



BRIEFING NOTE

Project Reference	170749-e Lyre WF ABP Further Information
Date & Time	23.09.2022
Subject	Shadow Flicker Outputs
Author(s)	Niamh McHugh, Killian McGovern, James Newell, Ellen Costello, Meabhann Crowe

Introduction

MKO has been commissioned to conduct a Shadow Flicker Assessment of 2 no. scenarios (Scenarios 1 and 2) in relation to turbine locations for the Proposed Lyrenacarriga Wind Farm Development following receipt of a request for Further Information from An Bord Pleanála (ref: ABP-309121-21). These 2 no. Scenarios have been assessed relative to an updated Dwellings database. The Dwellings database includes for two identified sensitive receptors in the form of granted planning permissions for a property/dwelling. These two dwellings are located within the designated set-back distance 600m (4 x tip height) of the proposed turbine 5 location, which was assessed in the Environmental Impact Assessment Report (EIAR) lodged and as submitted to An Bord Pleanála in 2021 (2021 EIAR).

These 2 no. scenarios are as follows:

- Scenario 1: 17 no. Turbines in their Original Locations (2021 EIAR)
- Scenario 2: Move T5 to Outside 700m of Dwellings

Within these scenarios (discussed overleaf), two turbine options have been assessed:

Label	Tip Height (m)	Hub Height (m)	Blade Length (m)	Rotor Diameter (m)
Turbine Option 1	150	83.5	66.5	133
Turbine Option 2	150	93.5	56.5	113

Therefore, the following 6 no. shadow flicker processing outputs have been assessed:

- Scenario 1 (Turbine Option 1)
- Scenario 1 (Turbine Option 2)
- Scenario 2 (Turbine Option 1)
- Scenario 2 (Turbine Option 2)

The results of Turbine Options 1 and 2 under Scenarios 1 and 2 are available to view in Appendix 1 of this document. The Shadow Flicker Assessment was carried out by Niamh McHugh and Killian McGovern both Environmental Scientists, and James Newell a Graphics Technician, all of MKO. This Shadow Flicker Assessment has been reviewed by Ellen Costello, a Project Environmental Scientist of MKO.



Shadow Flicker Prediction Methodology

Shadow Flicker occurs only under certain, combined circumstances. Where shadow flicker does occur, it is generally short-lived.

The occurrence of shadow flicker can be precisely predicted using specialist computer software programmes specifically developed for the wind energy industry, such as WindFarm (ReSoft) or WindFarmer (DNV.GL) or AWS OpenWind or WindPro.

The computer modelling of the occurrence and magnitude of shadow flicker is made possible by the fact that the sun rises and sets in the same position in the sky on every day each year.

Any potential impact can be precisely modelled to give the start and end time (accurate to the second) of any incidence of shadow flicker, at any location, on any day or all days of the year when it might occur. Where a shadow flicker impact is predicted to occur, the total maximum daily and annual durations can be predicted, along with the total number of days.

For the purposes of this shadow flicker assessment, the software package ReSoft WindFarm Version 5.0.1.2 has been used to predict the level of shadow flicker associated with the Lyrenacarriga Wind Farm Development.

Guidance

The current, adopted guidance for shadow flicker in Ireland is derived from the ‘*Wind Energy Development Guidelines for Planning Authorities 2006*’ (DoEHLG), and the ‘*Best Practice Guidelines for the Irish Wind Energy Industry*’ (Irish Wind Energy Association, 2012). The 2006 DoEHLG Guidelines state that at distances greater than 10 rotor diameters from a turbine, the potential for shadow flicker is very low.

The DoEHLG 2006 wind energy guidelines recommend that shadow flicker at dwellings within 500 metres of a proposed turbine location should not exceed a total of 30 hours per year or 30 minutes per day.

The adopted 2006 DoEHLG guidelines are currently under review. The DoHPLG released the ‘Draft Revised Wind Energy Development Guidelines’ in December 2019 for public consultation. The Draft 2019 guidelines recommend local planning authorities and/or An Bord Pleanála impose conditions to ensure that:

“no existing dwelling or other affected property will experience shadow flicker as a result of the wind energy development subject of the planning application and the wind energy development shall be installed and operated in accordance with the shadow flicker study submitted to accompany the planning application, including any mitigation measures required.”

The Draft 2019 Guidelines are based on the recommendations set out in the ‘Proposed Revisions to Wind Energy Development Guidelines 2006 – Targeted Review’ (December 2013) and the ‘Review of the Wind Energy Development Guidelines 2006 – Preferred Draft Approach’ (June 2017).

