Noise Impact Assessment Addendum for West Newton A Exploration, Appraisal and Production Development

West Newton, East Riding of Yorkshire

For Rathlin Energy (UK) Limited

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Quality Management

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1	22/09/2021	Final issue		

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Contents

1 Introduction 1
2 Updated Tables 2
3 Updated Figures 12

Tables

Table 7.5: Wellsite Construction and Restoration Noise Assessment 2
Table 7.6: PPG-M Noise Assessment for Conductor Drilling 3
Table 7.7: Temporary Ambient Noise Level Change Assessment – Conductor Drilling 4
Table 7.8: PPG-M Noise Assessment for Drilling 5
Table 7.9: Temporary Ambient Noise Level Change Assessment – Drilling 7
Table 7.10: PPG-M Noise Assessment for Appraisal Testing 8
Table 7.11: Temporary Ambient Noise Level Change Assessment – Appraisal Well Testing 9
Table 8.2: BS4142 Noise Assessment for Operational Noise 10
Table 8.3: Ambient Noise Level Change Assessment During Operational Phase 10

1 Introduction

1.1 Rathlin Energy (UK) Limited intends to extend the existing West Newton A (WNA) wellsite, drill, test, appraise and produce from the two existing wells and drill, test, appraise and produce from up to six new wells.

1.2 RPS Group was commissioned by Rathlin Energy (UK) Limited to undertake a noise assessment for the proposed wellsite. This report is an addendum to the report previously submitted (ref: JAT2106-REPT-03-R5-Rathlin-WNA, dated 17/06/2021).

1.3 The addendum provides the required update of Section 7 and Section 8 of the previously submitted report. The update is required due to the following changes:

- Previously only NSRs within a 2 km boundary was calculated, resulting in any NSRs outside this boundary appearing to have resulting noise levels of 0 dBA. This has now been changed and resulting levels at all NSRs outside the boundary are updated.
- Previously the noise model only took into account the reflections within the 2 km boundary. This has now been updated, so reflections are also considered outside the 2 km boundary. This update has resulted in only minor changes for certain NSRs.

1.4 It should be noted that the outcome of the assessment of the submitted report remains unchanged for the receptors, as due to their distance from the site, the predicted specific noise levels fall below the relevant criteria, resulting in negligible impacts.

1.5 This addendum presents an update to Tables 7.5 to 7.11 and Tables 8.2 and 8.3 of the submitted report. The updated table values are highlighted in green.

1.6 Section 3 of this addendum presents the updated figures A9 to A15. The grid noise maps present minor differences compared to the submitted figures of the previously submitted report and some caption incorrect numbering has now been updated.

2 Updated Tables

2.1 This section presents an update to Tables 7.5 to 7.11 and Tables 8.2 and 8.3 of the submitted report. The updated table values are highlighted in green.

Table 7.5: Wellsite Construction and Restoration Noise Assessment

Location	Baseline Ambient Sound Level, dB L_{Aeq}		BS 5228 Criteria		Site Construction Sound Level, dBA	Assessment	
	Day	Evening	Day	Evening / weekends		Day	Evening / weekends
Brickyard Cottage	59	35	65	55	14	OK	OK
Burton Constable	42	33	65	55	26	OK	OK
Caley Cottage	42	35	65	55	44	OK	OK
Church House	62	36	65	55	39	OK	OK
Flinton	57	51	65	55	20	OK	OK
Gardener's Cottage	42	33	65	55	24	OK	OK
Lambwath Hill / Low Fosham	42	30	65	55	32	OK	OK
Lambwath Meadows	42	30	65	55	27	OK	OK
Marton Farm	62	36	65	55	45	OK	OK
Moat Farm / Tansterne House	37	31	65	55	23	OK	OK
Model Farm	44	33	65	55	27	OK	OK
Old Farm	44	33	65	55	27	OK	OK
Marton Old School	62	36	65	55	43	OK	OK
Smithy Briggs	42	33	65	55	27	OK	OK
Smithy Briggs Cottage	42	33	65	55	23	OK	OK
South End	44	33	65	55	40	OK	OK
Straits Farm	44	33	65	55	39	OK	OK
West Carlton	38	32	65	55	27	OK	OK
West Newton Grange	37	31	65	55	27	OK	OK
Wood End House	62	36	65	55	42	OK	OK

Table 7.6: PPG-M Noise Assessment for Conductor Drilling

Location	Background sound level, dB L_{A90}			PPG-M limit, dBA			Specific sound level, dBA	Assessment		
	Day	Eve	Night	Day	Eve	Night	G-28	Day	Eve	Night
Brickyard Cottage	35	33	32	45-55	43-55	42	5	OK	OK	OK
Burton Constable	34	28	28	44-55	38-55	42	16	OK	OK	OK
Caley Cottage	34	27	26	44-55	37-55	42	35	OK	OK	OK
Church House	33	32	26	43-55	42-55	42	26	OK	OK	OK
Flinton	34	30	28	44-55	40-55	42	5	OK	OK	OK
Gardener's Cottage	34	28	28	44-55	38-55	42	11	OK	OK	OK
Lambwath Hill / Low Fosham	33	25	24	43-55	35-55	42	19	OK	OK	OK
Lambwath Meadows	33	25	24	43-55	35-55	42	17	OK	OK	OK
Marton Farm	33	32	26	43-55	42-55	42	30	OK	OK	OK
Moat Farm / Tansterne House	32	27	27	42-55	37-55	42	12	OK	OK	OK
Model Farm	36	30	30	46-55	40-55	42	17	OK	OK	OK
Old Farm	36	30	30	46-55	40-55	42	16	OK	OK	OK
Marton Old School	33	32	26	43-55	42-55	42	31	OK	OK	OK
Smithy Briggs	34	28	28	44-55	38-55	42	17	OK	OK	OK
Smithy Briggs Cottage	34	28	28	44-55	38-55	42	10	OK	OK	OK
South End	35	28	25	45-55	38-55	42	27	OK	OK	OK
Straits Farm	35	28	25	45-55	38-55	42	27	OK	OK	OK
West Carlton	33	26	25	43-55	36-55	42	17	OK	OK	OK
West Newton Grange	32	27	27	42-55	37-55	42	17	OK	OK	OK
Wood End House	33	32	26	43-55	42-55	42	27	OK	OK	OK

