

Appendix 7I

ORNITHOLOGICAL MONITORING – FT REPORT

Appendix 7I: Ornithological monitoring - results report: October 2020 to August 2021

BRITTAS WIND FARM BIRD SURVEYS

BASELINE ORNITHOLOGICAL SURVEYS - BRITTAS WIND FARM WINTER 2020/2021 AND SUMMER 2021

Prepared for: Enerco (Lissarda) Ltd.



Date: March 2022

NOTE: THIS REPORT CONTAINS SENSITIVE INFORMATION ON LOCATIONS OF BREEDING ANNEX I BIRDS. FIGURES OR COORDINATES OF THESE FEATURES SHOULD NOT BE INCLUDED IN THE EIAR (UPLOADED TO THE PLANNING WEBSITE). THEY SHOULD ONLY BE MADE AVAILABLE WITHIN A CONFIDENTIAL APPENDIX IF REQUIRED.

Core House, Pouladuff Road,

Cork, T12 D773, Ireland

T: +353 21 496 4133 | E: info@ftco.ie

CORK | DUBLIN | CARLOW

www.fehilytimoney.ie

BASELINE ORNITHOLOGICAL SURVEYS - BRITTAS WIND FARM WINTER 2020/2021 AND SUMMER 2021

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Abstract: This document comprises of baseline ornithological surveys at the proposed wind farm site at Brittas, Co. Tipperary. This ornithology report is required to assess the impacts of the proposed development on bird species within and surrounding the site. This development is to consist of 11 no. wind turbines across the townlands of Brittas, Brownstown, Clonbanna and Rossestown.

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EXECUTIVE SUMMARY

Ornithological surveys for the proposed Brittas Wind Farm searched for and recorded all bird species, focusing primarily on the wind farm site but also taking in the surrounding region. Surveys extended throughout the year, covering both the breeding and non-breeding seasons. Fehily Timoney carried out ornithological surveys for the proposed Brittas Wind Farm between October 2020 to August 2021, inclusive, comprising one complete year of surveys.

The methodology for the 2020/2021 ornithological survey at Brittas Wind Farm adhered to Scottish Natural Heritage guidance (SNH, 2017) for assessing the impact of proposed Wind Farm developments on the breeding and wintering bird populations. Two timed vantage point (VP) watches of three hours duration were carried out from each VP every month from October 2020 to August 2021, with two rounds of VP surveys completed in August 2021, totalling 72 hours (36 hours per season) of observation time at each VP over the survey period. Breeding & winter bird transect surveys, hinterland surveys, breeding wader and barn owl surveys were also undertaken during this interval.

Year One Summary (winter 2019/20 and summer 2020)

During year one surveys (winter 2020/21 and summer 2021), 53 species of bird in total were recorded during VP surveys. Of these species, nine are red listed under the 4th Birds of Conservation Concern in Ireland (BoCCI) assessment (Gilbert et al. 2021): kestrel, meadow pipit, yellowhammer, redwing, golden plover, lapwing, dunlin, curlew and snipe. A total of 16 species are amber listed – cormorant, hen harrier, merlin, skylark, starling, house sparrow, tree sparrow, linnet, mute swan, whooper swan, mallard, teal, wigeon, black headed gull, lesser-black backed gull and herring gull, and the remaining 28 are green listed. Six species are also protected under Annex I of the EU Birds Directive: golden plover, hen harrier, peregrine, merlin, little egret and whooper swan.

Across the summer and winter seasons, the most frequently observed target species was buzzard. For the six Annex I target species, golden plovers were observed frequently and mostly in medium and large sized flocks in winter, ranging from observations of single individuals to flocks of 700 birds. Whooper swans were observed in small sized flocks in winter, from 2 to 12 individuals. The other four Annex I target species observations were of one to two birds made on single occasions.

During year one hinterland surveys surrounding the proposed Wind Farm site, five red listed species were identified as being present: curlew, golden plover, lapwing, shoveler, and snipe. 14 amber listed bird species were identified, and seven green listed target bird species were identified as being present during hinterland surveys.

No hen harriers were observed nesting/roosting in or near the proposed Wind Farm site.

Bird species recorded during breeding bird transects within the wind farm site itself included five red listed species (grey wagtail, kestrel, meadow pipit, snipe and swift), 12 amber listed species and 33 green listed species.

Peregrine were observed nesting in Brittas Castle (ITM 612558 661504) and a heronry was observed along the woodland edge within the southern areas of the site (Approx. ITM 613090 661048). Snipe were recorded breeding onsite in the north and north-eastern areas (ITM 613413 663065 and 612728 663358). Buzzard were recorded nesting to the west of the site, c. 1km offsite (ITM 610834 662539). Kestrel bred near the site, with three juvenile kestrels observed to have fledged from a nest east of VP2 (ITM 614514 663157).



Seven juvenile mute swans were observed during the breeding bird transects on 14th May 2021 (>100m from transect/flying over). During the breeding wader surveys of hinterland sites on 19th May 2021, two pairs of ringed plover at Lisheen bog, and two pairs at Littleton Bog, exhibited breeding behaviour through distraction displays. Two pairs of curlew also exhibited distraction display at Littleton Bog during this breeding wader survey.

A total of 51 bird species were recorded during the winter bird survey transects, including five red listed species (grey wagtail, lapwing, meadow pipit, redwing and snipe), 13 amber listed species and 33 green listed species.

A barn owl was recorded at a farmhouse in the surrounding hinterland, approximately 1.17 km northwest of the site, during the survey for this species. Barn owl 'snoring' was heard from the building, before a single male emerged from the farmhouse and continued hunting around the buildings at dusk. This observation was recorded on 28th May 2021, within the breeding season.



1. INTRODUCTION

Fehily Timoney & Company (FT) was appointed by Enerco (Lissarda) to undertake ornithological surveys at the proposed Brittas Wind Farm in Co. Tipperary between 2020 to 2021 comprising one full year (winter 2020/21 to summer 2021) of surveys. This report presents the results of the ornithological surveys and summarises the activity of specific target bird species during each survey period.

This avian assessment for surveys completed over the survey period includes the assessment of target bird species potentially occurring within the proposed site boundary, and within the lands surrounding the proposed Wind Farm. Surveys adhered to Scottish Natural Heritage guidance (SNH, 2017). The following surveys were carried out:

- Vantage Point survey (breeding and non-breeding season);
- Hinterland survey;
- Breeding wader survey;
- Breeding & winter bird transect survey;
- Barn Owl survey.

This report outlines the results of the above surveys to inform about avian usage of the proposed Wind Farm site and surrounding areas.

1.1 Study Area

The proposed Brittas wind farm site is located near Brittas, Co. Tipperary, north of Thurles. The Brittas site encompasses parts of the townlands of Brittas, Brownstown, Clonbanna and Rossestown.

Figure 2-1 displays the site location.