The assessment herein is based on compliance with the current DoEHLG Guidelines limit (30 hours per year or 30 minutes per day).



Study Area

The study area for the shadow flicker assessment is ten times rotor diameter, as set out in the ‘*Wind Energy Development Guidelines for Planning Authorities*’, DoEHLG, 2006. All dwellings (including the two identified properties in receipt of planning permission) located within ten rotor diameters of the Lyrenacarriga Wind Farm have been included within this assessment.

Scenario 1 – 17 no. Turbines in their Original Locations (relative to 2021 EIAR)

Scenario A refers to the turbine layout as it currently stands, as assessed in the Environmental Impact Assessment Report (EIAR) lodged and as submitted to An Bord Pleanála in 2021 (2021 EIAR). The results for Turbine Option 1, and for Turbine Option 2 are presented in the attached in Appendix 1 as ‘Scenario 1 – Turbine Option 1’ and ‘Scenario 1 – Turbine Option 2’ respectively. As can be seen in Appendix 1, ‘Scenario 1 – Turbine Option 1’ leads to a total of 60 no. dwellings experiencing daily shadow flicker exceedances and 7 no. dwellings experiencing annual shadow flicker exceedances. Similarly, ‘Scenario 1 – Turbine Option 2’ leads to a total of 36 no. dwellings experiencing daily shadow flicker exceedances and 1 no. dwellings experiencing annual shadow flicker exceedances.

Scenario 2 – Move T5 to Outside 700m of Dwellings

Scenario C refers to the turbine layout if T5 were to be moved 165m to the east in order to maintain a 700m setback distance from all dwellings, a set-back distance from dwellings that is set out in the 2021 EIAR. The results for the Turbine Option 1, and for the Turbine Option 2 are presented in the attached in Appendix 1 as ‘Scenario 2 – Turbine Option 1’ and ‘Scenario 2 – Turbine Option 2’ respectively. As can be seen in Appendix 1, ‘Scenario 2 – Turbine Option 1’ leads to a total of 60 no. dwellings experiencing daily shadow flicker exceedances and 8 no. dwellings experiencing annual shadow flicker exceedances. Similarly, ‘Scenario 2 – Turbine Option 2’ leads to a total of 38 no. dwellings experiencing daily shadow flicker exceedances and 0 no. dwellings experiencing annual shadow flicker exceedances.

Example Mitigation Measures

An example of the mitigation strategy (i.e. the dates when exceedances will occur and potential turbine curtailment dates) can also be seen in Appendix 1 of this document and relates to Scenario 2: Turbine Option 2.

Summary

Scenario 1 vs. Scenario 2:

As detailed in the results presented above, the variance in results between the scenarios is minimal (\pm 2 no. dwellings). The movement of turbine no. 5 does not give rise to any significant changes in the number of dwellings in which there are daily shadow flicker exceedances and annual shadow flicker exceedances.

Turbine Option 1 vs. Turbine Option 2 across all scenarios:

For Turbine Option 2, across both scenarios, there is a range of 36-38 properties in which daily shadow flicker exceedances will occur. For Turbine Option 1, there is an increase of approximately 22 dwellings in which daily shadow flicker exceedances will occur i.e 60 properties across all

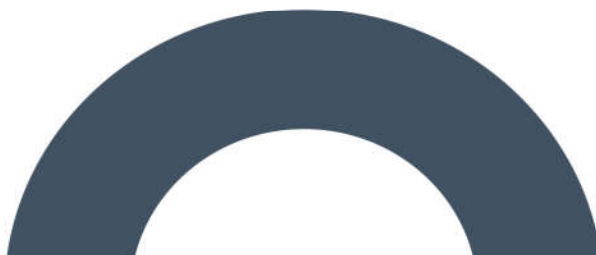
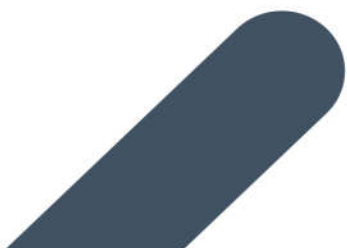


scenarios. For annual exceedances, Turbine Option 2 gives rise to annual exceedances 1 no. dwellings for Scenario 1 and at 0 no. dwellings for Scenario 2. There is an increase in annual exceedances at a range of 7-8 dwellings for Turbine Option 1 across both scenarios. As detailed above, Turbine Option 1 gives rise to greater daily and annual exceedances which is line with expected results, as Turbine Option 1 has a longer turbine blade and a great rotor diameter than that of Turbine Option 2.