Table 7.7: Temporary Ambient Noise Level Change Assessment – Conductor Drilling

Location	Ambient sound level, dB L_{Aeq}			Specific sound level, dBA	Max new ambient sound level, dBA			Change, dB		
	Day	Eve	Night	G-28	Day	Eve	Night	Day	Eve	Night
Brickyard Cottage	59	35	32	5	59	35	32	**0**	**0**	**0**
Burton Constable	42	33	32	16	42	33	32	**0**	**0**	**0**
Caley Cottage	42	35	32	35	43	38	37	**+1**	**+3**	**+5**
Church House	62	36	32	26	62	36	33	**0**	**0**	**+1**
Flinton	57	51	40	5	57	51	40	**0**	**0**	**0**
Gardener's Cottage	42	33	32	11	42	33	32	**0**	**0**	**0**
Lambwath Hill / Low Fosham	42	30	29	19	42	31	30	**0**	**0**	**0**
Lambwath Meadows SSSI	42	30	29	17	42	30	29	**0**	**0**	**0**
Marton Farm	62	36	32	30	62	37	34	**0**	**+1**	**+2**
Moat Farm / Tansterne House	37	31	30	12	37	31	30	**0**	**0**	**0**
Model Farm	44	33	34	17	44	33	34	**0**	**0**	**0**
Old Farm	44	33	34	16	44	33	34	**0**	**0**	**0**
Marton Old School	62	36	32	31	62	37	35	**0**	**+1**	**+3**
Smithy Briggs	42	33	32	17	42	33	32	**0**	**0**	**0**
Smithy Briggs Cottage	42	33	32	10	42	33	32	**0**	**0**	**0**
South End	44	33	30	27	44	34	32	**0**	**+1**	**+2**
Straits Farm	44	33	30	27	44	34	32	**0**	**+1**	**+2**
West Carlton	38	32	31	17	38	32	31	**0**	**0**	**0**
West Newton Grange	37	31	30	17	37	31	30	**0**	**0**	**0**
Wood End House	62	36	32	27	62	37	34	**0**	**+1**	**+1**

Table 7.8: PPG-M Noise Assessment for Drilling

Location	Background sound level, dB L_{A90}			PPG-M limit, dBA			Specific sound level, dBA		Assessment		
	Day	Eve	Night	Day	Eve	Night	HH-220	T-208	Day	Eve	Night
Brickyard Cottage	35	33	32	45-55	43-55	42	14	10	**OK**	**OK**	**OK**
Burton Constable	34	28	28	44-55	38-55	42	24	21	**OK**	**OK**	**OK**
Caley Cottage	34	27	26	44-55	37-55	42	38	38	**OK**	**Exceedance of lower limit only (see paragraph 7.20)**	**OK**
Church House	33	32	26	43-55	42-55	42	35	32	**OK**	**OK**	**OK**
Flinton	34	30	28	44-55	40-55	42	19	14	**OK**	**OK**	**OK**
Gardener's Cottage	34	28	28	44-55	38-55	42	22	18	**OK**	**OK**	**OK**
Lambwath Hill / Low Fosham	33	25	24	43-55	35-55	42	28	26	**OK**	**OK**	**OK**
Lambwath Meadows	33	25	24	43-55	35-55	42	25	22	**OK**	**OK**	**OK**
Marton Farm	33	32	26	43-55	42-55	42	36	37	**OK**	**OK**	**OK**
Moat Farm / Tansterne House	32	27	27	42-55	37-55	42	21	17	**OK**	**OK**	**OK**
Model Farm	36	30	30	46-55	40-55	42	25	22	**OK**	**OK**	**OK**
Old Farm	36	30	30	46-55	40-55	42	25	21	**OK**	**OK**	**OK**
Marton Old School	33	32	26	43-55	42-55	42	37	36	**OK**	**OK**	**OK**
Smithy Briggs	34	28	28	44-55	38-55	42	25	22	**OK**	**OK**	**OK**
Smithy Briggs Cottage	34	28	28	44-55	38-55	42	22	17	**OK**	**OK**	**OK**
South End	35	28	25	45-55	38-55	42	33	33	**OK**	**OK**	**OK**

Location	Background sound level, dB L_{A90}			PPG-M limit, dBA			Specific sound level, dBA		Assessment		
	Day	Eve	Night	Day	Eve	Night	HH-220	T-208	Day	Eve	Night
Straits Farm	35	28	25	45-55	38-55	42	32	31	**OK**	**OK**	**OK**
West Carlton	33	26	25	43-55	36-55	42	24	21	**OK**	**OK**	**OK**
West Newton Grange	32	27	27	42-55	37-55	42	25	21	**OK**	**OK**	**OK**
Wood End House	33	32	26	43-55	42-55	42	39	36	**OK**	**OK**	**OK**