The predominant habitat on site is improved agricultural grassland. Hedgerows and treelines are present throughout the site but are absent from large areas of agricultural lands to the north of the site. There are sections of scrub, mixed broadleaved woodland, and commercial forestry within the site. The surrounding landscape is of similar character to that found within the site. The River Suir (WFD Code IE_SE_16S020600) is within the development site and flows in a southerly direction within the site.

Protected European sites within 15 km of the site boundary include two SACs:

- Lower River Suir SAC (002137; 6.55km southwest)
- Kilduff, Devilsbit Mountain SAC (000934; 12.08km northwest)



Protected national sites within 10 km of the site boundary include three pNHAs:

- Cabragh Wetlands pNHA (site code 000582; 0.25 km south)
- Templemore Wood pNHA (site code 000942; 7.99 km north)
- Killough Hill pNHA (site code 000959; 9.18 km south)

Lower River Suir SAC (site code 002137) is located approximately 6.55 km southwest of the Brittas site. This site is designated for habitats, invertebrates, fish and mammal species. While it is not designated for birds, parts of the site have been identified as of ornithological importance for a number of Annex I (E.U. Birds Directive) bird species, including Greenland white fronted goose, golden plover, whooper swan and kingfisher. Wintering populations of migratory birds use the SAC.

No SPAs occur within 15km of the Brittas site.

Kilduff, Devilsbit Mountain SAC (site code 000959) is located approximately 12.08 km northwest of the Brittas site. While it is designated for habitats and not birds, Annex I-listed peregrine breed within the site.

Cabragh Wetlands pNHA overlaps with Lower River Suir SAC. Wigeon, teal and mallard are numerous within these marshes.

Blackcaps, garden warblers, sparrowhawks and mallards have been recorded within Templemore Wood pNHA. It is noted that regenerating limestone grasslands and woodlands of Killough Hill pNHA supports a large bird population.

No NHAs occur within 10km of the Brittas site.



2. SURVEY METHODOLOGY

The avian surveys carried out at the proposed wind farm adhered to Scottish Natural Heritage guidance (SNH, 2017) methodologies of the following survey types:

- Vantage Point survey (breeding and non-breeding season);
- Hinterland survey (hen harrier winter roost; I-WeBS and geese/swan census; and breeding target species);
- Breeding wader survey; and
- Breeding & winter bird transect surveys;

2.1 Vantage Point Surveys

VP surveys were carried out at the proposed Brittas Wind Farm site from October 2020 to August 2021 (with two rounds of VP surveys completed in August 2021), during the non-breeding and breeding seasons, in accordance with the Scottish Natural Heritage methodology for impact assessment of onshore wind farms (SNH, 2017). These surveys were divided into winter (October 2020 to March 2021) and summer (April to August 2021) seasons. Three fixed VP locations overlooking the study area were used during the VP surveys. VPs were chosen to cover a specific viewshed of the proposed development site. Each was chosen specifically to encompass the view of a 500 m circular buffer drawn around each of the proposed turbines (known as the 'flight activity survey area'), per SNH (2017) guidance.

The main purposes of VP survey watches are to collect data on *target species* that will enable estimates to be made of:

- The time spent flying over the defined survey area;
- The relative use of different parts of the defined survey area; and
- The proportion of flying time spent within the upper and lower height limits as determined by the rotor diameter and rotor hub height.

The specific vantage points and turbines within their viewsheds can be seen in Table 2-1 and Figure 2-1:

Table 2-1: Vantage point viewshed and turbines encompassed

Vantage Point	Turbine number(s) covered in viewshed
VP 1	5, 10 and 11
VP 2	2, 3, 6, 7, 8, 9, 10 and 11
VP 3	1, 2, 3 and 4



Vantage point locations were based on observations from walkover/reconnaissance surveys, viewshed analysis (using GIS) and collated information on known feeding and roosting sites from both desktop review and consultation. The number and location of vantage points was selected in order to achieve visibility of the entire flight activity survey area.

In line with recommended best practice (SNH, 2017 and Band *et al.* 2007), viewshed analysis was undertaken using ARCMAP 10.3, to calculate a theoretical zone of visibility from each vantage point. Visibility is calculated from each vantage point along an invisible layer suspended at the predicted lowermost height passed through by the rotor blade tips, using an observer height of 1.5 m. We note the following from SNH guidance in respect of priority areas for viewshed analysis (emphasis added):

*“Where the key purpose is to estimate the risk of collision with turbines, **it is the visibility of the airspace to be occupied by the turbine rotors (the collision risk volume) that is of prime importance.** Therefore, it is recommended that visibility be calculated using the least visible part of this airspace, i.e. an imaginary layer suspended at the lowermost height passed through by the rotor blade tips (typically about 20-30 m above ground level). Predicting visibility at this level is a simple task using GIS. Being able to view all or most of the site to ground level can be helpful in gauging overall bird activity and usage of the site but is not as important as being able to view the collision risk volume.”*

The method of observing was via constant search effort, mostly through quality binoculars, or a telescope and a tripod used to scan the horizon back and forth in search of target species combined with short spells of eyeballing the foreground. In this way, smaller target species such as kestrel can be found and tracked up to the 2 km limit of each viewshed in most weather conditions. Dictaphones were utilised to dictate bird heights whilst tracking flight events.

Data recorded included flight activity of target species (flight height, duration, directionality), in addition to metrics such as flock size (per recorded transit) and time of observation. Detailed notes of each observation of a target bird species were recorded including behaviour, gender (where possible), numbers, flight height, associated habitat and the period of time spent within the study area. Successful foraging events were also noted if they arose. Other bird species seen or heard during the VP surveys were also recorded on a casual basis and were considered separately in the analysis as additional species. Flight activity was annotated onto field maps. Total numbers of birds present both on arrival at the vantage point and on departure was noted. Details of each flight-path observation are provided in Section 3.

When a flock of the same species were located, one individual within the flock was identified and tracked to record the times within each height band.

Flight heights are estimated visually as allowed for in SNH (2017) guidance. Flight height estimation using a clinometer or rangefinder is accepted as an *alternative* means of determining flight height; however, this is often not practicable (equipment may be clumsy and birds may be lost from view whilst trying to focus additional equipment on a target species rapidly moving out of sight). It should be noted that in practice many birds do not fly close enough to a surveyor for a rangefinder to be used, resulting in most flights heights being estimated in any case. An experienced surveyor was used, resulting in a more robust dataset.

As previously mentioned, VP surveys were carried out at the site from October 2020 to August 2021, inclusive, and involved carrying out 2 x 3-hour surveys at each VP location every month.

As per SNH guidance (2017), at least thirty-six hours of VP effort was carried out at each vantage point during each breeding and non-breeding survey period.



The proportion of survey time that activity was recorded inside and outside the 500m turbine buffer was used as part of the overall analysis and assessment of target species usage of the study area. VP locations can be found in Table 2-2 below. All surveys were conducted during suitable weather conditions.