FI Lyrenacarriga

Appendix 8



Shadow Flicker Turbine Hub 83.5m

Exceedances	No. Of Properties
Daily	56
Annual	7

House ID	ITM Coordinates (Easting)	ITM Coordinates (Northing)	Description	Distance to Nearest Turbine (metres)	Nearest Proposed Turbine No.	Max. Daily Shadow Flicker: Pre-Mitigation (hrs:min:sec)	Max. Annual Shadow Flicker: Pre-Mitigation (hrs:min:sec)	Max. Annual Shadow Flicker Adjusted for Average Regional Sunshine (hrs:min:sec)	Proposed Turbine(s) Giving Rise to Daily Shadow Flicker Exceedance	Mitigation Strategy Required (Daily)	Mitigation Strategy Required (Annual)
1	598514	588721	Dwelling	1060	T13	00:31:12	13:24:00	4:20:45	13	Yes	Yes
2	598645	588003	Dwelling	725	T13	01:02:24	85:36:00	27:45:38	13, 14	Yes	Yes
3	598651	587842	Dwelling	756	T13	01:07:48	103:24:00	33:32:00	13, 14, 16	Yes	Yes
4	598656	588404	Dwelling	776	T13	00:42:00	56:06:00	18:11:37	13	Yes	Yes
5	598687	587517	Dwelling	887	T13	00:35:24	39:12:00	12:42:46	14, 16	Yes	Yes
6	598850	587409	Dwelling	762	T16	00:43:12	89:06:00	28:53:44	14, 16	Yes	Yes
7	598894	588985	Dwelling	1012	T13	00:31:12	34:36:00	11:13:15	12	Yes	Yes
8	598998	586888	Dwelling	753	T16	00:29:24	39:18:00	12:44:43	N/A	No	No
9	599326	586507	Dwelling	869	T16	00:30:36	23:00:00	7:27:32	17	Yes	Yes
10	599748	586235	Dwelling	1054	T17	00:00:00	0:00:00	0:00:00	N/A	No	No
11	600379	588814	Dwelling	707	T12	00:46:48	49:48:00	16:09:01	12	Yes	Yes
12	600493	588853	Dwelling	824	T12	00:40:12	44:36:00	14:27:51	12	Yes	Yes
13	600562	589306	Dwelling	1180	T12	00:27:00	17:18:00	5:36:38	N/A	No	No
14	600549	586316	Dwelling	888	T17	00:00:00	0:00:00	0:00:00	N/A	No	No
15	600654	589321	Dwelling	1252	T12	00:27:36	22:06:00	7:10:02	N/A	No	No
16	600822	586555	Dwelling	823	T17	00:00:00	0:00:00	0:00:00	N/A	No	No
17	601046	587710	Dwelling	962	T17	00:35:24	45:30:00	14:45:21	15, 17	Yes	Yes