Table 7.9: Temporary Ambient Noise Level Change Assessment – Drilling

Location	Ambient sound level, dB L_{Aeq}			Specific sound level, dBA		Max new ambient sound level, dBA			Change, dB		
	Day	Eve	Night	HH-220	T-208	Day	Eve	Night	Day	Eve	Night
Brickyard Cottage	59	35	32	14	10	59	35	32	**0**	**0**	**0**
Burton Constable	42	33	32	24	21	42	34	33	**0**	**+1**	**+1**
Caley Cottage	42	35	32	38	38	43	40	39	**+1**	**+5**	**+7**
Church House	62	36	32	35	32	62	39	37	**0**	**+3**	**+5**
Flinton	57	51	40	19	14	57	51	40	**0**	**0**	**0**
Gardener's Cottage	42	33	32	22	18	42	33	32	**0**	**0**	**0**
Lambwath Hill / Low Fosham	42	30	29	28	26	42	32	32	**0**	**+2**	**+3**
Lambwath Meadows SSSI	42	30	29	25	22	42	31	30	**0**	**+1**	**+1**
Marton Farm	62	36	32	36	37	62	40	38	**0**	**+4**	**+6**
Moat Farm / Tansterne House	37	31	30	21	17	37	31	31	**0**	**0**	**+1**
Model Farm	44	33	34	25	22	44	34	35	**0**	**+1**	**+1**
Old Farm	44	33	34	25	21	44	34	35	**0**	**+1**	**+1**
Marton Old School	62	36	32	37	36	62	40	38	**0**	**+4**	**+6**
Smithy Briggs	42	33	32	25	22	42	34	33	**0**	**+1**	**+1**
Smithy Briggs Cottage	42	33	32	22	17	42	33	32	**0**	**0**	**0**
South End	44	33	30	33	33	44	36	35	**0**	**+3**	**+5**
Straits Farm	44	33	30	32	31	44	36	34	**0**	**+3**	**+4**
West Carlton	38	32	31	24	21	38	33	32	**0**	**+1**	**+1**
West Newton Grange	37	31	30	25	21	37	32	31	**0**	**+1**	**+1**
Wood End House	62	36	32	39	36	62	41	40	**0**	**+5**	**+8**

Table 7.10: PPG-M Noise Assessment for Appraisal Testing

Location	Background sound level, dB L_{A90}			PPG-M limit, dBA			Specific sound level, dBA	Assessment		
	Day	Eve	Night	Day	Eve	Night		Day	Eve	Night
Brickyard Cottage	35	33	32	45	43	42	12	OK	OK	OK
Burton Constable	34	28	28	44	38	42	17	OK	OK	OK
Caley Cottage	34	27	26	44	37	42	37	OK	OK	OK
Church House	33	32	26	43	42	42	33	OK	OK	OK
Flinton	34	30	28	44	40	42	14	OK	OK	OK
Gardener's Cottage	34	28	28	44	38	42	17	OK	OK	OK
Lambwath Hill / Low Fosham	33	25	24	43	35	42	22	OK	OK	OK
Lambwath Meadows SSSI	33	25	24	43	35	42	21	OK	OK	OK
Marton Farm	33	32	26	43	42	42	35	OK	OK	OK
Moat Farm / Tansterne House	32	27	27	42	37	42	17	OK	OK	OK
Model Farm	36	30	30	46	40	42	22	OK	OK	OK
Old Farm	36	30	30	46	40	42	21	OK	OK	OK
Marton Old School	33	32	26	43	42	42	37	OK	OK	OK
Smithy Briggs	34	28	28	44	38	42	18	OK	OK	OK
Smithy Briggs Cottage	34	28	28	44	38	42	16	OK	OK	OK
South End	35	28	25	45	38	42	32	OK	OK	OK
Straits Farm	35	28	25	45	38	42	30	OK	OK	OK
West Carlton	33	26	25	43	36	42	21	OK	OK	OK
West Newton Grange	32	27	27	42	37	42	22	OK	OK	OK
Wood End House	33	32	26	43	42	42	34	OK	OK	OK

Table 7.11: Temporary Ambient Noise Level Change Assessment – Appraisal Well Testing

Location	Ambient sound level, dB L_{Aeq}			Specific sound level, dBA	Max new ambient sound level (Initial Flow Testing), dBA			Appraisal Well Testing Noise Change, dB		
	Day	Eve	Night		Day	Eve	Night	Day	Eve	Night
Brickyard Cottage	59	35	32	12	59	35	32	**0**	**0**	**0**
Burton Constable	42	33	32	17	42	33	32	**0**	**0**	**0**
Caley Cottage	42	35	32	37	43	39	38	**+1**	**+4**	**+6**
Church House	62	36	32	33	62	38	36	**0**	**+2**	**+4**
Flinton	57	51	40	14	57	51	40	**0**	**0**	**0**
Gardener's Cottage	42	33	32	17	42	33	32	**0**	**0**	**0**
Lambwath Hill / Low Fosham	42	30	29	22	42	31	30	**0**	**+1**	**+1**
Lambwath Meadows SSSI	42	30	29	21	42	31	30	**0**	**+1**	**+1**
Marton Farm	62	36	32	35	62	39	37	**0**	**+3**	**+5**
Moat Farm / Tansterne House	37	31	30	17	37	31	30	**0**	**0**	**0**
Model Farm	44	33	34	22	44	33	34	**0**	**0**	**0**
Old Farm	44	33	34	21	44	33	34	**0**	**0**	**0**
Marton Old School	62	36	32	37	62	40	38	**0**	**+4**	**+6**
Smithy Briggs	42	33	32	18	42	33	32	**0**	**0**	**0**
Smithy Briggs Cottage	42	33	32	16	42	33	32	**0**	**0**	**0**
South End	44	33	30	32	44	36	34	**0**	**+3**	**+4**
Straits Farm	44	33	30	30	44	35	33	**0**	**+2**	**+3**
West Carlton	38	32	31	21	38	33	31	**0**	**0**	**0**
West Newton Grange	37	31	30	22	37	32	31	**0**	**+1**	**+1**
Wood End House	62	36	32	34	62	38	36	**0**	**+2**	**+4**