Table 2-2: Grid References for VP locations at Brittas Wind Farm

Vantage Point	Easting, Northing (ITM)
VP1	614141, 660736
VP2	614367, 663290
VP3	610955, 662209

2.2 Hinterland Surveys (IWeBS, hen harrier winter roost and breeding target species)

Two types of hinterland surveys were undertaken: an IWeBS-style census for wintering waders and waterbirds (Lewis et al. 2019), and a summer survey for breeding target species.

Winter season hinterland surveys were carried out between November 2020 and March 2021, and summer season hinterland surveys were carried out in June and July 2021.

The surveys were conducted in suitable agricultural, peatland and wetland habitats in the area surrounding the proposed wind farm site. These sites were chosen as they had suitable habitat for the following target groups: raptors, waders and waterfowl.

For the winter IWeBS-style census surveys, seven sites within 10 km of the proposed wind farm site were surveyed. These sites included Ballydavid, Littleton, Liathmore, Loughmoe Castle, Clonamuckoge Beg, Lisheen Bog, The Tank, Thurles, and Cabragh Wetlands (see Figure 2-2). Winter hinterland IWeBS-style surveys were carried out following a 'look-see' methodology as outlined in BirdWatch Ireland/NPWS's counter manual¹.

In the summer months, an additional site was added, bringing the total of hinterland survey sites to eight. Summer hinterland survey techniques used to survey for raptors followed those outlined in Hardey *et al.* (2013).

Some hinterland sites visited in the winter were not visited in the summer, depending on suitability for breeding target species.

¹ <https://birdwatchireland.ie/app/uploads/2019/03/IWeBS-Counter-Manual.pdf>. Accessed 26/01/2021.



Details of hinterland survey locations and dates are shown below in Table 2-3 and Figure 2-2.

Table 2-3: Hinterland Survey Locations

Hinterland VP (hVP) number	Location	Easting, Northing (ITM)	Dates visited	Distance from proposed site (km)
1	Ballydavid, Littleton	618520, 655169	12/11/20, 26/11/20, 08/12/20, 16/01/2021, 06/02/2021, 07/03/2021, 26/06/2021, 27/07/2021	7.5
2	Liathmore	622428, 657304	12/11/20, , 26/11/20, 08/12/20, 16/01/2021, 05/02/21, 07/03/2021	9.2
3	Loughmoe Castle	611709, 667115	12/11/20, , 26/11/20, 08/12/20, 16/01/2021, 06/02/2021,	3.4
4	Clonamuckoge Beg	611488, 663537	12/11/20, 26/11/20, 08/12/20, 16/01/2021, 06/02/2021, 07/03/2021	0.3
5	Lisheen Bog	622448, 661640, 623808, 664948	26/11/20, 08/12/20, 16/01/2021, 06/02/2021, 07/03/2021, 26/06/2021, 27/07/2021	8.3
6	The Tank, Thurles	611810, 660386	12/11/2020, , 26/11/20, 08/12/20, 06/02/2021, 07/03/2021	0.6
7	Cabragh Wetlands	610792, 655289	12/11/20, 26/11/20, 08/12/20, 16/01/2021, 06/02/2021, 07/03/2021, 26/06/2021,	6
8	Littleton Bog	621016, 654779, 623663, 653048	27/07/2021	7.5

2.3 Breeding Waders Surveys

Surveys to assess the presence of breeding wader populations were completed during May 2021. Two areas of bog/ wet grassland suitable for breeding waders, notably snipe, is present at the proposed site (ITM 613412, 663058 and ITM 612724, 663345). Three locations were outside the development boundary, see Table 2-6. These breeding wader sites outside the proposed site overlapped a number of hinterland survey sites, see Figure 2-2. However, a greater search area was covered at each location and increased survey effort was expended during breeding wader surveys.

A number of methods were combined from published literature including Bibby *et al*, (2000), Gilbert *et al*, (1998), O'Brien & Wilson (2011) and SNH (2017) to estimate numbers of target species breeding within this envelope.



Methods utilised were grouped into 2 categories; those for breeding Lapwing *Vanellus* and those for other species such as Curlew *Numenius arquata*, Common Snipe *Gallinago*, Redshank *Tringa totanus*, Woodcock *Scolopax rusticola*, Common Sandpiper *Actitis hypoleucos* and Ringed Plover *Charadrius hiaticula*. For each species, a pre-defined matrix of suitable habitats was created and used to select target habitats for survey.

Table 2-4: Target Species and Associated Suitable Breeding Habitat

Target Species	Suitable Breeding Habitat
Lapwing	Lowland wet grassland, arable farmland, cutover bog with pools and wet grassland
Snipe	Wet pastures, marsh, bogs (intact and cutover) and fens
Redshank	Bog
Curlew	Bog
Common Sandpiper	Streams/rivers in bog
Woodcock	Woodland, bog woodland
Ringed Plover	Cutover bog, milled peat with exposed gravel

Survey methods for Lapwing followed those in Bibby *et al.* 2000 wherein the primary count unit for breeding birds is defined as an incubating female; in addition, displaying birds, birds standing guard near nests or distraction displays were also recorded as indications of occupied territories. Extensive areas of open ground were covered from roads, farm tracks or roadsides (where possible); larger areas of open ground not visible from easily accessible vantage points were walked using transects.

Surveys were carried out during the time periods recommended in Bibby *et al.* 2000 although territorial behaviour noted outside these periods was also utilised in the assessment. For all additional species of wader the employed method was essentially the same and utilised transects walked through suitable habitat within 3 hours of dawn or dusk. Count units (see Table 2-5) were predefined for each target species and included in the method statement provided to surveyors.

All suitable habitats for waders were visited during May 2020. Observations were annotated onto maps (locations of territories or breeding attempts). Breeding wader summary sheets were also compiled at the end of the breeding season, indicating in each case the minimum number of breeding pairs/occupied territories known to occur.



Table 2-5: Count Units for each Wading Species

Species	Count Unit
Lapwing	Incubating Bird
Common Snipe	Drumming or Chipping Bird
Redshank	Alarming Bird
Woodcock	Displaying Male
Ringed Plover	Presence or Absence/ Fledged Young late in season
Common Sandpiper	Presence or Absence/ Fledged young late in season
Curlew	Territorial Activity

All species encountered (seen or heard) were recorded and their abundance, behaviour, sex/age and breeding status noted. Any species occurring more than 100 m from the observer, or flying over the site and not using it, were recorded as 'additional' species to further inform the baseline survey. Table 2-6 below, details the survey dates and weather conditions.

Table 2-6: Breeding Waders Survey Details

Date	Site	Cloud (Okta)	Precipitation	Wind
19/05/2021	Lisheen Bog	4/8	Dry	F1 N
19/05/2021	Littleton Bog	4/8	Dry	F1 N
19/05/2021	Ballydavid, Littleton	4/8	Dry	F1N
28/05/2021	Brittas Wind Farm	3/8	Dry	F1 N

2.4 Breeding Bird Surveys

For breeding bird surveys, the method utilised was based on the existing British Trust for Ornithology (BTO) Breeding Bird Survey (BBS or CBS; Bibby *et al*, 2000). The study area for this survey comprised a total of four no. c. 1 km transects which were selected and centred on different habitats present within the subject site (see Figure 2-3 for the location of transects). Birds were counted over two visits, each timed to coincide with the early part of the breeding season (late-March to mid-May) and later part of the season (mid-May to late June), with visits at least four weeks apart (transect order and direction were reversed between surveys to avoid confounding transect order and direction with time of day). Surveyors recorded all birds seen or heard as they walked methodically along the transect routes.