18	601073	587560 Dwelling	908 T17	00:36:00	42:36:00	13:48:56	15, 17	Yes	Yes
19	601077	587501 Dwelling	887 T17	00:36:36	43:00:00	13:56:42	15, 17	Yes	Yes
20	601175	587859 Dwelling	1131 T15	00:30:00	36:30:00	11:50:14		17 No	No
21	601232	587219 Dwelling	974 T17	00:33:36	35:48:00	11:36:36		17 Yes	Yes
22	601260	587175 Dwelling	1000 T17	00:32:24	34:48:00	11:17:09		17 Yes	Yes
23	601282	587503 Dwelling	1079 T17	00:30:36	29:24:00	9:32:04		17 Yes	Yes
24	601306	588360 Dwelling	1452 T15	00:00:00	0:00:00	0:00:00	N/A	No	No
25	601370	588387 Dwelling	1521 T15	00:00:00	0:00:00	0:00:00	N/A	No	No
26	601546	588343 Dwelling	1652 T15	00:00:00	0:00:00	0:00:00	N/A	No	No
27	601556	586585 Dwelling	1416 T17	00:00:00	0:00:00	0:00:00	N/A	No	No
28	601596	586485 Derelict	1495 T17	00:00:00	0:00:00	0:00:00	N/A	No	No
29	601655	586422 Dwelling	1577 T17	00:00:00	0:00:00	0:00:00	N/A	No	No
30	601777	585912 Dwelling	1720 T11	00:00:00	0:00:00	0:00:00	N/A	No	No
31	601850	585882 Dwelling	1652 T11	00:00:00	0:00:00	0:00:00	N/A	No	No
32	602048	587698 Dwelling	1106 T2	00:30:00	14:00:00	4:32:25	N/A	No	No
33	602152	586803 Dwelling	1038 T5	00:32:24	53:30:00	17:21:01	2, 5	Yes	Yes
34	602198	585676 Dwelling	1292 T9	00:25:48	10:00:00	3:14:35	N/A	No	No
35	602210	587575 Dwelling	919 T2	00:35:24	36:48:00	11:56:04	2, 5	Yes	Yes
36	602379	587837 Dwelling	858 T2	00:39:00	57:54:00	18:46:38		2 Yes	Yes
37	602444	587867 Dwelling	821 T2	00:41:24	57:00:00	18:29:08		2 Yes	Yes
38	602475	587884 Dwelling	806 T2	00:42:00	56:06:00	18:11:37		2 Yes	Yes
39	602605	586363 Dwelling	836 T5	00:36:00	49:12:00	15:57:21	9, 11	Yes	Yes
40	602608	586548 Dwelling	710 T5	00:37:48	64:00:00	20:45:20	5, 11	Yes	Yes
41	602629	585772 Dwelling	878 T9	00:37:12	79:54:00	25:54:43	9, 10, 11	Yes	Yes
42	602655	586333 Commercial unit	826 T5	00:38:24	69:06:00	22:24:34	9, 11	Yes	Yes
43	602690	585993 Dwelling	805 T11	00:54:36	92:48:00	30:05:44	9, 11	Yes	Yes
44	602718	585838 Dwelling	810 T9	00:41:24	97:42:00	31:41:05	9, 10, 11	Yes	Yes
45	602726	585900 Dwelling	793 T11	00:51:36	99:06:00	32:08:19	9, 10, 11	Yes	Yes
46	602730	586270 Dwelling	763 T11	00:42:00	80:30:00	26:06:24	9, 11	Yes	Yes
47	602738	585979 Dwelling	761 T11	00:57:36	107:18:00	34:47:53	9, 10, 11	Yes	Yes
48	603003	584835 Dwelling	734 T10	00:31:48	19:30:00	6:19:26		10 Yes	Yes
49	603022	584761 Dwelling	762 T10	00:00:00	0:00:00	0:00:00	N/A	No	No
50	603085	584339 Dwelling	1040 T10	00:00:00	0:00:00	0:00:00	N/A	No	No

51	603114	588174 Dwelling	788 T2	00:34:12	19:06:00	6:11:39		1 Yes	Yes
52	603170	584219 Dwelling	1108 T10	00:00:00	0:00:00	0:00:00	N/A	No	No
53	603997	584136 Dwelling	1157 T10	00:00:00	0:00:00	0:00:00	N/A	No	No
54	604076	584274 Dwelling	1059 T10	00:00:00	0:00:00	0:00:00	N/A	No	No
55	604113	588564 Dwelling	855 T1	00:00:00	0:00:00	0:00:00	N/A	No	No
56	604119	584398 Dwelling	969 T10	00:00:00	0:00:00	0:00:00	N/A	No	No
57	604305	588638 Dwelling	972 T1	00:00:00	0:00:00	0:00:00	N/A	No	No
58	604428	588706 Dwelling	1080 T1	00:00:00	0:00:00	0:00:00	N/A	No	No
59	604493	584864 Dwelling	945 T10	00:42:36	59:24:00	19:15:50		10 Yes	Yes
60	604511	584867 Dwelling	960 T10	00:40:48	55:42:00	18:03:50		10 Yes	Yes
61	604594	585857 Dwelling	705 T6	01:08:24	84:42:00	27:28:07		8 Yes	Yes
62	604600	588586 Dwelling	1060 T1	00:27:00	14:48:00	4:47:59	N/A	No	No
63	604654	588453 Dwelling	989 T1	00:31:48	33:06:00	10:44:04		1 Yes	Yes
64	604701	585856 Dwelling	752 T6	01:00:00	89:30:00	29:01:31	7, 8	Yes	Yes
65	604897	587449 Dwelling	944 T1	00:35:24	47:36:00	15:26:13	1, 4	Yes	Yes
66	604792	588210 Dwelling	939 T1	00:35:24	25:00:00	8:06:28		1 Yes	Yes
67	604818	587518 Dwelling	850 T1	00:39:00	54:00:00	17:30:45	1, 4	Yes	Yes
68	604854	585817 Dwelling	867 T6	00:33:36	52:00:00	16:51:50	7, 8	Yes	Yes
69	604957	587397 Dwelling	1017 T1	00:33:00	35:12:00	11:24:56		1 Yes	Yes
70	605008	586923 Dwelling	785 T6	00:52:12	57:54:00	18:46:38		6 Yes	Yes
71	605266	586328 Dwelling	946 T6	00:34:48	34:30:00	11:11:19		6 Yes	Yes
72	605282	586432 Dwelling	947 T6	00:40:48	32:00:00	10:22:40		6 Yes	Yes
73	605377	586748 Dwelling	1065 T6	00:30:36	15:36:00	5:03:33		6 Yes	Yes
74	600571	589162 Planning Application	1080 T12	00:31:48	33:54:00	10:59:38		12 Yes	Yes
75	605310	586260 Planning Application	1005 T6	00:33:36	22:18:00	7:13:55		6 Yes	Yes
76	600578	586492 Planning Application	736 T17	00:00:00	0:00:00	0:00:00	N/A	No	No
77	599003	586321 Planning Application ID 18/4499 - Cork granted	1176 T16	00:00:00	0:00:00	0:00:00	N/A	No	No