Table 8.2: BS4142 Noise Assessment for Operational Noise

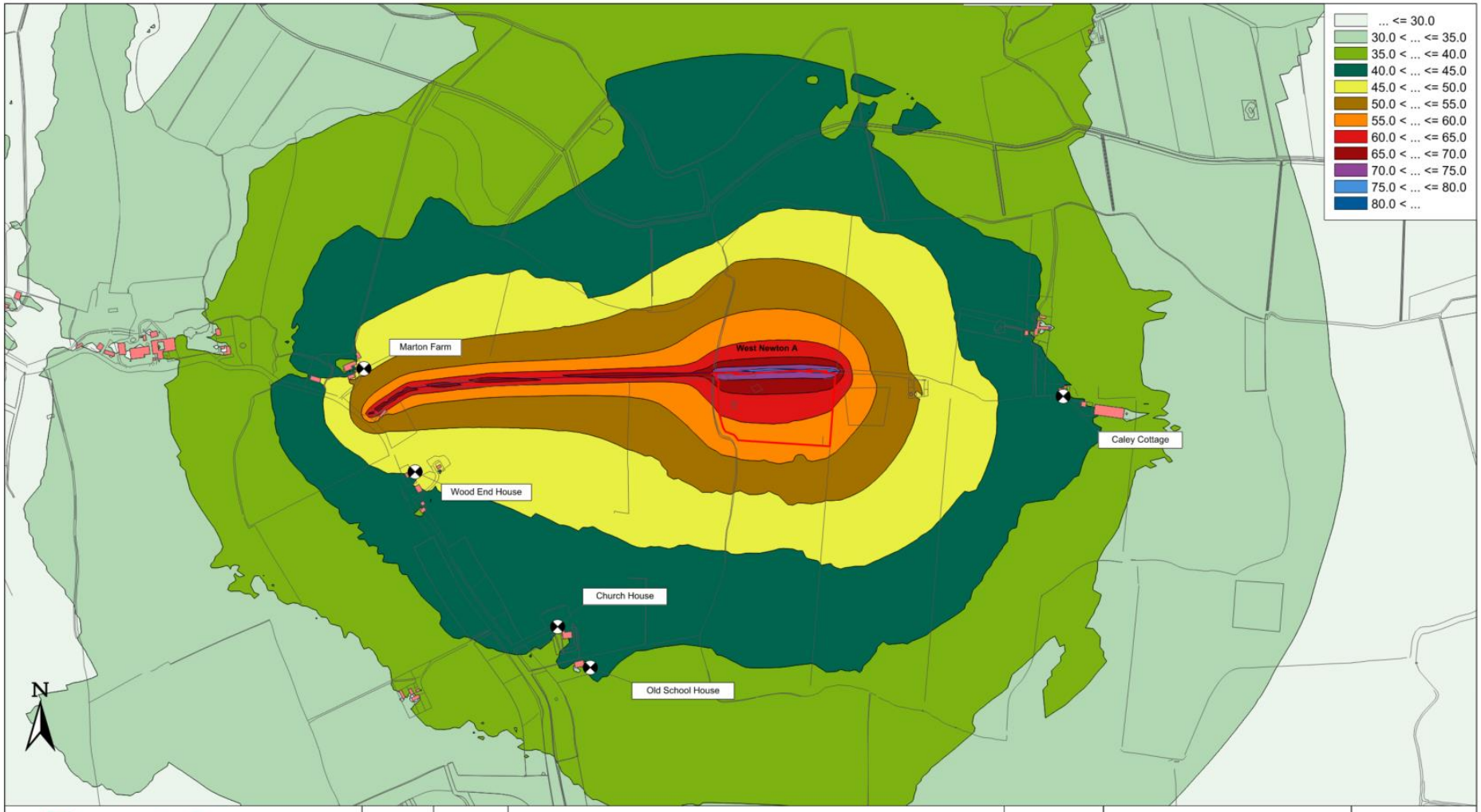
Location	Background sound level, dB L_{A90}			Residual sound level, dB $L_{Aeq,T}$			Specific sound level, dBA	Rating Penalty, dB	Rating Level, dB	Rating - Background Level Difference, dB		
	Day	Eve	Night	Day	Eve	Night				Day	Eve	Night
Brickyard Cottage	35	33	32	59	35	32	0	0	0	**-35**	**-33**	**-32**
Burton Constable	34	28	28	42	33	32	6	0	6	**-34**	**-28**	**-28**
Caley Cottage	34	27	26	42	35	32	23	3	26	**-8**	**-1**	**0**
Church House	33	32	26	62	36	32	17	3	20	**-13**	**-12**	**-6**
Flinton	34	30	28	57	51	40	1	0	1	**-33**	**-29**	**-27**
Gardener's Cottage	34	28	28	42	33	32	4	0	4	**-30**	**-24**	**-24**
Lambwath Hill / Low Fosham	33	25	24	42	30	29	11	0	11	**-22**	**-14**	**-13**
Lambwath Meadows SSSI	33	25	24	42	30	29	7	0	7	**-26**	**-18**	**-17**
Marton Farm	33	32	26	62	36	32	20	3	23	**-10**	**-9**	**-3**
Moat Farm / Tansterne House	32	27	27	37	31	30	3	0	3	**-29**	**-24**	**-24**
Model Farm	36	30	30	44	33	34	9	0	9	**-27**	**-21**	**-21**
Old Farm	36	30	30	44	33	34	8	0	8	**-28**	**-22**	**-22**
Marton Old School	33	32	26	62	36	32	21	3	24	**-9**	**-8**	**-2**
Smithy Briggs	34	28	28	42	33	32	7	0	7	**-27**	**-21**	**-21**
Smithy Briggs Cottage	34	28	28	42	33	32	4	0	4	**-30**	**-24**	**-24**
South End	35	28	25	44	33	30	18	0	18	**-17**	**-10**	**-7**
Straits Farm	35	28	25	44	33	30	17	0	17	**-18**	**-11**	**-8**
West Carlton	33	26	25	38	32	31	6	0	6	**-27**	**-20**	**-19**
West Newton Grange	32	27	27	37	31	30	7	0	7	**-25**	**-20**	**-20**
Wood End House	33	32	26	62	36	32	21	3	24	**-9**	**-8**	**-2**