Birds were recorded in four distance categories, measured at right angles to the transect line (within 25 m, between 25 m - 100 m and over 100 m from the transect line/ and those seen in flight only). Recording birds in distance bands gives a measure of bird detectability and allows relative population densities to be estimated if required (BTO, 2018).

The breeding bird transect schedule is available in Table 2-7. The results are presented in Section 3.

Table 2-7: Breeding Bird Transect Survey Details

Date	Transect	Time	Weather Conditions
14/05/2021	T1, T2, T3 and T4	07:15 – 11:30	dry; wind F1 W; cloud 5/8 oktas
28/06/2021	T1, T2, T3 and T4	08:00 – 14:40	dry; wind F1 NE

2.5 Wintering Bird Survey

For the general wintering bird survey, the method utilised was the same as for the breeding bird transects, except it was undertaken in the winter season. Three visits for all transects were undertaken over the winter season. See Figure 2-3 for the location of transects.

The wintering bird transect schedule is available in Table 2-8. The results are presented in Section 3.

Table 2-8: Wintering Bird Transect Survey Details

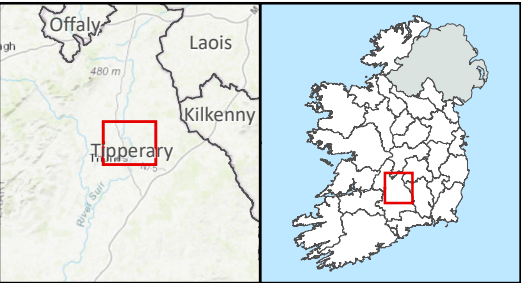
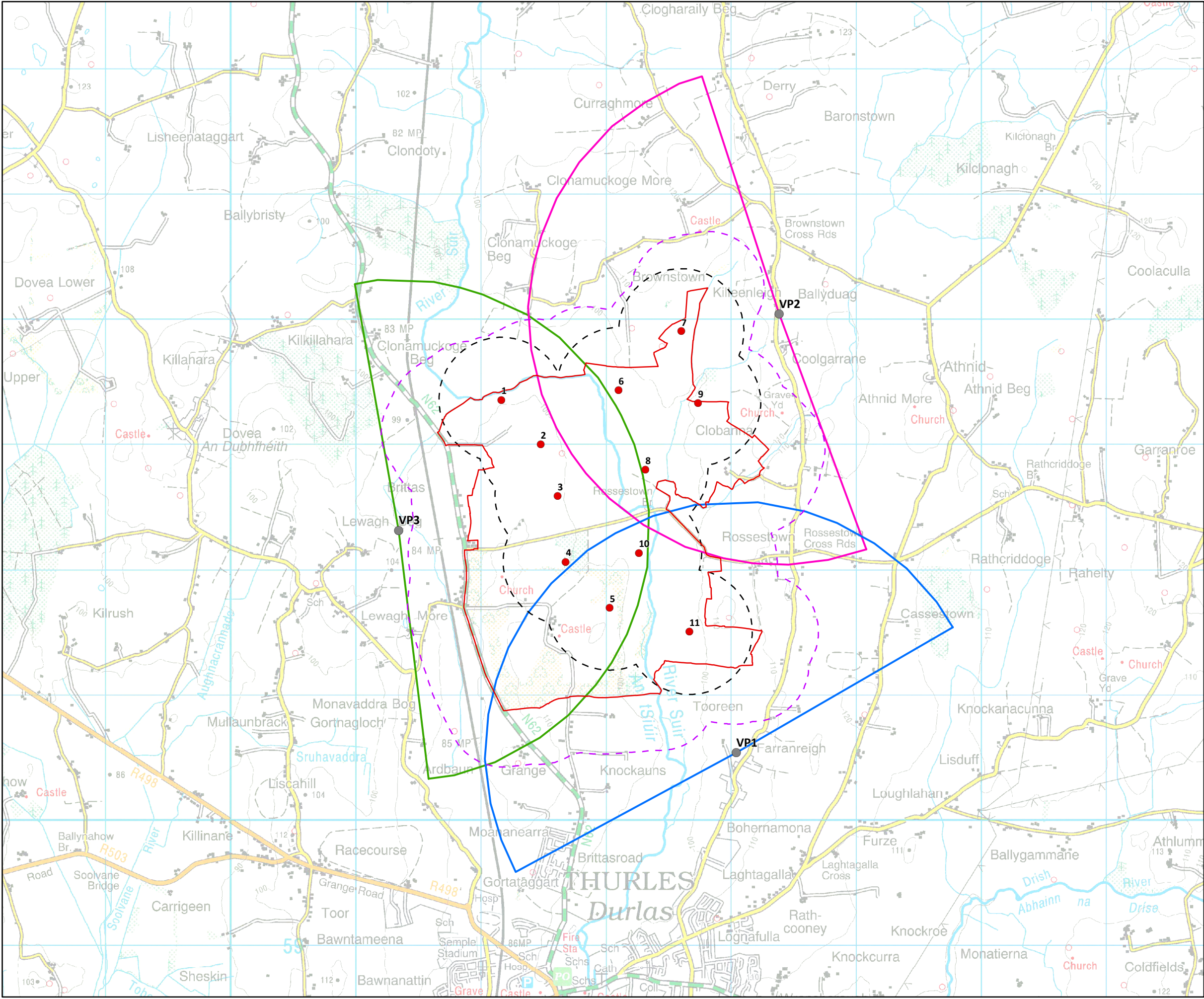
Date	Transect	Time	Weather Conditions
23/01/2021	T1, T2, T3 and T4	10:00 – 14:50	Visibility good; dry; wind F1 W; cloud 1/8 oktas
21/02/2021	T1, T2, T3 and T4	09:00 – 15:00	dry; wind F1 S; cloud 4/8 oktas
27/03/2021	T1, T2, T3 and T4	08:20 - 13:10	dry; wind F2 W; cloud 2/8 oktas



2.6 Barn Owl Surveys

A pre-sunset barn owl walkover survey within the site was carried out on 28th May 2021. A targeted barn owl survey was completed at a farmhouse building was carried out on 28th May 2021 from sunset, 21:45 to 23:00. The barn owl survey focused on visiting an old farmhouse building identified as having potential for Barn Owl. The surveyor also remained vigilant for Barn Owl activity when travelling to/from and between survey sites. The barn owl survey was carried out on 28th May 2021 and included watches for activity and searches for signs of barn owl.

