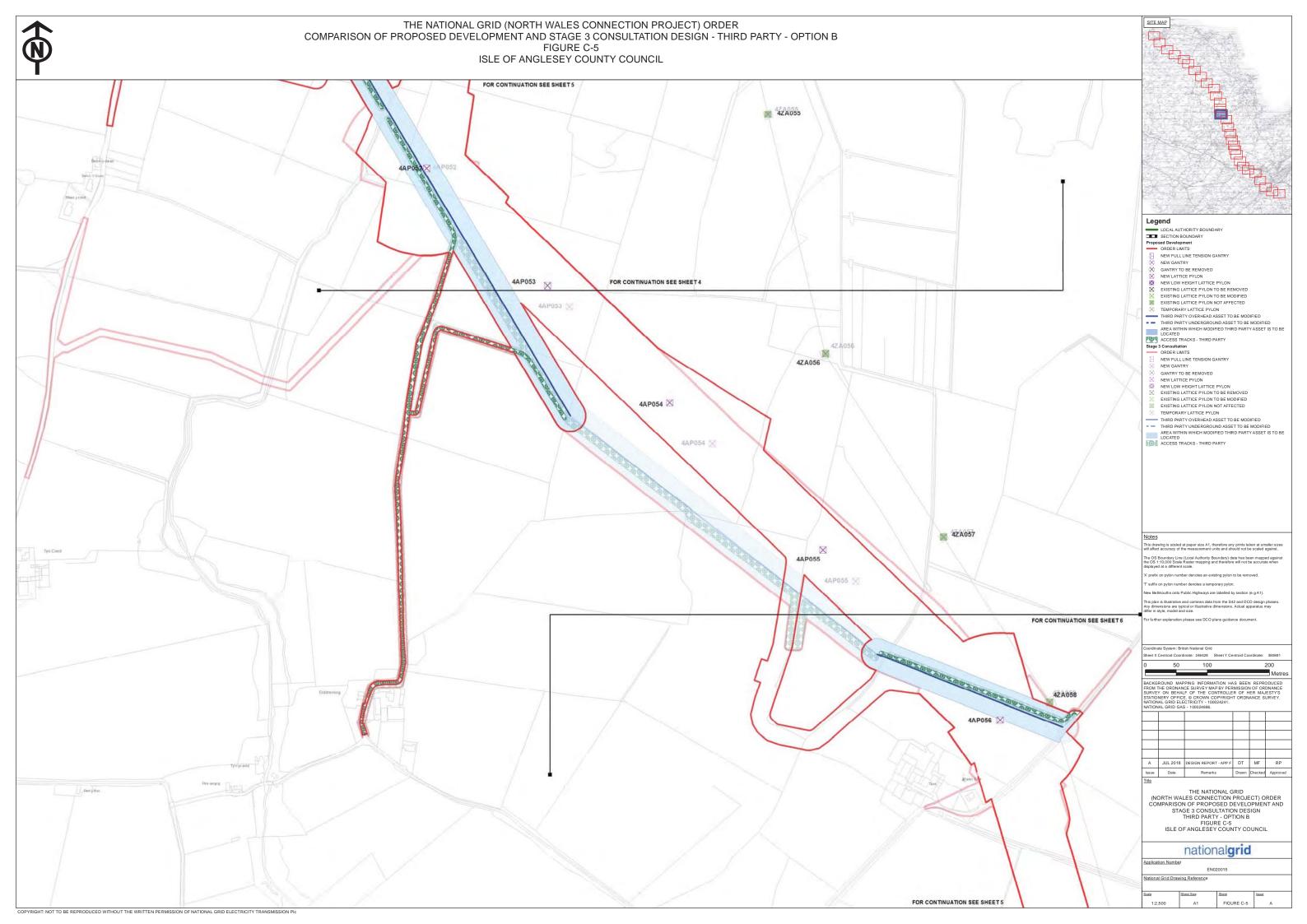
THE NATIONAL GRID (NORTH WALES CONNECTION PROJECT) ORDER COMPARISON OF PROPOSED DEVELOPMENT AND STAGE 3 CONSULTATION DESIGN - THIRD PARTY - OPTION B FIGURE B-4 ISLE OF ANGLESEY COUNTY COUNCIL FOR CONTINUATION SEE SHEET 4 4ZA038 4ZA039 LOCAL AUTHORITY BOUNDARY SECTION BOUNDARY Proposed Development FOR CONTINUATION SEE SHEET 3 ORDER LIMITS ORDER LIMITS NEW FULL LINE TENSION GANTRY NEW GANTRY GANTRY GANTRY TO BE REMOVED NEW LATTICE PYLON EXISTING LATTICE PYLON EXISTING LATTICE PYLON TO BE REMOVED EXISTING LATTICE PYLON TO BE MODIFIED EXISTING LATTICE PYLON TO BE MODIFIED THIRD PARTY VINDERGAD ASSET TO BE MODIFIED THIRD PARTY VINDERGROUND ASSET TO BE MODIFIED AREA WITHIN WHICH MODIFIED THIRD PARTY ASSET IS TO BE LOCATED ACCESS TRACKS - THIRD PARTY 4AP035 Stage 3 Consultation ORDER LIMITS ORDER LIMITS NEW FULL LINE TENSION GANTRY NEW GANTRY GANTRY TO BE REMOVED NEW LATTICE PYLON EXISTING LATTICE PYLON TO BE REMOVED EXISTING LATTICE PYLON TO BE MODIFIED EXISTING LATTICE PYLON TO BE MODIFIED EXISTING LATTICE PYLON TO BE MODIFIED TEMPORARY LATTICE PYLON THIRD PARTY OVERHEAD ASSET TO BE MODIFIED THIRD PARTY UNDERGROUND ASSET TO BE MODIFIED AREA WITHIN WHICH MODIFIED THIRD PARTY ASSET IS TO BE LOCATED ACCESS TRACKS - THIRD PARTY 4ZA040 4AP036 4AP036 🛛 4ZA041/ 4AP037 ⊠ X4ZA040 4ZA042 X M 4AP038 Llandyfrydog and the same THE NATIONAL GRID (NORTH WALES CONNECTION PROJECT) ORDER COMPARISON OF PROPOSED DEVELOPMENT AND STAGE 3 CONSULTATION DESIGN THIRD PARTY - OPTION B FIGURE B-4 ISLE OF ANGLESEY COUNTY COUNCIL SECTION B SECTION C 4ZA043 4ZA043 nationalgrid 4AP039