Table 8.3: Ambient Noise Level Change Assessment During Operational Phase

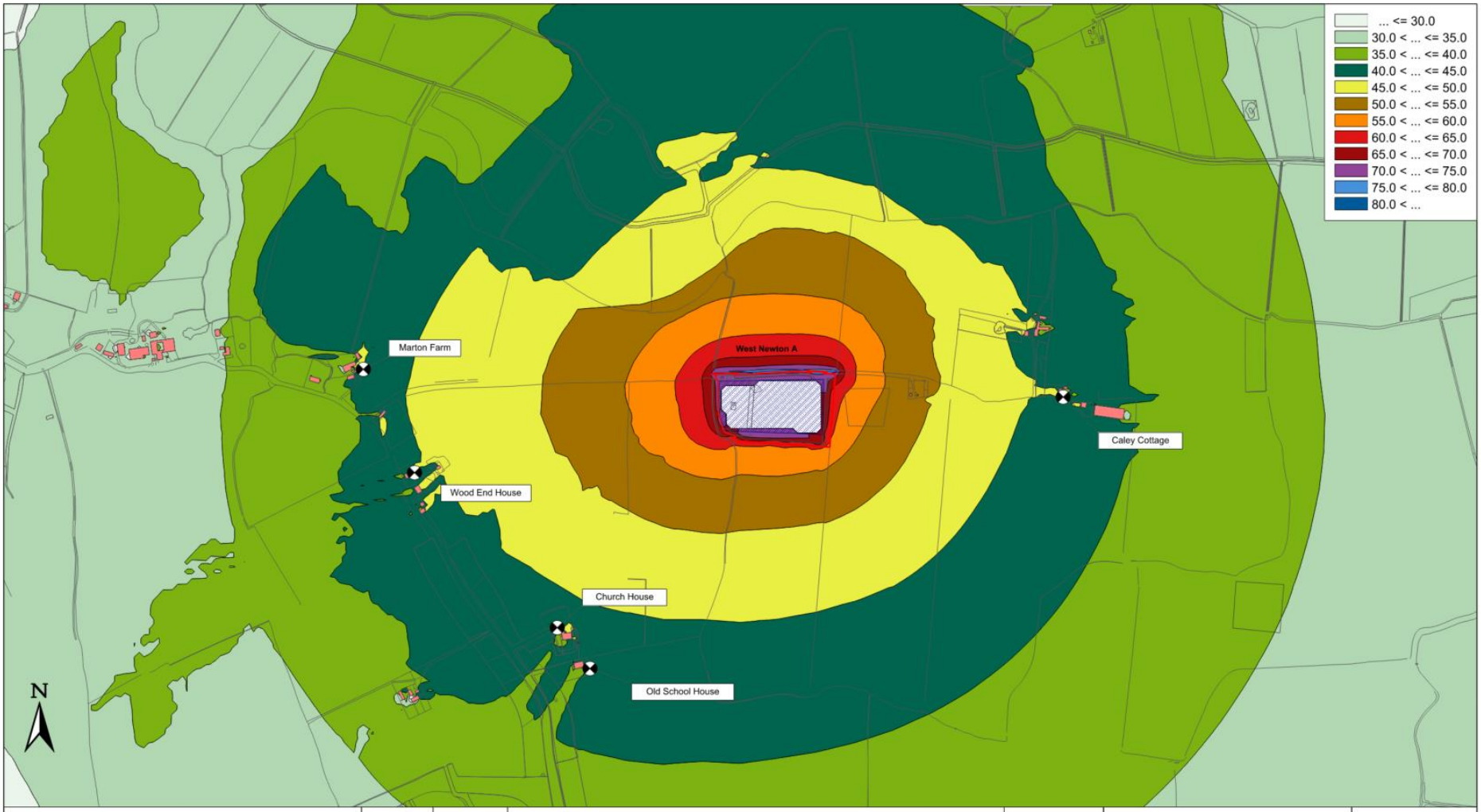
Location	Ambient Sound Level, dB L_{Aeq}			Specific Sound Level, dBA	Max New Ambient Sound Level (incl. Operational Noise), dBA			Ambient Noise Level Change, dB		
	Day	Eve	Night		Day	Eve	Night	Day	Eve	Night
Brickyard Cottage	59	35	32	0	59	35	32	**0**	**0**	**0**
Burton Constable	42	33	32	6	42	33	32	**0**	**0**	**0**
Caley Cottage	42	35	32	23	42	35	33	**0**	**0**	**+1**
Church House	62	36	32	17	62	36	32	**0**	**0**	**0**

Location	Ambient Sound Level, dB L_{Aeq}			Specific Sound Level, dBA	Max New Ambient Sound Level (incl. Operational Noise), dBA			Ambient Noise Level Change, dB		
	Day	Eve	Night		Day	Eve	Night	Day	Eve	Night
Flinton	57	51	40	1	57	51	40	**0**	**0**	**0**
Gardener's Cottage	42	33	32	4	42	33	32	**0**	**0**	**0**
Lambwath Hill / Low Fosham	42	30	29	11	42	30	29	**0**	**0**	**0**
Lambwath Meadows SSSI	42	30	29	7	42	30	29	**0**	**0**	**0**
Marton Farm	62	36	32	20	62	36	32	**0**	**0**	**0**
Moat Farm / Tansterne House	37	31	30	3	37	31	30	**0**	**0**	**0**
Model Farm	44	33	34	9	44	33	34	**0**	**0**	**0**
Old Farm	44	33	34	8	44	33	34	**0**	**0**	**0**
Marton Old School	62	36	32	21	62	36	33	**0**	**0**	**+1**
Smithy Briggs	42	33	32	7	42	33	32	**0**	**0**	**0**
Smithy Briggs Cottage	42	33	32	4	42	33	32	**0**	**0**	**0**
South End	44	33	30	18	44	33	30	**0**	**0**	**0**
Straits Farm	44	33	30	17	44	33	30	**0**	**0**	**0**
West Carlton	38	32	31	6	38	32	31	**0**	**0**	**0**
West Newton Grange	37	31	30	7	37	31	30	**0**	**0**	**0**
Wood End House	62	36	32	21	62	36	32	**0**	**0**	**0**