The TII guidance document ‘Survey and Mitigation Standards for Barn Owls to inform the Planning, Instruction and Operation of National Road Projects’ (TII, 2021) was considered in determining Barn Owl survey Methodology; however, the methodology selected aligned with Shawyer (2012) ‘Barn Owl *Tyto alba* Survey Methodology and Techniques for use in Ecological Assessment’.

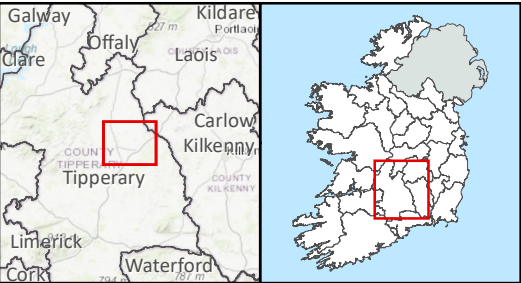
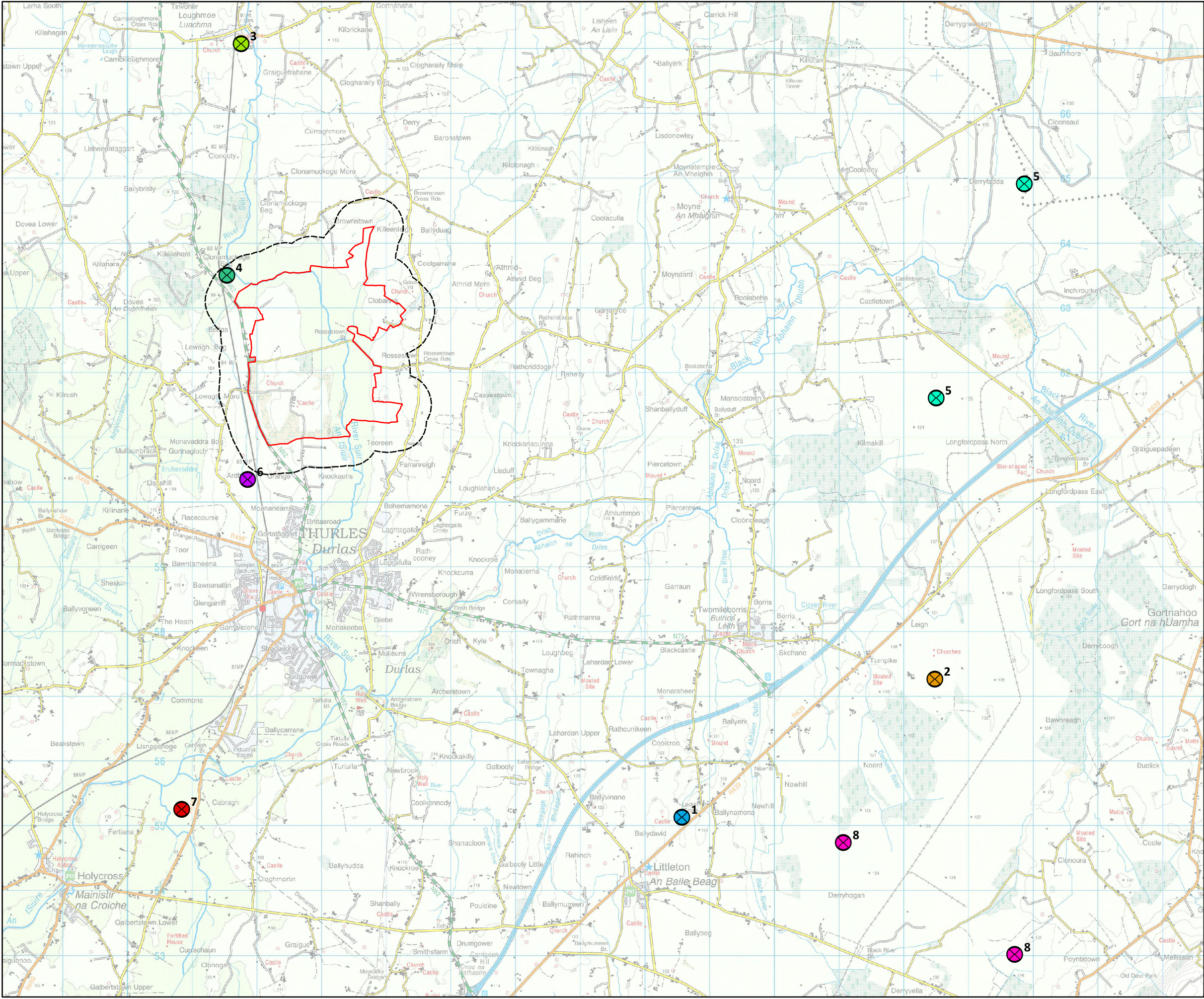


- Vantage Points
- Turbine Layout
- Site Boundary
- 450m Buffer of Site Boundary
- 500m Buffer of Turbine Layout
- VP1 Viewshed
- VP2 Viewshed
- VP3 Viewshed

2km viewsheds based on a target height of 30m and an observation height of 1.5m

ID	Easting	Northing
VP1	614228	660786
VP2	614327	663822
VP3	611356	662042

TITLE:		Viewshed Analysis	
PROJECT:		Brittas Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:30000	REVISION:	0
DATE:	28/10/2020	PAGE SIZE:	A3