78	598909	586292	Planning Application ID 18/6951 - Cork granted	1251	T16	00:00:00	0:00:00	0:00:00	N/A	No	No
79	598876	587308	Planning Application ID 19/5914 - Cork granted	732	T16	01:00:36	89:06:00	28:53:44	14, 16	Yes	Yes
80	605293	586234	Planning Application ID 18/383 - W'ford granted	995	T6	00:33:36	23:48:00	7:43:06		6 Yes	Yes
81	604240	589061	0	1366	T1	00:00:00	0:00:00	0:00:00	N/A	No	No
82	604171	589043	0	1337	T1	00:00:00	0:00:00	0:00:00	N/A	No	No
83	604183	589037	0	1333	T1	00:00:00	0:00:00	0:00:00	N/A	No	No
84	604258	588965	0	1275	T1	00:00:00	0:00:00	0:00:00	N/A	No	No
85	604307	588937	0	1259	T1	00:00:00	0:00:00	0:00:00	N/A	No	No
86	604315	588931	0	1255	T1	00:00:00	0:00:00	0:00:00	N/A	No	No
87	605450	585949	0	1247	T6	00:28:12	24:12:00	7:50:53	N/A	No	No
88	605444	585872	0	1279	T6	00:28:12	31:54:00	10:20:43	N/A	No	No
89	603877	583927	0	1328	T10	00:00:00	0:00:00	0:00:00	N/A	No	No
90	603083	584058	0	1290	T10	00:00:00	0:00:00	0:00:00	N/A	No	No
91	603155	584011	0	1306	T10	00:00:00	0:00:00	0:00:00	N/A	No	No
92	600468	585862	0	1311	T17	00:00:00	0:00:00	0:00:00	N/A	No	No
93	602068	586784	0	1124	T5	00:30:00	50:12:00	16:16:49	N/A	No	No
94	602665	586822	Planning Permission for dwelling	533	T5	01:09:36	152:24:00	49:25:27	3, 5, 11	Yes	Yes
95	602717	586621	Planning Permission for dwelling	580	T5	00:40:12	74:36:00	24:11:35	5, 11	Yes	Yes
100	598862	587310	PP 195914	728	0	00:59:24	88:12:00	28:36:14	14, 16	Yes	Yes
101	598862	587357	PP 214825	729	0	00:51:36	92:42:00	30:03:47	14, 16	Yes	Yes

102	598638	588151 PP 059256	730	0	00:43:48	83:36:00	27:06:43	13	Yes	Yes
103	600658	586499 PP 184499	768	0	00:00:00	0:00:00	0:00:00	N/A	No	No
104	600573	589079 PP 0949	1024	0	00:33:36	35:54:00	11:38:33	12	Yes	Yes
105	599107	586351 PP 184499	1082	0	00:00:00	0:00:00	0:00:00	N/A	No	No
106	598862	586486 PP 205092	1107	0	00:00:00	0:00:00	0:00:00	N/A	No	No
107	605407	586110 PP 06143	1143	0	00:30:00	19:54:00	6:27:13	6	No	No
108	598986	586238 PP 186951	1239	0	00:00:00	0:00:00	0:00:00	N/A	No	No
109	600445	585900 PP 085349	1270	0	00:00:00	0:00:00	0:00:00	N/A	No	No