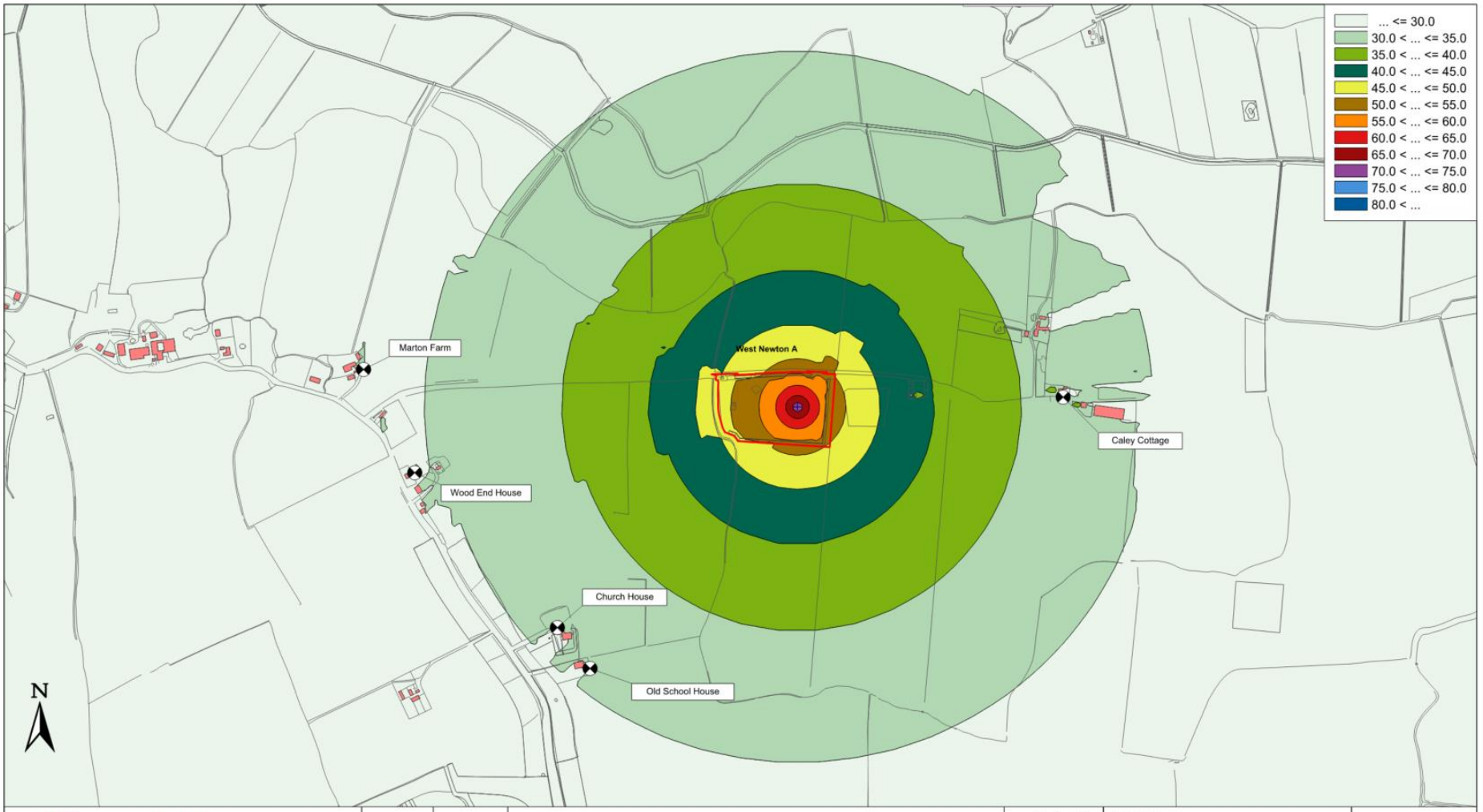
3 Updated Figures



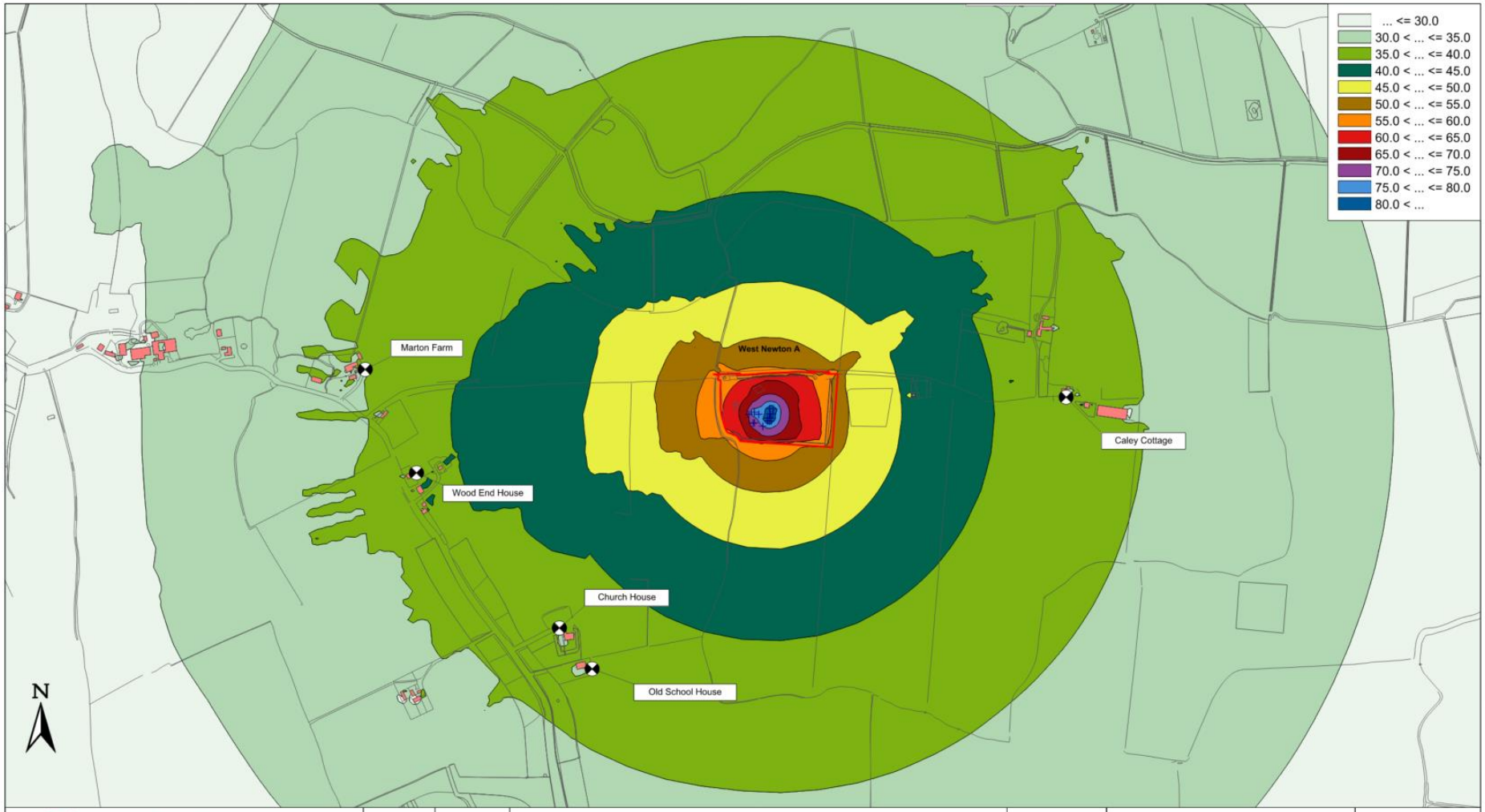
Rathlin Energy	Author	CI	West Newton A Wellsite Site Construction Access	Project No.	JAT2106
				Project Title	West Newton A
	Scale	1:7500@A3	Rathlin Energy (UK) Limited	Drawing No.	Figure A9
			Sheet 1 of 1	Date	20.07.21



Rathlin Energy	Author	CI	**West Newton A Wellsite** **Site Construction and Restoration**	Project No.	JAT2106