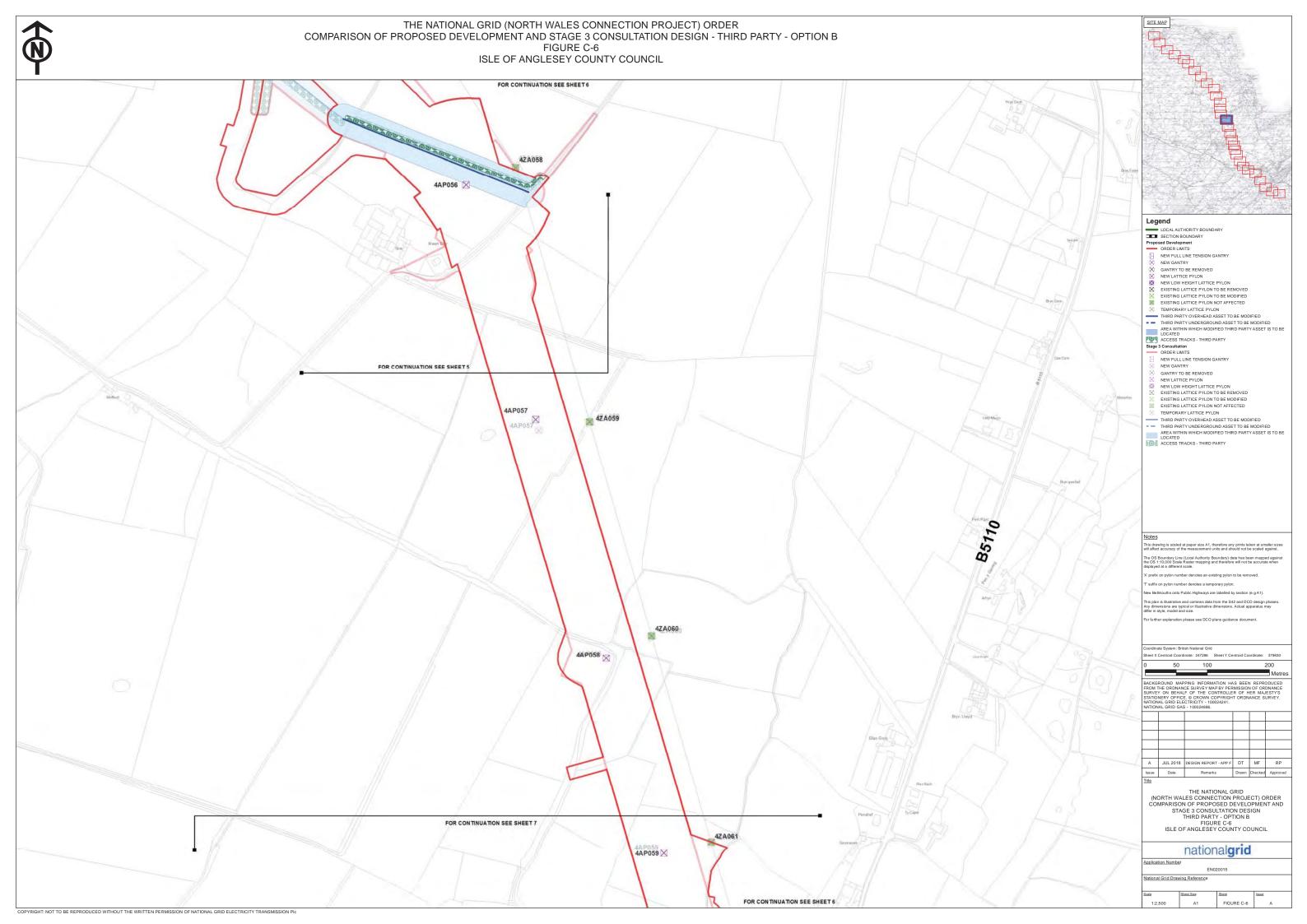


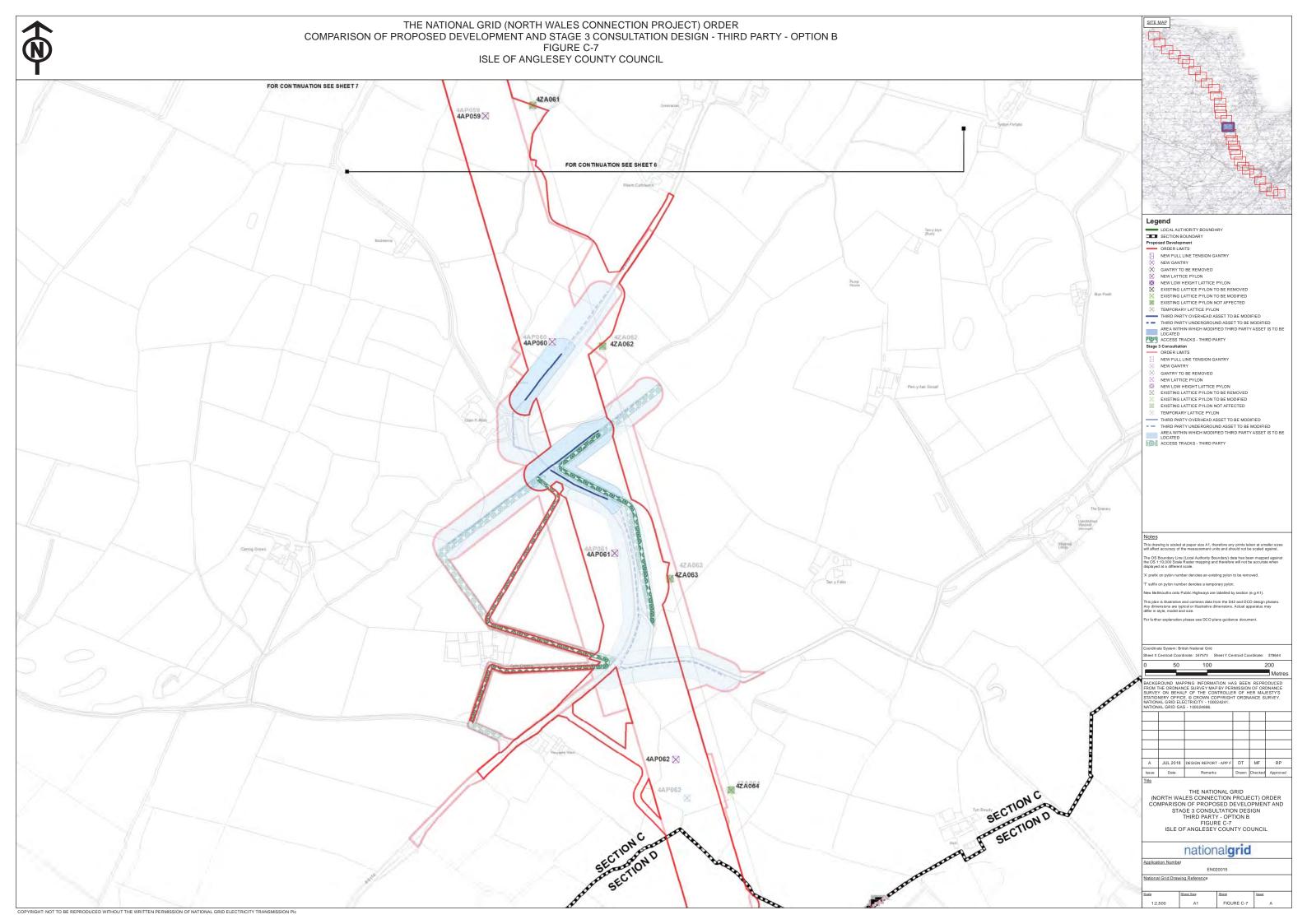


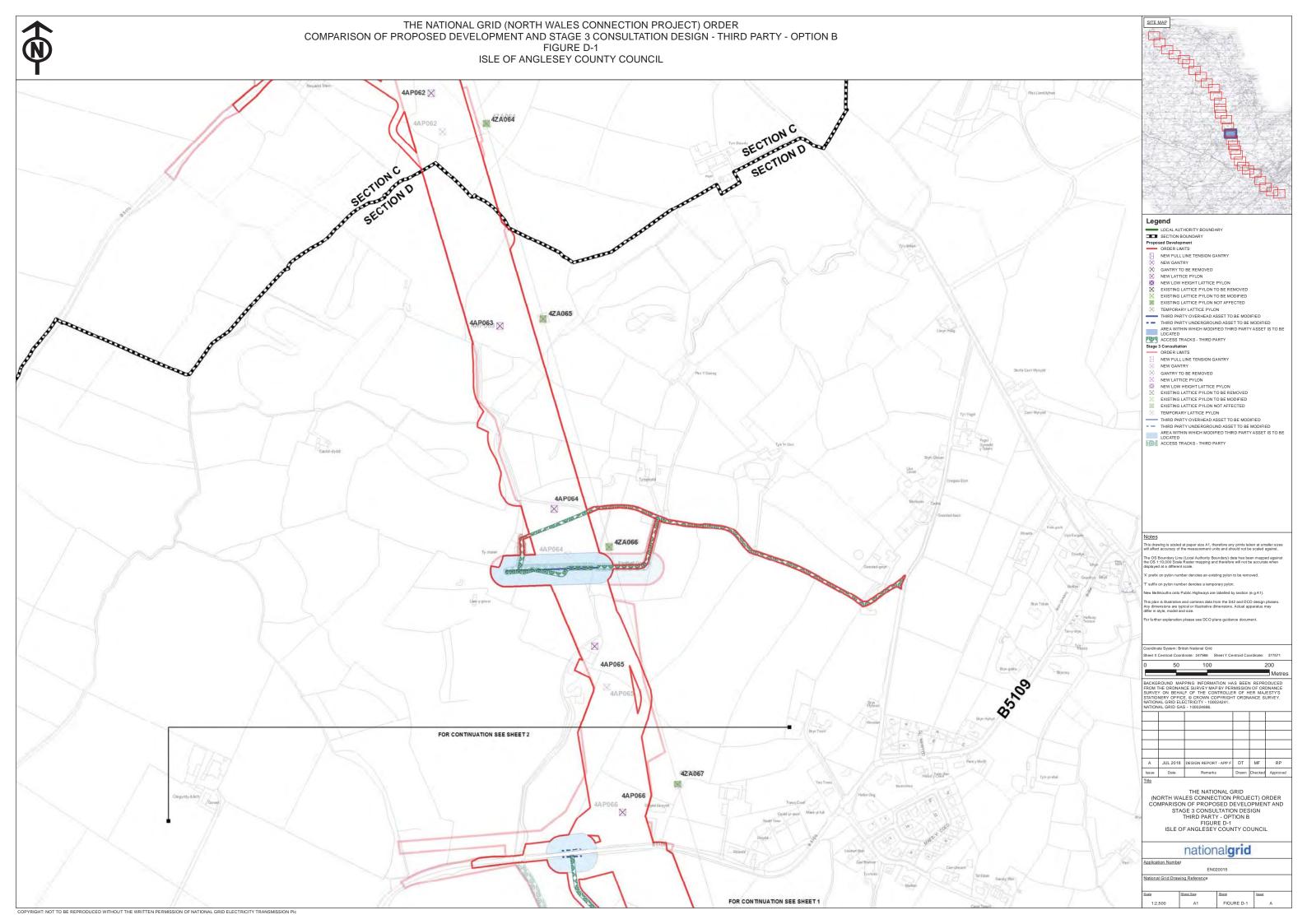