Shadow Flicker Turbine Hub 93.5m

Exceedances	No. Of Properties
Daily	33
Annual	1

House ID	ITM Coordinates (Easting)	ITM Coordinates (Northing)	Description	Distance to Nearest Turbine (metres)	Nearest Proposed Turbine No.	Max. Daily Shadow Flicker: Pre-Mitigation (hrs:min:sec)	Max. Annual Shadow Flicker: Pre-Mitigation (hrs:min:sec)	Max. Annual Shadow Flicker Adjusted for Average Regional Sunshine (hrs:min:sec)	Proposed Turbine(s) Giving Rise to Daly Shadow Flicker Exceedance	Mitigation Strategy Required (Daily)	Mitigation Strategy Required (Annual)
1	598514	588721	Dwelling	1060	T13	00:27:36	8:42:00	2:49:17	N/A	No	No
2	598645	588003	Dwelling	725	T13	00:38:24	39:30:00	12:48:36	13	Yes	Yes
3	598651	587842	Dwelling	756	T13	00:38:24	65:12:00	21:08:41	13	Yes	Yes
4	598656	588404	Dwelling	776	T13	00:36:00	22:12:00	7:11:58	13	Yes	Yes
5	598687	587517	Dwelling	887	T13	00:30:00	31:00:00	10:03:13	16	No	No
6	598850	587409	Dwelling	762	T16	00:37:12	59:42:00	19:21:40	14, 16	Yes	Yes
7	598894	588985	Dwelling	1012	T13	00:27:00	28:18:00	9:10:40	N/A	No	No
8	598998	586888	Dwelling	753	T16	00:00:00	0:00:00	0:00:00	N/A	No	No
9	599326	586507	Dwelling	869	T16	00:00:00	0:00:00	0:00:00	N/A	No	No
10	599748	586235	Dwelling	1054	T17	00:00:00	0:00:00	0:00:00	N/A	No	No
11	600379	588814	Dwelling	707	T12	00:39:36	31:42:00	10:16:50	12	Yes	Yes
12	600493	588853	Dwelling	824	T12	00:34:12	23:06:00	7:29:29	12	Yes	Yes
13	600562	589306	Dwelling	1180	T12	00:00:00	0:00:00	0:00:00	N/A	No	No
14	600549	586316	Dwelling	888	T17	00:00:00	0:00:00	0:00:00	N/A	No	No
15	600654	589321	Dwelling	1252	T12	00:00:00	0:00:00	0:00:00	N/A	No	No
16	600822	586555	Dwelling	823	T17	00:00:00	0:00:00	0:00:00	N/A	No	No
17	601046	587710	Dwelling	962	T17	00:30:00	32:48:00	10:38:14	17	No	No
18	601073	587560	Dwelling	908	T17	00:31:12	31:24:00	10:11:00	17	Yes	Yes