				Project Title	West Newton A
	Scale	1:7500@A3	**Rathlin Energy (UK) Limited**	Drawing No.	Figure A10
			Sheet 1 of 1	Date	20.07.21

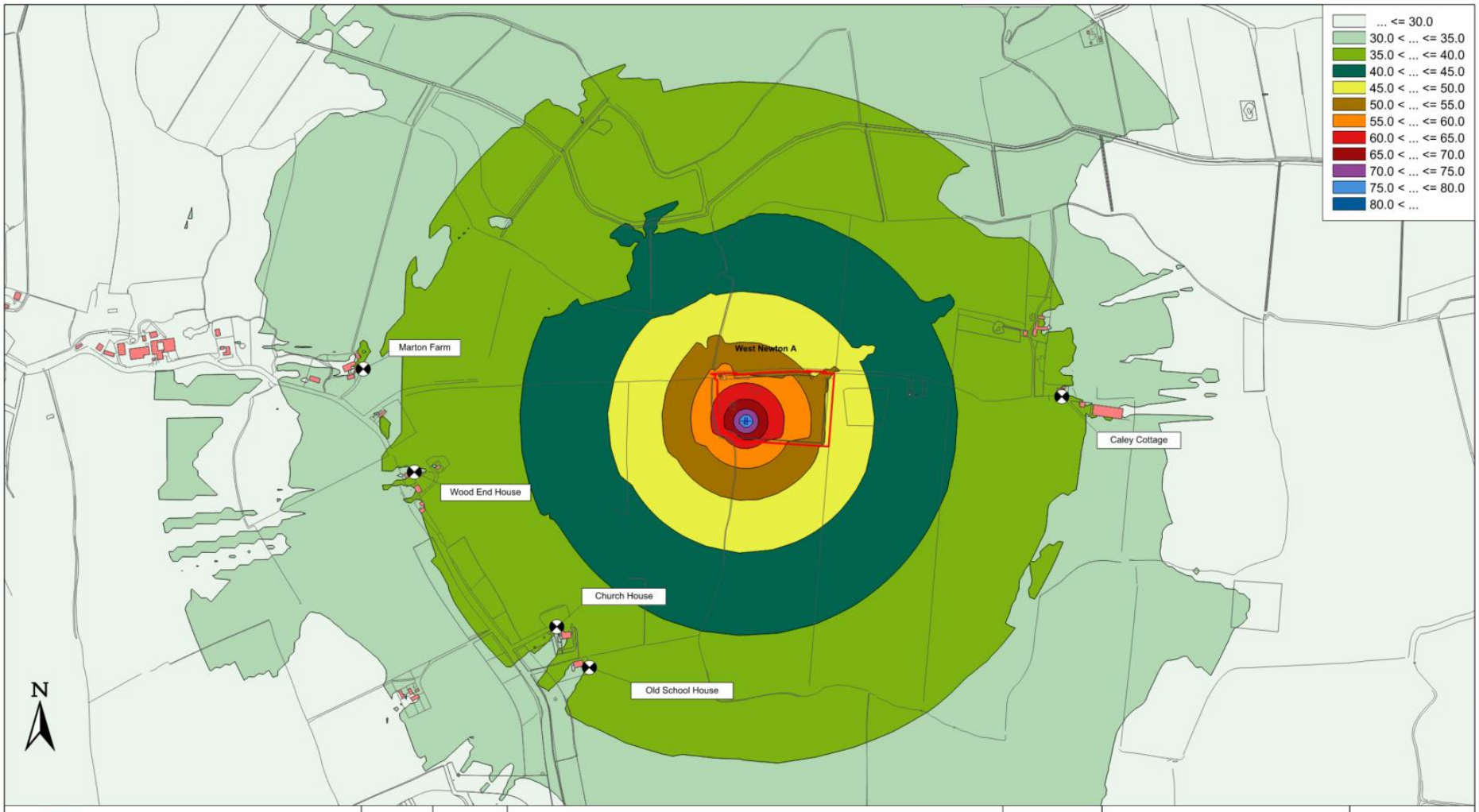


Rathlin Energy	Author	CI	**West Newton A Wellsite Conductor Drilling**	Project No.	JAT2106
				Project Title	West Newton A
	Scale	1:7500@A3	**Rathlin Energy (UK) Limited**	Drawing No.	Figure A11
			Sheet 1 of 1	Date	20.07.21