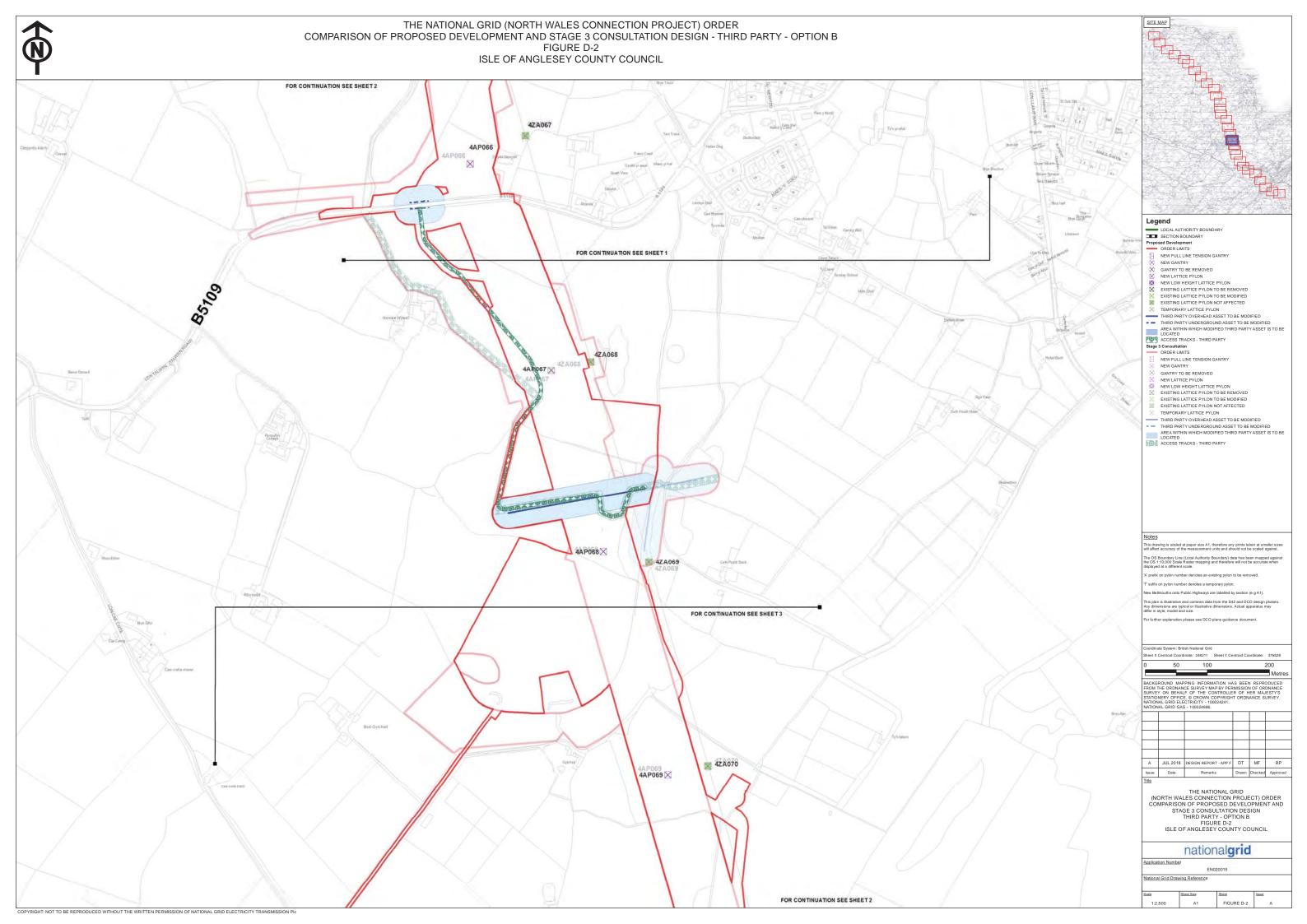


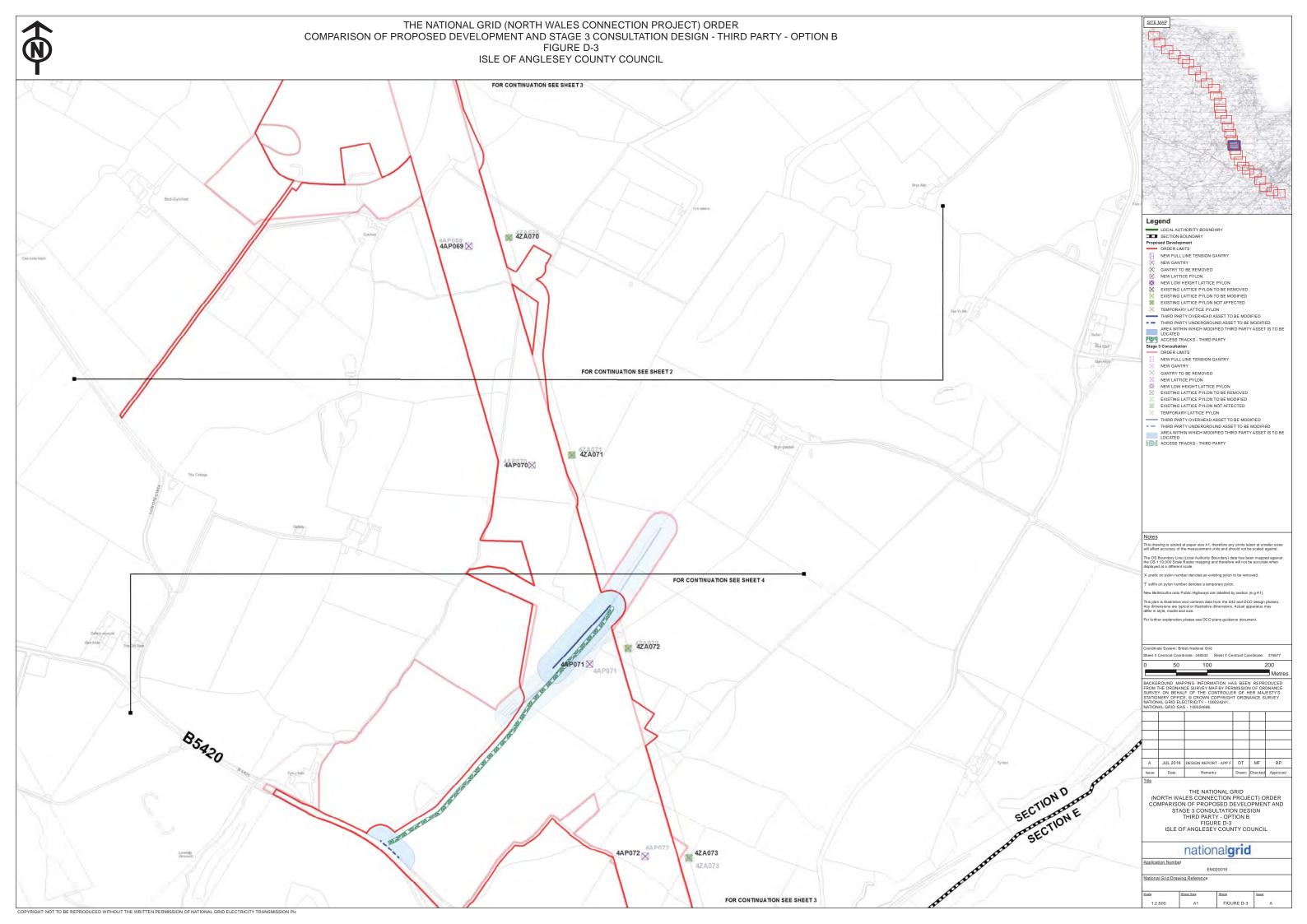


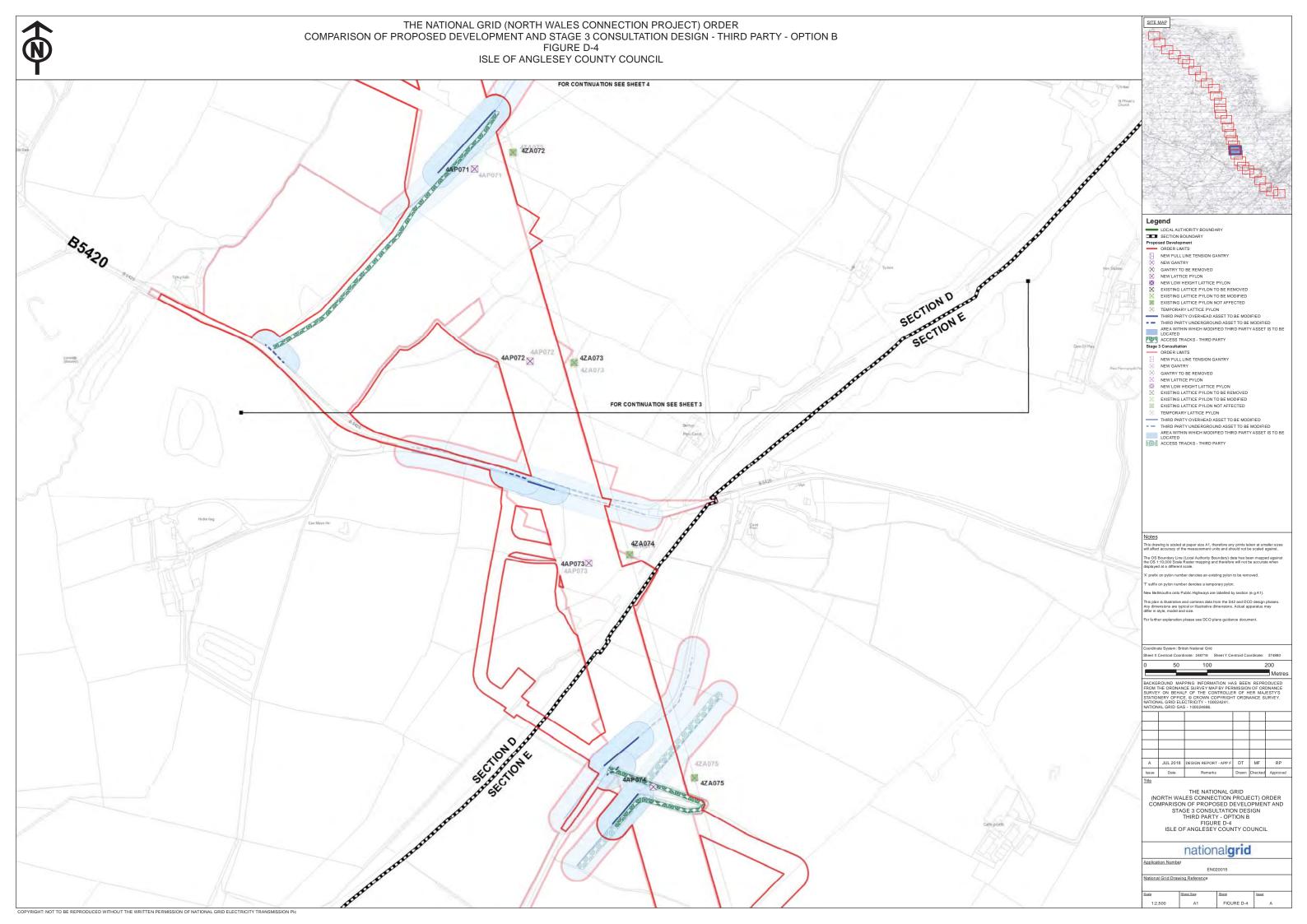