19	601077	587501 Dwelling	887 T17	00:31:48	31:36:00	10:14:53		17	Yes	Yes
20	601175	587859 Dwelling	1131 T15	00:00:00	0:00:00	0:00:00	N/A		No	No
21	601232	587219 Dwelling	974 T17	00:28:48	14:06:00	4:34:22	N/A		No	No
22	601260	587175 Dwelling	1000 T17	00:28:12	13:30:00	4:22:41	N/A		No	No
23	601282	587503 Dwelling	1079 T17	00:26:24	11:54:00	3:51:33	N/A		No	No
24	601306	588360 Dwelling	1452 T15	00:00:00	0:00:00	0:00:00	N/A		No	No
25	601370	588387 Dwelling	1521 T15	00:00:00	0:00:00	0:00:00	N/A		No	No
26	601546	588343 Dwelling	1652 T15	00:00:00	0:00:00	0:00:00	N/A		No	No
27	601556	586585 Dwelling	1416 T17	00:00:00	0:00:00	0:00:00	N/A		No	No
28	601596	586485 Derelict	1495 T17	00:00:00	0:00:00	0:00:00	N/A		No	No
29	601655	586422 Dwelling	1577 T17	00:00:00	0:00:00	0:00:00	N/A		No	No
30	601777	585912 Dwelling	1720 T11	00:00:00	0:00:00	0:00:00	N/A		No	No
31	601850	585882 Dwelling	1652 T11	00:00:00	0:00:00	0:00:00	N/A		No	No
32	602048	587698 Dwelling	1106 T2	00:25:48	11:24:00	3:41:50	N/A		No	No
33	602152	586803 Dwelling	1038 T5	00:27:36	41:24:00	13:25:35	N/A		No	No
34	602198	585676 Dwelling	1292 T9	00:00:00	0:00:00	0:00:00	N/A		No	No
35	602210	587575 Dwelling	919 T2	00:30:36	15:36:00	5:03:33		2	Yes	Yes
36	602379	587837 Dwelling	858 T2	00:33:36	22:30:00	7:17:49		2	Yes	Yes
37	602444	587867 Dwelling	821 T2	00:35:24	27:42:00	8:59:00		2	Yes	Yes
38	602475	587884 Dwelling	806 T2	00:36:00	31:18:00	10:09:03		2	Yes	Yes
39	602605	586363 Dwelling	836 T5	00:31:12	16:12:00	5:15:14		11	Yes	Yes
40	602608	586548 Dwelling	710 T5	00:29:24	26:00:00	8:25:55	N/A		No	No
41	602629	585772 Dwelling	878 T9	00:31:48	42:24:00	13:45:02	9,11		Yes	Yes
42	602655	586333 Commercial unit	826 T5	00:33:00	45:18:00	14:41:28		11	Yes	Yes
43	602690	585993 Dwelling	805 T11	00:34:48	41:18:00	13:23:38	9,11		Yes	Yes
44	602718	585838 Dwelling	810 T9	00:35:24	66:42:00	21:37:52	9,11		Yes	Yes
45	602726	585900 Dwelling	793 T11	00:36:00	65:12:00	21:08:41	9,11		Yes	Yes
46	602730	586270 Dwelling	763 T11	00:36:00	53:12:00	17:15:11		11	Yes	Yes
47	602738	585979 Dwelling	761 T11	00:37:12	47:18:00	15:20:23	9,11		Yes	Yes
48	603003	584835 Dwelling	734 T10	00:28:48	15:54:00	5:09:23	N/A		No	No
49	603022	584761 Dwelling	762 T10	00:00:00	0:00:00	0:00:00	N/A		No	No
50	603085	584339 Dwelling	1040 T10	00:00:00	0:00:00	0:00:00	N/A		No	No
51	603114	588174 Dwelling	788 T2	00:29:24	15:48:00	5:07:27	N/A		No	No

52	603170	584219 Dwelling	1108 T10	00:00:00	0:00:00	0:00:00	N/A	No	No
53	603997	584136 Dwelling	1157 T10	00:00:00	0:00:00	0:00:00	N/A	No	No
54	604076	584274 Dwelling	1059 T10	00:00:00	0:00:00	0:00:00	N/A	No	No
55	604113	588564 Dwelling	855 T1	00:00:00	0:00:00	0:00:00	N/A	No	No
56	604119	584398 Dwelling	969 T10	00:00:00	0:00:00	0:00:00	N/A	No	No
57	604305	588638 Dwelling	972 T1	00:00:00	0:00:00	0:00:00	N/A	No	No
58	604428	588706 Dwelling	1080 T1	00:00:00	0:00:00	0:00:00	N/A	No	No
59	604493	584864 Dwelling	945 T10	00:31:12	32:36:00	10:34:21		10 Yes	Yes
60	604511	584867 Dwelling	960 T10	00:30:36	28:30:00	9:14:34		10 Yes	Yes
61	604594	585857 Dwelling	705 T6	00:37:48	27:00:00	8:45:23		8 Yes	Yes
62	604600	588586 Dwelling	1060 T1	00:24:36	13:00:00	4:12:58	N/A	No	No
63	604654	588453 Dwelling	989 T1	00:30:00	29:24:00	9:32:04	N/A	No	No
64	604701	585856 Dwelling	752 T6	00:33:36	29:36:00	9:35:58		8 Yes	Yes
65	604897	587449 Dwelling	944 T1	00:30:36	30:54:00	10:01:16		1 Yes	Yes
66	604792	588210 Dwelling	939 T1	00:30:36	18:36:00	6:01:56		1 Yes	Yes
67	604818	587518 Dwelling	850 T1	00:33:36	35:24:00	11:28:49		1 Yes	Yes
68	604854	585817 Dwelling	867 T6	00:28:48	37:30:00	12:09:41	N/A	No	No
69	604957	587397 Dwelling	1017 T1	00:28:48	28:18:00	9:10:40	N/A	No	No
70	605008	586923 Dwelling	785 T6	00:36:00	24:54:00	8:04:31		6 Yes	Yes
71	605266	586328 Dwelling	946 T6	00:30:00	17:24:00	5:38:35		6 No	No
72	605282	586432 Dwelling	947 T6	00:30:00	15:48:00	5:07:27	N/A	No	No
73	605377	586748 Dwelling	1065 T6	00:26:24	11:54:00	3:51:33	N/A	No	No
74	600571	589162 Planning Application	1080 T12	00:28:12	30:30:00	9:53:29	N/A	No	No
75	605310	586260 Planning Application	1005 T6	00:28:48	16:42:00	5:24:57	N/A	No	No
76	600578	586492 Planning Application	736 T17	00:00:00	0:00:00	0:00:00	N/A	No	No
77	599003	586321 Planning Application ID 18/4499 - Cork granted	1176 T16	00:00:00	0:00:00	0:00:00	N/A	No	No
78	598909	586292 Planning Application ID 18/6951 - Cork granted	1251 T16	00:00:00	0:00:00	0:00:00	N/A	No	No