Legend

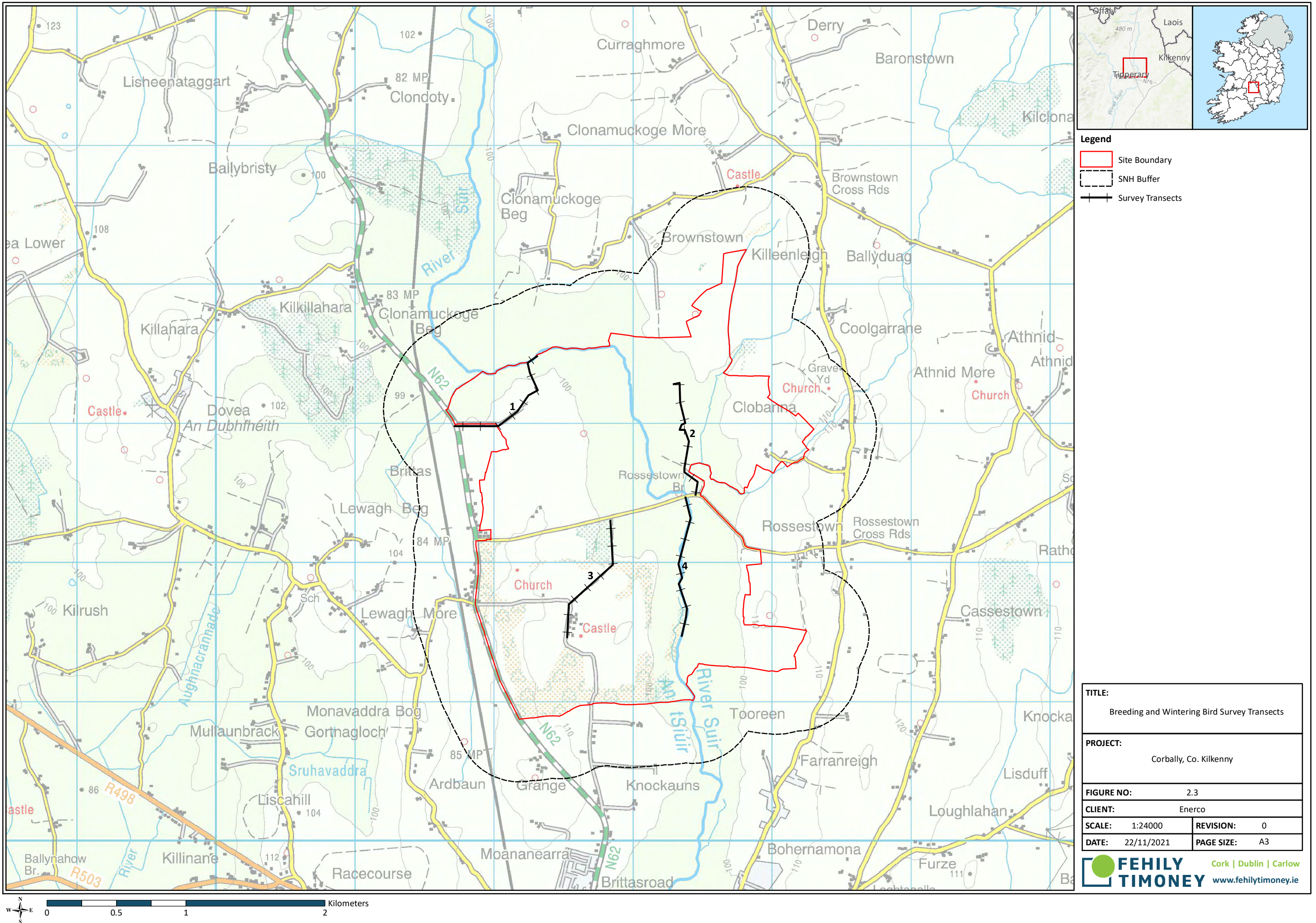
- Site Boundary
- SNH Buffer

Hinterland Survey Sites

ID and Location:

- 1: Ballydavid, Littleton
- 2: Liathmore
- 3: Loughmoe Castle
- 4: Clonamuckoge Beg
- 5: Lisheen Bog
- 6: The Tank, Thurles
- 7: Cabragh Wetlands
- 8: Littleton Bog

TITLE:		Hinterland Survey Area	
PROJECT:		Corbally, Co. Kilkenny	
FIGURE NO:		2.2	
CLIENT:		Enerco	
SCALE:	1:58000	REVISION:	0
DATE:	22/11/2021	PAGE SIZE:	A3





3. RESULTS

3.1 Avian usage of the Study Area – Vantage Point surveys

Year One (winter 2020/2021 and summer 2021)

Two timed watches of three hours duration each were carried out at each of the three vantage points every month from November 2020 to August 2021, inclusive. This survey effort totals to 72 hours of observation time at each VP over the survey period in year one, with a double count in December to make up for the October period (see Appendix 1 and Appendix 2). Bird activity was recorded from the VPs during each survey. In total there were 888 individual flight lines of 16 target species observed during the year one survey period.

In total 53 species of bird were recorded. Of these, nine are red listed under the BoCCI: curlew, dunlin, golden plover, kestrel, lapwing, meadow pipit, redwing, snipe, and yellowhammer. 16 species are amber listed and the remaining 28 are green listed. Six species are protected under Annex I of the EU Birds Directive: golden plover, hen harrier, little egret, merlin, peregrine, and whooper swan. Table 3-1 lists all 53 species and indicates their conservation/protection status.

Flight lines for each target species are shown in Appendix 4.

3.1.1 Summary Results Winter (October 2020 to March 2021)

Annex I species

A total of six Annex I species were recorded between October 2020 and March 2021, namely golden plover, hen harrier, little egret, merlin, peregrine and whooper swan. Golden plover were recorded each month at all three VP locations. A single observation of a hen harrier was recorded from VP2 on December 24th. Little egret were recorded each month, present at VP2 and VP3. An observation of merlin from VP2 was recorded 11th November 2020 and observations from VP3 were recorded on November 11th, December 26th, 2021, and February 16th 2021, with all observations of single individuals. A single observation of a peregrine was recorded on October 19th 2021 from VP3 and twice at the same VP on March 16th. These birds were soaring and displaying. Observations of whooper swans were recorded from VP1 on November 15th, December 20th and December 29th, 2020, and February 05th 2021. These observations were both in and outside the flight activity survey area. Three whooper swan juveniles were recorded in the November observation. Whooper swan observations were recorded at VP3 on December 30th, 2020, and January 3rd, 2021.

Other species

Black-headed gull was recorded 14 times, buzzards were observed on 50 occasions, cormorants 16 times, grey heron on seven occasions, kestrel 41 times, lapwing 67 times, lesser black-backed gull on eight occasions, sparrowhawk eleven times and snipe seven times during winter vantage point surveys in 2020/21.

3.1.2 Summary Results Summer 2021 (April to September)

Annex I species

Two Annex I species were recorded between April and September 2021: little egret and peregrine. Little egret were recorded each month, at least once at all the VP locations. Observations were most frequent at VP2.



At VP1, two observations of peregrine were recorded on April 24th, 2021 (no.=1 each), one single individual was observed on May 30th, five observations were recorded on August 26th and one single individual observation was recorded on September 2nd. Of the five observations from VP1 in August, two of these sightings recorded two individuals, and the other observations were of single individuals. A single observation was recorded from VP3 on August 24th, outside the flight activity survey area.

Other species

During the summer 2021 season, levels of avian activity were generally lower than during winter 2020/21. Black-headed gull was recorded 15 times, buzzards were observed on 70 occasions, cormorants three times, curlew once, grey heron on 26 occasions, herring gull once, kestrel 98 times, lapwing 15 times, lesser black-backed gull on eleven occasions, sparrowhawk 16 times and snipe twice during summer vantage point surveys in 2020/21.