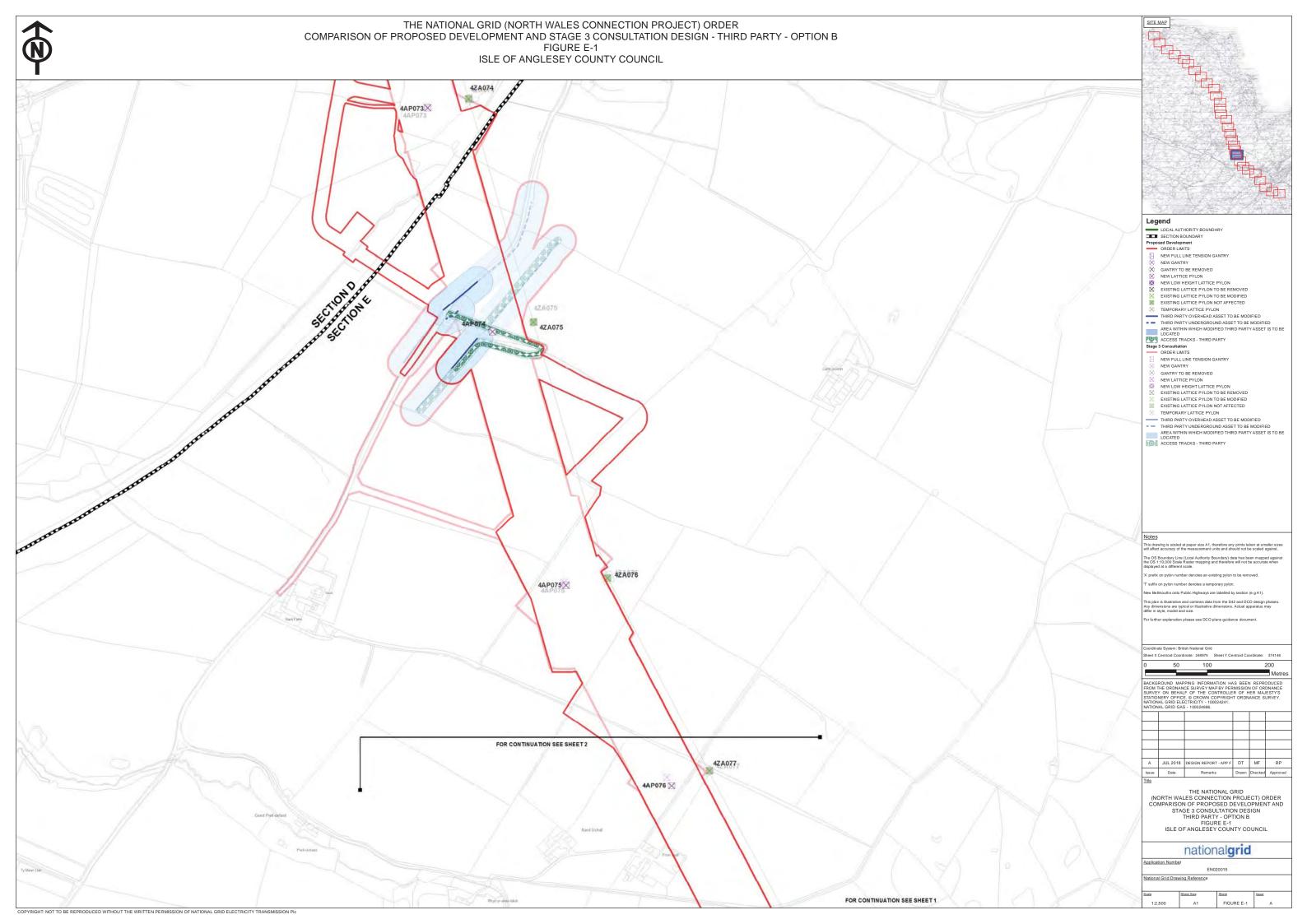






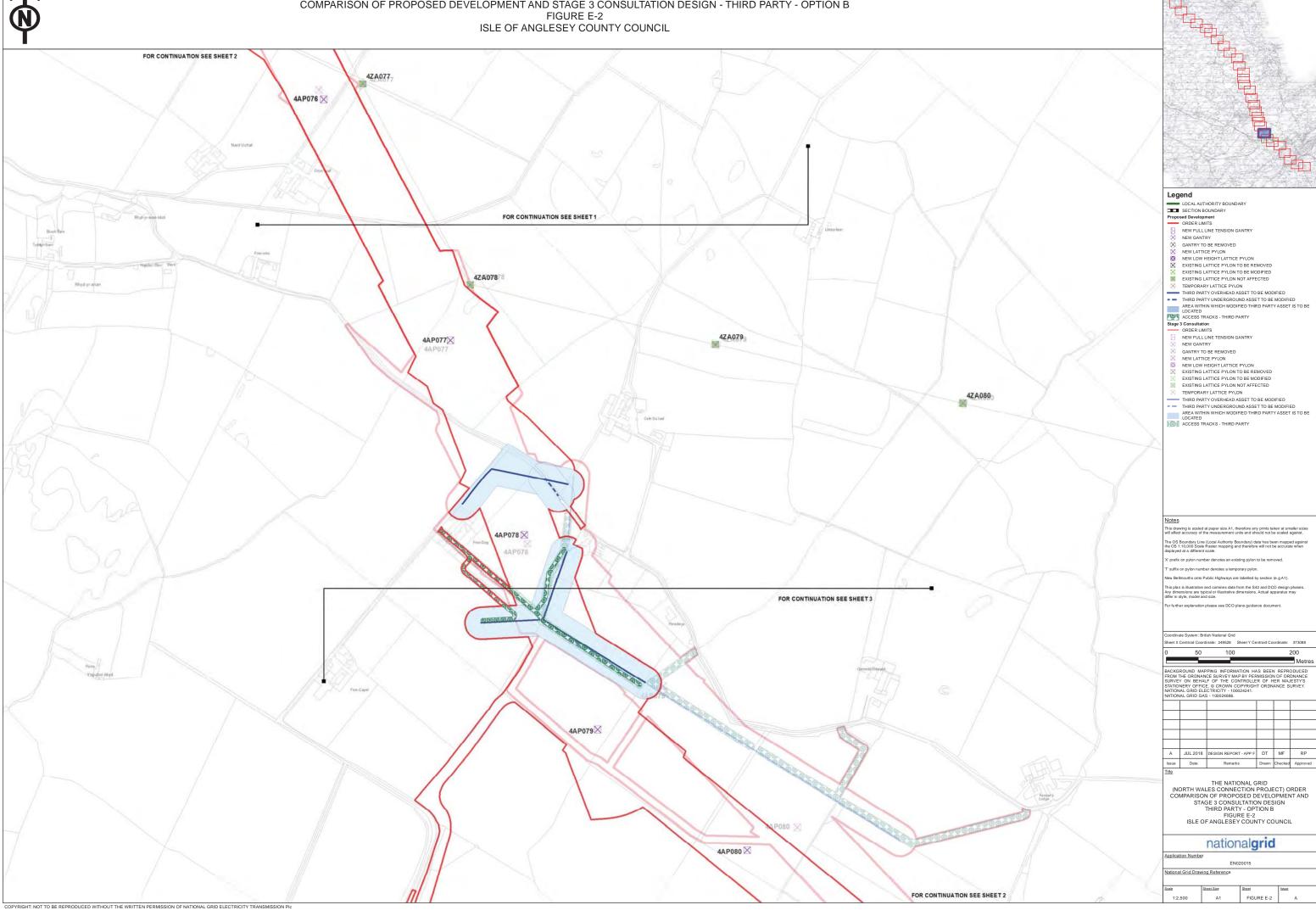


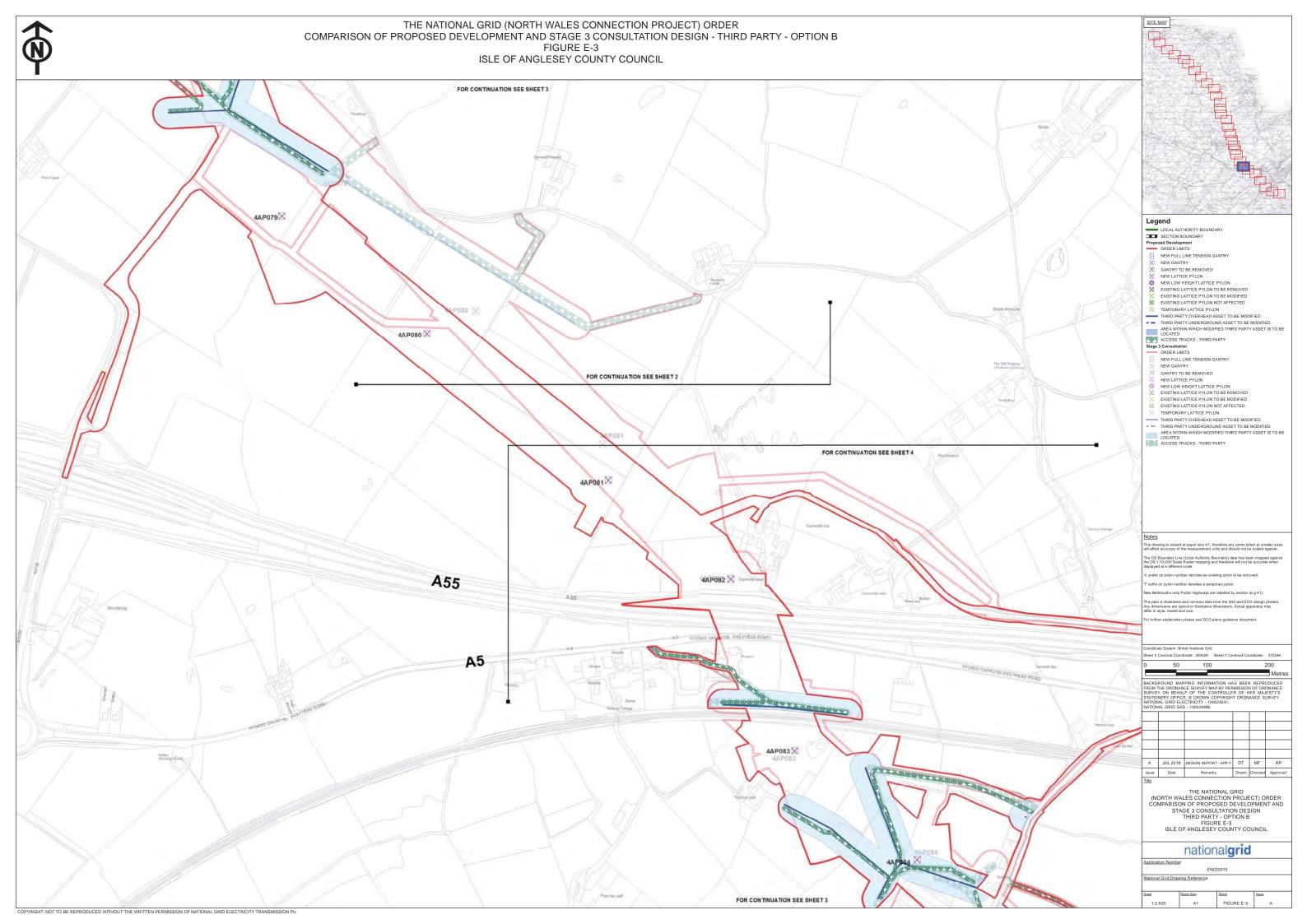