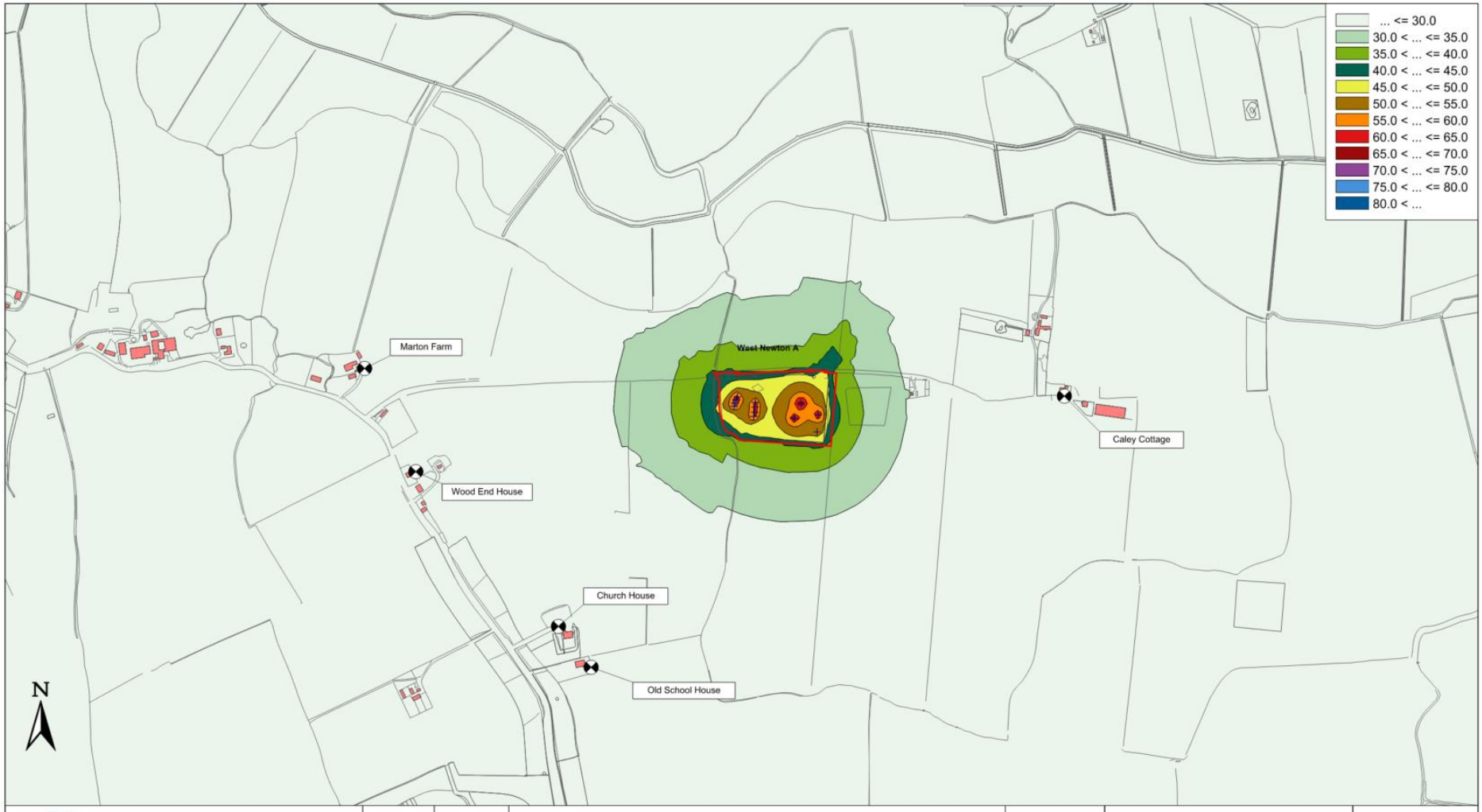


Rathlin Energy	Author	CI	West Newton A Wellsite Drilling HH220	Project No.	JAT2106
				Project Title	West Newton A
	Scale	1:7500@A3	Rathlin Energy (UK) Limited	Drawing No.	Figure A12
			Sheet 1 of 1	Date	20.07.21

Rathlin Energy	Author	CI	**West Newton A Wellsite Drilling T208**	Project No.	JAT2106
				Project Title	West Newton A
	Scale	1:7500@A3	**Rathlin Energy (UK) Limited**	Drawing No.	Figure A13
			Sheet 1 of 1	Date	20.07.21



Rathlin Energy	Author	CI	West Newton A Wellsite Well Testing	Project No.	JAT2106
				Project Title	West Newton A
	Scale	1:7500@A3	Rathlin Energy (UK) Limited	Drawing No.	Figure A14
			Sheet 1 of 1	Date	20.07.21



Rathlin Energy	Author	CI	**West Newton A Wellsite Production**	Project No.	JAT2106
				Project Title	West Newton A
	Scale	1:7500@A3	**Rathlin Energy (UK) Limited**	Drawing No.	Figure A15
			Sheet 1 of 1	Date	20.07.21