Table 3-1: Status of species observed in year one (winter 2020/21 and summer 2021)²

Common name	Scientific name	*BoCCI status	**Annex I status
Blackbird	<i>Turdus merula</i>	Green	No
Blackcap	<i>Sylvia atricapilla</i>	Green	No
Black-headed gull	<i>Chroicocephalus ridibundus</i>	Amber	No
Blue tit	<i>Cyanistes caeruleus</i>	Green	No
Bullfinch	<i>Pyrrhula pyrrhula</i>	Green	No
Buzzard	<i>Buteo buteo</i>	Green	No
Chaffinch	<i>Fringilla coelebs</i>	Green	No
Collard Dove	<i>Streptopelia decaocto</i>	Green	No
Cormorant	<i>Periparus ater</i>	Amber	No
Curlew	<i>Numenius arquata</i>	Red	No
Dunlin	<i>Prunella modularis</i>	Red	No
Fieldfare	<i>Turdus pilaris</i>	Green	No
Golden plover	<i>Pluvialis apricaria</i>	Red	Yes
Goldfinch	<i>Carduelis carduelis</i>	Green	No
Grey heron	<i>Ardea cinerea</i>	Green	No
Hen harrier	<i>Circus cyanaeus</i>	Amber	Yes
Herring gull	<i>Larus argentatus</i>	Amber	No
Hooded crow	<i>Corvus cornix</i>	Green	No
House sparrow	<i>Passer domesticus</i>	Amber	No
Jackdaw	<i>Coloeus monedula</i>	Green	No
Kestrel	<i>Falco tinnunculus</i>	Red	No

² Species listed under Annex I of the EU Birds Directive shown in bold



Common name	Scientific name	*BoCCI status	**Annex I status
Lapwing	<i>Vanellus vanellus</i>	Red	No
Lesser black-backed gull	<i>Larus fuscus</i>	Amber	No
Lesser redpoll	<i>Carduelis flammea cabaret</i>	Green	No
Linnet	<i>Linaria cannabina</i>	Amber	No
Little egret	<i>Egretta garzetta</i>	Green	Yes
Long-tailed tit	<i>Aegithalos caudatus</i>	Green	No
Magpie	<i>Pica pica</i>	Green	No
Mallard	<i>Anas platyrhynchos</i>	Amber	No
Meadow pipit	<i>Anthus pratensis</i>	Red	No
Merlin	<i>Falco columbarius</i>	Amber	Yes
Mistle thrush	<i>Turdus viscivorus</i>	Green	No
Mute swan	<i>Cygnus olor</i>	Amber	No
Pheasant	<i>Phasianus colchicus</i>	Green	No
Peregrine	<i>Falco peregrinus</i>	Green	Yes
Pied wagtail	<i>Motacilla alba</i>	Green	No
Raven	<i>Corvus corax</i>	Green	No
Redwing	<i>Turdus iliacus</i>	Red	No
Reed bunting	<i>Emberiza schoeniclus</i>	Green	No
Robin	<i>Erithacus rubecula</i>	Green	No
Rook	<i>Corvus frugilegus</i>	Green	No
Siskin	<i>Spinus spinus</i>	Green	No
Skylark	<i>Alauda arvensis</i>	Amber	No
Snipe	<i>Gallinago gallinago</i>	Red	No
Song thrush	<i>Turdus philomelos</i>	Green	No
Sparrowhawk	<i>Accipiter nisus</i>	Green	No
Starling	<i>Sturnus vulgaris</i>	Amber	No
Teal	<i>Anas crecca</i>	Amber	No
Tree sparrow	<i>Passer montanus</i>	Amber	No
Whooper swan	<i>Cygnus cygnus</i>	Amber	Yes
Wigeon	<i>Anas penelope</i>	Amber	No
Woodpigeon	<i>Columba palumbus</i>	Green	No
Yellowhammer	<i>Emberiza citrinella</i>	Red	No

* refers to the conservation status of the species according to Birds of Conservation Concern in Ireland.

**refers to species listed on Annex I of the EU Birds Directive; shown in bold.



3.2 Target Species observations

3.2.1 Black-headed gull

Winter

A total of 29 observations of this Amber-listed species were recorded during winter vantage point surveys between November 2020 and March 2021. The largest flock of black-headed gulls recorded was on 29th December 2020, where 200 individuals were observed within the flight activity survey area. These birds were observed flying in the 0-20m, 20-50m and the 50-100m height bands. Two birds were observed flying for 70 seconds within the 50-100m on 20th December 2020, the longest observation time for this species in this flight band. Black-headed gulls were not recorded flying above 100m during the winter season 2020/21.

Summer

A total of 12 observations of this species were recorded during summer vantage point surveys across all months (April-August 2021). All birds were recorded within the 20-50m height bands, excluding one individual which flew for 32 seconds in the 0-20m band on 15th June 2021. The largest flock of black-headed gulls recorded was on 30th May 2021, where eight individuals were observed outside of the flight activity survey area (500m turbine buffer).

3.2.2 Buzzard

Winter

A total of 98 observations of this Green-listed species were made at the Brittas site during the winter period VP surveys 2020/21. Buzzard were recorded at all VP locations in each month (October- March 2021). Most observations were of one or two birds, with one observation of three individuals, and another of four. Four individuals were recorded on 8th March 2021, flying outside the flight activity survey area for 189 seconds in the 100-200m height band. A buzzard was observed soaring in the 100-200m height band for 517 seconds on 16th March 2021, the longest observation in this height band. Buzzard were not recorded flying above 200m during the winter season 2020/21.

Summer

A total of 152 observations of this species were recorded during summer vantage point surveys across all months (April-August 2021) and all VP locations. One individual was recorded flying above 200m for 170 seconds outside the site buffer. All other buzzards were recorded between 0-200m. All observations involved between one and three individuals, with the exception of a group of four birds recorded on 31st May 2021 flying outside the flight activity survey area at 0-20m. A nest was confirmed north of VP3, c. 1km outside the site boundary (ITM 610834 662539).

3.2.3 Cormorant

Winter

39 observations of this Amber-listed species were recorded during winter vantage point surveys. The majority of sightings were recorded with the 20-50m height band. One individual was recorded on 28th November 2020 flying for 71 seconds within the 100-200m height band. All other birds were observed below 100m.



The largest group of birds were recorded on 30th December 2020, with eleven individuals flying within the flight activity survey area for 120 seconds at 50-100m. A cormorant roost was noted to the east of the site, near Turbine 11 and along the River Suir (ITM 613253 661373).

Summer

Cormorant was observed once on 8th April 2021, inside/outside the 500m turbine buffer. There were no other observations of cormorant during the summer period.

3.2.4 Golden plover

Winter

This Red-listed Annex I species was recorded 80 times during winter surveys in 2020/21 at Brittas. This species was regularly seen in large flocks, with observations of 700 individuals recorded in November, December 2020, and January 2021. Golden plover were recorded across all height bands, and were regularly recorded above 200m. The longest observation within this height band involved 350 birds flying above 200m for 867 seconds. Golden plover were recorded at all VP locations, but VP2 and VP 3 had far higher numbers of observations than VP1.

Summer

No golden plover observations were recorded during the summer of 2020.

3.2.5 Grey heron

Winter

Grey heron, a Green-listed species was observed on 17 occasions at Brittas during the winter period 2020/21. The majority of sightings were of one or two individuals that were low flying or on the ground. The highest-flying heron was recorded for 167 seconds within the 50-100m height band on 17th January 2021.

Summer

This species was recorded 22 times over the summer 2021 survey period. Similar to the winter period, the majority of sightings were low flying birds or individuals on the ground. The highest-flying heron was recorded for 100 seconds within the 50-100m height band on 30th May 2021. A heronry was observed in the woodland edge to the south of the site (ITM 613090 661048).

3.2.6 Hen harrier

Winter

There was a single observation of this Amber listed Annex 1 species on 24th December 2020. One male was observed flying outside the flight activity survey area at 100-200m for 137 seconds.