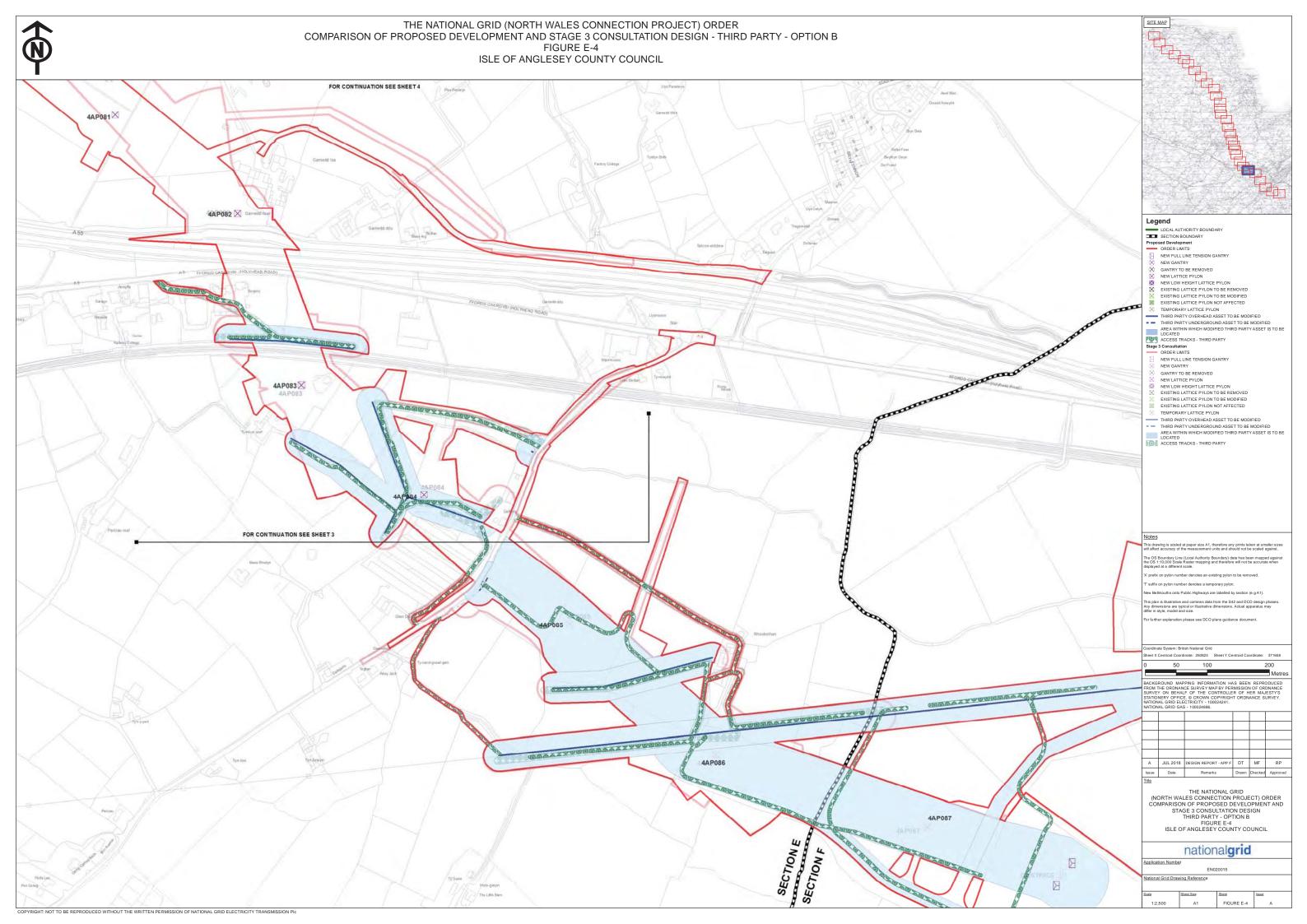


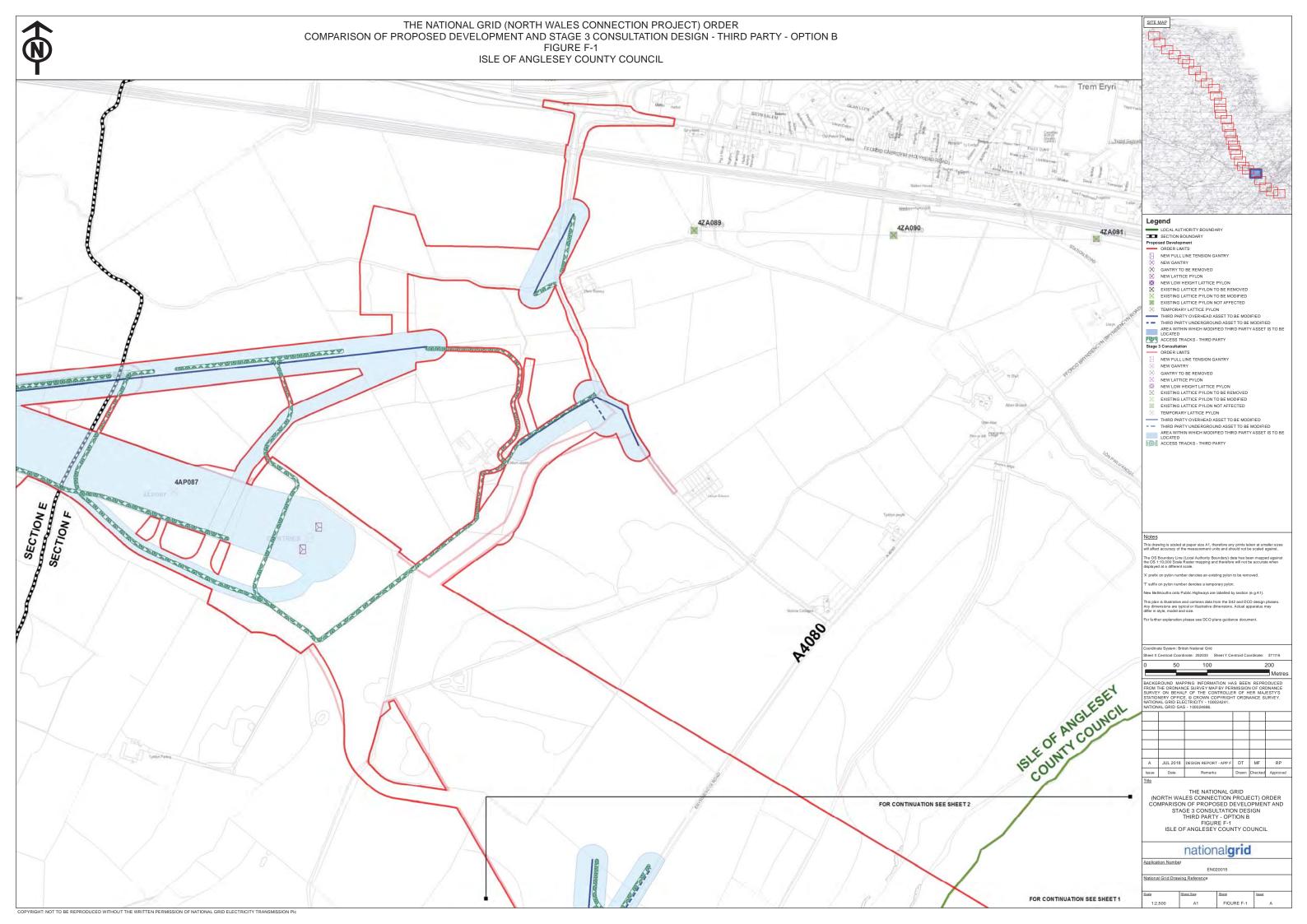


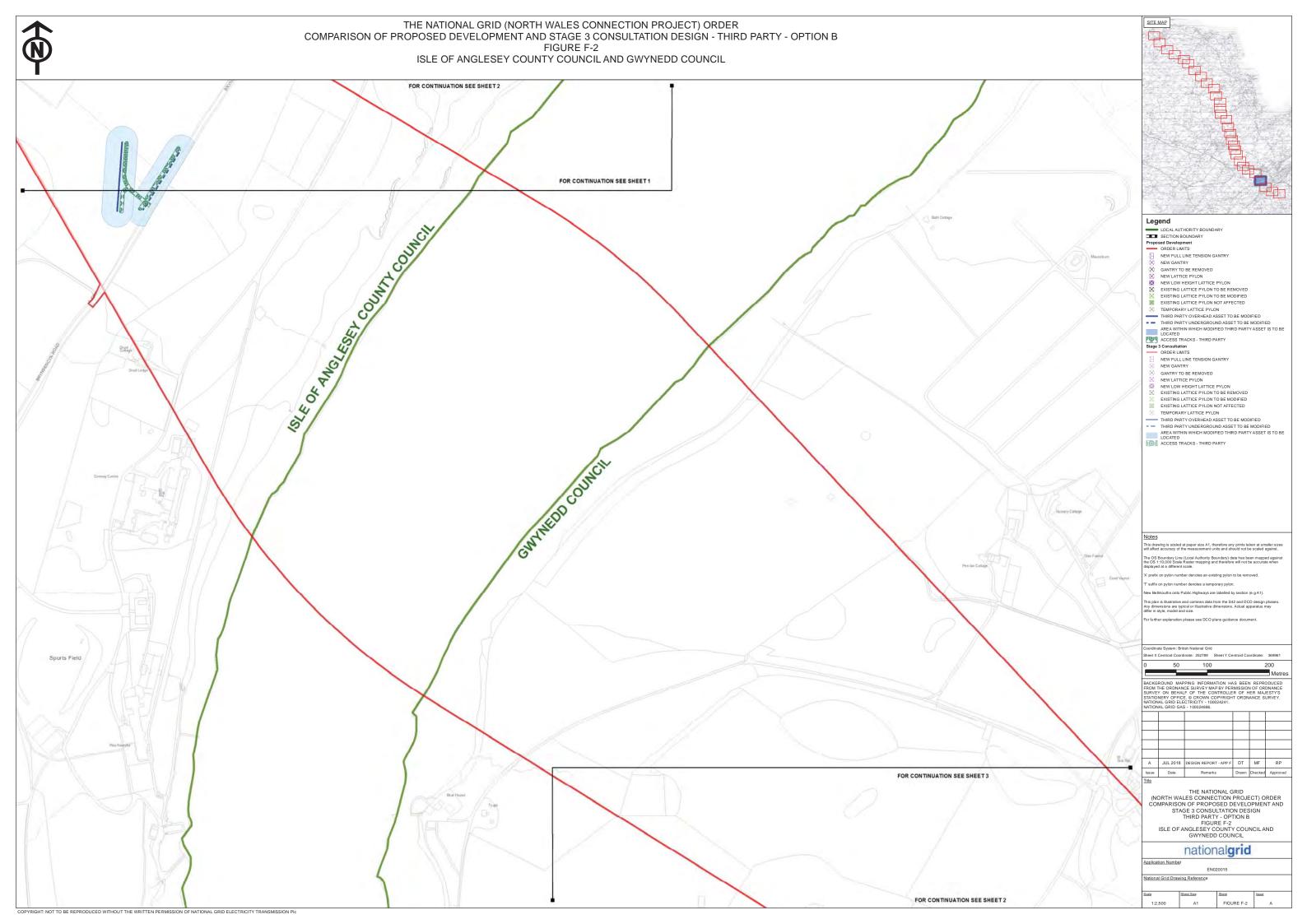
THE NATIONAL GRID (NORTH WALES CONNECTION PROJECT) ORDER COMPARISON OF PROPOSED DEVELOPMENT AND STAGE 3 CONSULTATION DESIGN - THIRD PARTY - OPTION B FIGURE E-2