79	598876	587308	Planning Application ID 19/5914 - Cork granted	732	T16	00:39:00	56:48:00	18:25:14	14, 16	Yes	Yes	
80	605293	586234	Planning Application ID 18/383 - W'ford granted	995	T6	00:29:24	17:54:00	5:48:18	N/A	No	No	
81	604240	589061		0	1366	T1	00:00:00	0:00:00	0:00:00	N/A	No	No
82	604171	589043		0	1337	T1	00:00:00	0:00:00	0:00:00	N/A	No	No
83	604183	589037		0	1333	T1	00:00:00	0:00:00	0:00:00	N/A	No	No
84	604258	588965		0	1275	T1	00:00:00	0:00:00	0:00:00	N/A	No	No
85	604307	588937		0	1259	T1	00:00:00	0:00:00	0:00:00	N/A	No	No
86	604315	588931		0	1255	T1	00:00:00	0:00:00	0:00:00	N/A	No	No
87	605450	585949		0	1247	T6	00:00:00	0:00:00	0:00:00	N/A	No	No
88	605444	585872		0	1279	T6	00:00:00	0:00:00	0:00:00	N/A	No	No
89	603877	583927		0	1328	T10	00:00:00	0:00:00	0:00:00	N/A	No	No
90	603083	584058		0	1290	T10	00:00:00	0:00:00	0:00:00	N/A	No	No
91	603155	584011		0	1306	T10	00:00:00	0:00:00	0:00:00	N/A	No	No
92	600468	585862		0	1311	T17	00:00:00	0:00:00	0:00:00	N/A	No	No
93	602068	586784		0	1124	T5	00:25:48	12:00:00	3:53:30	N/A	No	No
94	602665	586822	Planning Permission for dwelling	533	T5	01:03:36	121:42:00	39:28:05		5	Yes	Yes
95	602717	586621	Planning Permission for dwelling	580	T5	00:31:48	26:00:00	8:25:55		11	Yes	Yes
100	598862	587310	PP 195914	728	0	00:37:48	57:06:00	18:31:04	14, 16	Yes	Yes	
101	598862	587357	PP 214825	729	0	00:37:48	62:18:00	20:12:15	14, 16	Yes	Yes	
102	598638	588151	PP 059256	730	0	00:37:48	35:18:00	11:26:53		13	Yes	Yes
103	600658	586499	PP 184499	768	0	00:00:00	0:00:00	0:00:00	N/A	No	No	
104	600573	589079	PP 0949	1024	0	00:28:48	23:00:00	7:27:32	N/A	No	No	
105	599107	586351	PP 184499	1082	0	00:00:00	0:00:00	0:00:00	N/A	No	No	
106	598862	586486	PP 205092	1107	0	00:00:00	0:00:00	0:00:00	N/A	No	No	
107	605407	586110	PP 06143	1143	0	00:00:00	0:00:00	0:00:00	N/A	No	No	
108	598986	586238	PP 186951	1239	0	00:00:00	0:00:00	0:00:00	N/A	No	No	
109	600445	585900	PP 085349	1270	0	00:00:00	0:00:00	0:00:00	N/A	No	No	