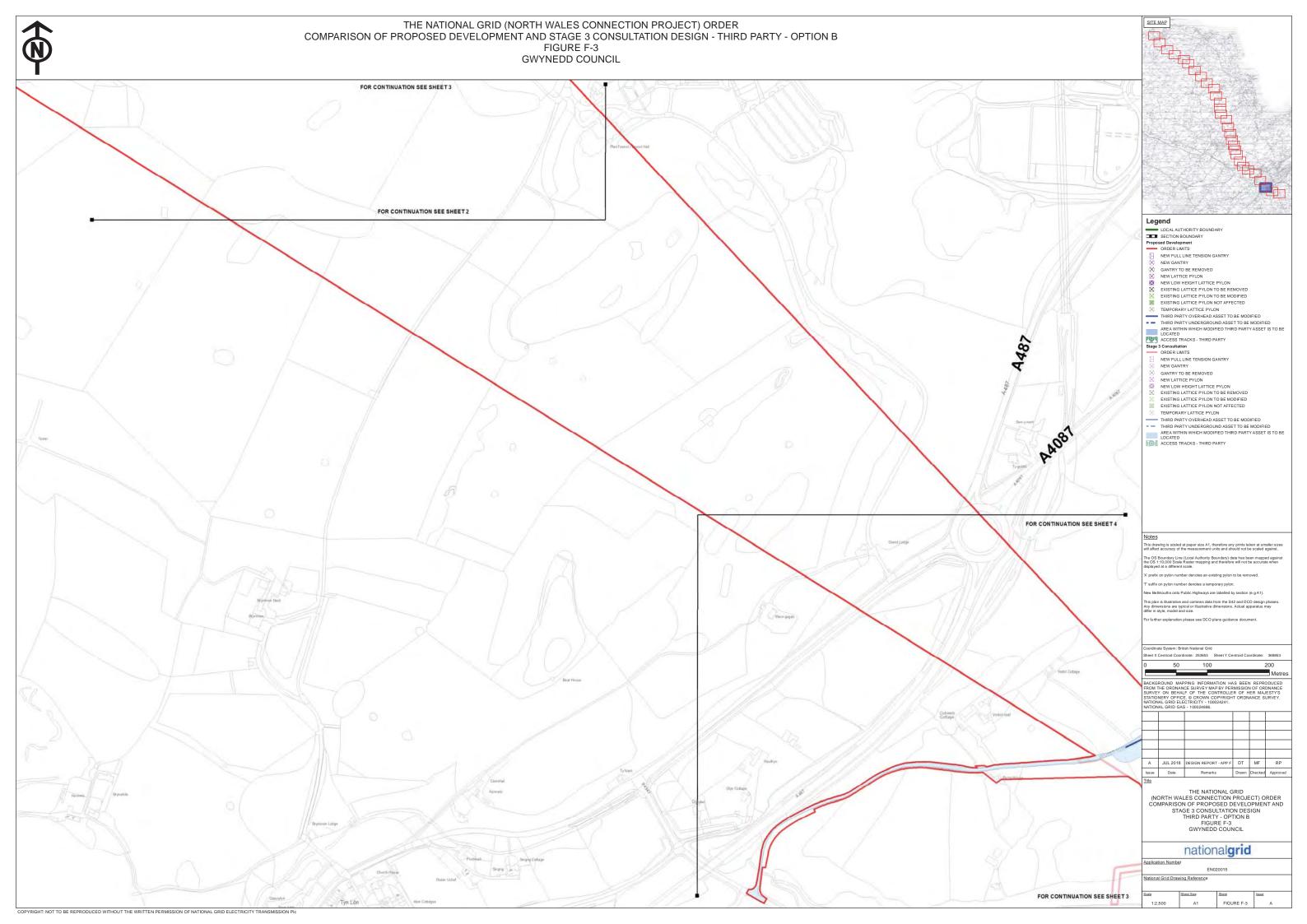


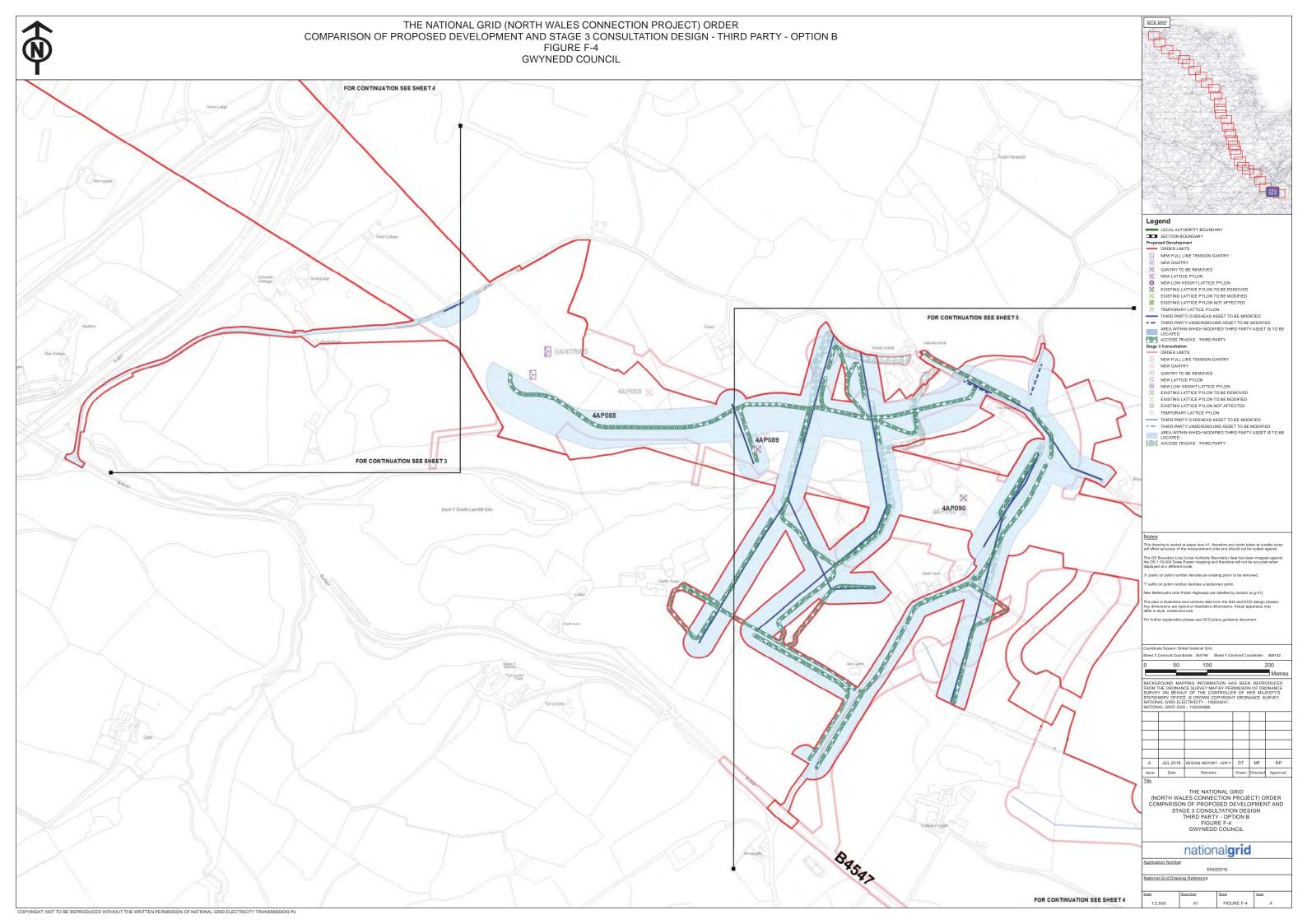






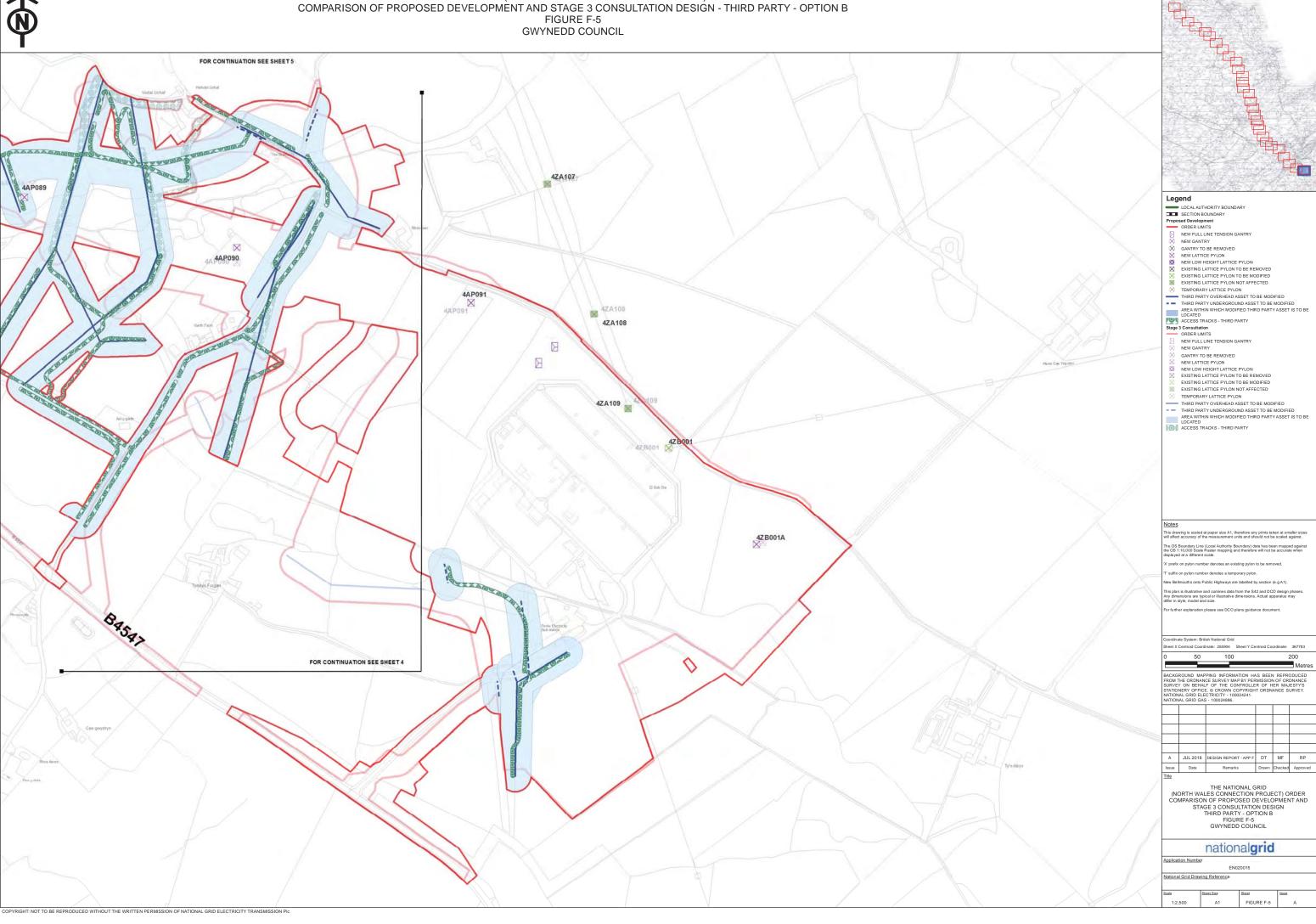








THE NATIONAL GRID (NORTH WALES CONNECTION PROJECT) ORDER COMPARISON OF PROPOSED DEVELOPMENT AND STAGE 3 CONSULTATION DESIGN - THIRD PARTY - OPTION B FIGURE F-5



Appendix G



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	and and and and special special and and and and and	2 yer with 2 yer 2 yer see we spire of the see of the s	2 yet zeet zeet zeet zeet zeet zeet zeet	30
	/ 84 / 84 / 84 / 84 8 8 8 8 8 8 8 8 8 8	/ 41 / 41 / 46 / 41 / 53 5 / 41 / 46 / 41 / 41 /	<u> </u>	
	4AP 4ZA	4AP 4ZA	4AF 4ZA DISMANTLING	
Existing Pylon	Wylfa Substation	4AP039 D30 57.7 45.03 33.22 54.3 D25 4ZA043	4AP074 D10 45.3 23.48 ← → 23.55 53.1 D 4ZA075 X4ZA027 D 47 20.88	
New Pylon	4AP001 DT 46 59.66 ← 89.98 55.3 DJT 4ZA004	4AP040 D 50 22.16 - 18.43 49.5 D 4ZA044	4AP075 D25 51.3 31.17 ← 42.54 54.7 D30 4ZA076 X4ZA028 D 53.1 23.55	
Pylon to be Dismantled	4AP002 D30 51.6 38.54 28.32 48.3 D25 4ZA005	4AP041 D25 54.3 33.28	4AP076 D 52.50 19.56	
	4AP003 D 56.1 25.34 ★★★★ 17.00 46.5 D 4ZA006 4AP004 D30 48.6 36.38 ★★★★ 26.30 45.3 D25 4ZA007	4AP042 D 49.5 18.43 19.56 52.5 D 4ZA046 4AP043 D33* 57.3 36.62 42.54 54.7 D30 4ZA047	4AP077 D10 48.3 26.01 4AP078 D 49.5 18.43 X4ZA031 D 59.2 26.71	
Paired pylons that are bold are	4AP004 D30 48.6 36.38 ← 26.30 45.3 D25 4ZA007 4AP005 D 56.1 25.34 □	4AP043 D33* 57.3 36.62 ★★★★ 42.54 54.7 D30 4ZA047 26.71 59.2 D 4ZA048	4AP078 D 49.5 18.43 4AP079 D33* 45.3 26.30 X4ZA032 D 59.2 26.71 X4ZA032 D 59.2 26.71	
considered synchronised as they are	26.01 48.3 D10 4ZA008	4AP044 D 61.5 23.65	4AP080 D 46.5 17.00 X4ZA033 D 56.1 25.34	
perpendicular (relative to the	4AP006 D 56.1 25.34 + 19.56 52.5 D 4ZA009	4AP045 D 58.5 22.42 ← 25.34 56.1 D 4ZA049	4AP081 D 52.5 19.56 X4ZA040 D 56.1 36.38	
centreline) within 20 metres up and	4AP007 D 56.1 25.34 - 17.00 46.5 D 4ZA010	51.73 56.4 D60 4ZA050	4AP082 D33* 48.3 28.32 X4ZA044 D 50 22.16	
down the route of each other. The	4AP008 D 59.2 26.71 - 19.56 52.5 D 4ZA012	4AP046 D55 54.8 41.00	4AP083 D33* 48.3 28.32 X4ZA045 D 53.1 23.55	
remaining paired pylons are considered	4AP009 D 56.1 25.34	4AP047 D 49.5 18.43 → 26.71 59.2 D 4ZA051 4AP048 D25 51.3 31.17 → 25.34 56.1 D 4ZA052	4AP084 D10 48.3 26.01	
broadly synchronised as they are	4AP010 D30 51.6 38.54 ← 27.07 51.3 D10 4ZA014 18.43 49.5 D 4ZA015	4AP048 D25 51.3 31.17 ★★★★ 25.34 56.1 D 4ZA052 4AP049 D 52.5 19.56	4AP085 LD30 41.4 26.13 4AP086 LD30 38.4 24.71	
perpendicular (relative to centreline)	4AP011 D 50 22.16	23.55 53.1 D 4ZA053	End of Section E	
within 20-50 metres up and down the	4AP012 D 53.1 23.55 19.56 52.5 D 4ZA016	4AP050 D 46.5 17.00	End of Section E APPORT LD30 41.4 26.13 Braint FLT Gantries 28	AICITICI I
route of each other.	4AP013 D 50 22.16 21.09 55.5 D 4ZA017	23.55 53.1 D 4ZA054	Braint FLT Gantries 28	AI SI I GI
	4AP014 D30 48.6 36.38 - 31.17 51.3 D25 4ZA018	4AP051 D 49.5 18.43	<u> </u>	
	4AP015 D 53.1 23.55 - 18.43 49.5 D 4ZA019	25.34 56.1 D 4ZA055	Tunnel Under the Menai Strait	
*Indicates change from originally	4AP016 D 59.2 26.71 ← 19.56 52.5 D 4ZA020	4AP052 D55 45.8 31.84	Tŷ Fodol FLT Gantries 28	
proposed D55 to new D33 pylon	4AP017 D 56.1 25.34 - 17.00 46.5 D 4ZA021	4AP053 D 49.5 18.43	4AP088 LD30 35.4 22.10	
	4AP018 D 59.2 26.71 ★★★★ 18.43 49.5 D 4ZA022 4AP019 D 53.1 23.55 ★★★★ 19.56 52.5 D 4ZA023	38.54 51.6 D30 4ZA056	4AP089 D10 48.3 26.01 4AP090 D 55.5 21.09	
	4AP020 D 56.1 25.34 19.56 52.5 D 4ZA024	4AP055 D 55.5 21.09	4AP091 DT 52 68.86	
Existing pylons from 4ZA078 onwards	4AP021 D60 53.4 47.60 38.15 51.8 D55 4ZA025	23.55 53.1 D 4ZA057	Pentir FLT Gantires 28	
are not included	End of Section A	4AP056 D33* 51.3 31.17 38.54 51.6 D30 4ZA058	Pentir substation	
	4AP022 D 50 22.16 ← 17.00 46.5 D 4ZA026	4AP057 D 55.5 21.09 \longleftrightarrow 26.71 59.2 D 4ZA059		
	4AP023 D30 48.6 36.38 17.00 46.5 D 4ZA027	4AP058 D 55.5 21.09		
Pylon weights are rounded to two	4AP024 D33* 48.3 28.32 - 26.30 45.3 D33* 4ZA028	4AP059 D 49.5 18.43		
decimal places	4AP025 D 55.5 21.09 + 19.56 52.5 D 4ZA029	4AP060 D 49.5 18.43 ← 25.34 56.1 D 4ZA062		
	4AP026 D 43.5 16.00 - 16.00 43.5 D 4ZA030	4AP061 D 55.5 21.09		
	4AP027 D 55.5 21.09 + 19.56 52.5 D 4ZA031	23.55 53.1 D 4ZA063		
	4AP028 D25 54.3 33.28 - 36.62 57.3 D25 4ZA032	4AP062 D 58.5 22.42		
	4AP029 D 49.5 18.43	26.71 59.2 D 4ZA064		
	19.56 52.5 D 4ZA033	End of Section C		
	4AP030 D10 54.3 28.53 ■ 31.17 51.3 D25 4ZA034 4AP031 D 55.5 21.09 ■ 25.34 56.1 D 4ZA035	4AP063 D 46.5 17.00	NORTH WALES CONNECT	TION PROJECT
	4AP031 D 55.5 21.09 ★★★★ 25.34 56.1 D 4ZA035 4AP032 D 52.5 19.56 ★★★★ 26.71 59.2 D 4ZA036	4AP064 D 52.5 19.56 ★★★ 25.34 56.1 D 4ZA066 4AP066 D 55.5 21.09 ★★★ 25.34 56.1 D 4ZA067	DOCUMENT 7.17 - DESI	IGN REPORT
	4AP033 D 55.5 21.09 \rightleftharpoons 26.71 59.2 D 4ZA037	4AP067 D10 51.3 27.07 \longleftrightarrow 22.16 50 D 4ZA068		
	4AP034 D 52.5 19.56 ← 26.71 59.2 D 4ZA038	4AP068 D 55.5 21.09 ← 25.34 56.1 D 4ZA069		
	4AP035 D 43.5 16.00 ← 26.71 59.2 D 4ZA039	4AP069 D 58.5 22.42 ← 23.55 53.1 D 4ZA070		
	4AP036 D25 57.3 36.62 - 36.38 48.6 D30 4ZA040	4AP070 D 52.5 19.56 ← 26.71 59.2 D 4ZA071	APPENDIX G.	
	4AP037 D25 51.3 31.17 31.17 51.3 D25 4ZA041 4AP038 D 65.3 31.07 22.42 58.5 D 4ZA042	4AP071 D 46.5 17.00 23.55 53.1 D 4ZA072 4AP072 D 52.5 19.56 23.55 53.1 D 4ZA073	SYNCHRONISATION	A CCHEDITIE
	End of Section B	4AP073 D 52.5 19.56 25.34 56.1 D 4ZA074		SCHEDOLE
	LIIU OI SECCIOII D	End of Section D	(OPTION A)	

Appendix H