Summer

There were no observations of this species during the summer season VP surveys.



3.2.7 Herring gull

Winter

There were no observations of this species during winter VP surveys.

Summer

A single sighting of this Amber listed species was recorded on 15th April 2021. The herring gull was observed flying for 39 seconds inside the flight activity survey area in the 20-50m height band.

3.2.8 Kestrel

Winter

This Red-listed species was recorded 91 times in winter, with several sightings in each month. Most sightings were within the 20-50m height band, and all observations were of single individuals. The longest observation was of a male hunting in the 20-50m height band for 294 seconds on 19th December 2020.

Summer

There were 94 observations of kestrel within the summer 2021 survey season. Most sightings were within the 0-20m and the 20-50m height bands, with only two observations of individuals within the 50-100m band. Three juvenile kestrels were observed flying for 57 seconds at 0-20m on 30th June 2021. These had fledged from a successful nest east of VP2, c 280m outside the site boundary.

3.2.9 Lapwing

Winter

There were 82 observations of this Red listed species during winter 2020/21. Flock sizes observed were generally large with 100 to 500 individuals. Three observations of flocks flying at heights greater than 200m were recorded. The longest of these sightings involved 400 individuals flying in this height band for 221 seconds.

Summer

There were 14 observations of lapwing within the summer season, ranging from single individuals up to flock sizes of eight. The longest observation was of six birds for 140 seconds at 20-50m on 30th June 2021.

3.2.10 Lesser black-backed Gull

Winter

There were 10 observations of this Amber listed species during the winter 2020/21 survey season. Observations included individual birds and flocks of up to 21 birds. The largest flock, 21 birds, was observed on 22nd February 2021 flying at 100-200m both inside and out of the flight activity survey area.



Summer

This species was observed on nine occasions during the 2021 summer season. Numbers of birds per sighting ranged from individuals to groups of up to six. The highest-flying flock was recorded on 2nd September 2021, flying for 336 seconds at 100-200m.

3.2.11 Little egret

Winter

There were 16 observations of the Green listed Annex 1 species during the winter 2020/21 survey season. Observations were largely of individual birds, with several sightings of two to three birds, and one observation of four birds. The group of four birds was recorded within the 0-20m height band for 44 seconds on 22nd March 2021. All birds were low flying, being recorded in either the 0-20m or 20-50m height bands. Little egret were recorded on the flooded field within the site adjacent to the River Suir near Turbine 11.

Summer

This species was observed on 11 occasions during the summer season. Observations were largely of two birds, with fewer sightings of one, four or five birds. The longest observation of this species was of two birds flying in the 20-50m height band for 325 seconds on 26th May 2021. The highest height band that little egret were recorded in was 50-100m.

3.2.12 Merlin

Winter

There were seven sightings of this Amber listed Annex 1 species during the winter 2020/21 VP surveys. All sightings were of individual birds. These were low flying sightings, all within the 0-20m to 20-50m height bands. On 11th December 2020 a single bird was recorded being mobbed by hooded crow while flying both in and out of the flight activity survey area. A male was recorded for 14 seconds in the 0-20m height band on 24th December. The sex of all other individuals was not identified.

Summer

There were no observations of this species during summer VP surveys.

3.2.13 Peregrine

Winter

Five records of Green-listed Annex 1 peregrine were made during winter VP surveys. One sighting on 14th January 2021 was of two individuals; all other sightings were of single individuals. These two birds were observed to be calling within the flight activity survey area. An individual was recorded on 16th March 2021 soaring for 69 seconds in the 20-50m height band. It then began displaying for 279 seconds in the 50-100m height band.



Summer

Seven records of peregrine were made during summer VP surveys. One sighting on 14th January 2021 was of two individuals, all other sightings were of single individuals. These two birds were observed to be calling within the flight activity survey area. An individual was recorded on 16th March 2021 soaring for 69 seconds in the 20-50m height band. It then began displaying for 279 seconds in the 50-100m height band.

3.2.14 Snipe

Winter

Seven records of Red-listed snipe were made in the winter VP season. One observation was on 19th December 2020, involving an individual recorded for 6 seconds at 0-20m. The remaining observations were in March 2021. All observations in winter were outside the flight activity survey area and in the 0-20m height band.

Summer

There were two records of snipe in summer 2021, both occurring on 2nd September 2021. The first record was of two birds at 0-20m for 116 seconds. The second record, an hour and eight minutes later, was of two birds for 42 seconds at 0-20m. One record was both inside and outside the flight activity survey area, while the other was outside the flight activity survey area.

3.2.15 Sparrowhawk

Winter

Sparrowhawk, a Green listed species in Ireland, was recorded 28 times in winter 2020/21. Most birds were recorded flying low in the 0-20m or 20-50m height bands. There were three observations in the 50-100m height band. One individual was recorded hunting for 48 seconds inside the flight activity survey area on 15th December 2021. Other hunting observations were made of individuals on 28th November and 04th December, both outside the buffer. Male and female sparrowhawk were recorded in winter.

Summer

A total of 16 observations of sparrowhawk were recorded during summer VP surveys. Most birds were low flying within the 0-20m height band. One observation was within the 20-50m height band and four were within the 50-100m band. All, excluding one, observations were of individual birds. Two birds were recorded on 21st April 2021 for 138 seconds flying within the 50-100m height band.

3.2.16 Whooper swan

Winter

Seven flightlines of whooper swan were recorded during the winter 2020/21 VP surveys. Static observations were also recorded. The largest static flock was 12 birds observed grazing on the site's flooded fields on 29th December 2020. Two adults and two juveniles were recorded on 15th December 2020, within the flight activity survey area for 10 seconds in the 0-20m height band. All birds were low flying, occurring either in the 0-20 or the 20-50m height bands.



Summer

There were no observations of this species during summer surveys.

3.3 Hinterland Survey (IWeBS and breeding target species)

Hinterland surveys to establish occupancy and quantity of target species that could potentially cross the site whilst moving to and from roosting and feeding grounds within a 10 km radius of the site were carried out in November 2020 - March 2021, and in June/July 2021. These surveys were for wintering (IWeBS survey) and breeding target species.

During the winter season, 25 species were recorded. Of these, five species are Red listed (curlew, golden plover, lapwing, shoveler and snipe), 14 species are Amber listed (black-headed gull, coot, gadwall, garganey, greylag goose, lesser black-backed gull, mallard, mute swan, pintail, ringed plover, shelduck, teal, whooper swan, wigeon) and the remainder are Green listed (buzzard, grey heron, little egret, little grebe, moorhen and peregrine). Golden plover, little egret, peregrine and whooper swan are also listed under Annex I of the EU Birds Directive.

During the summer season, 14 species were recorded. Of these, three species were red listed (curlew, snipe, and lapwing), seven species were amber listed (black-headed gull, coot, lesser black-backed gull, mallard, ringed plover, teal and snipe) and the remainder green listed (little egret, grey heron, moorhen and little grebe). Little egret is listed under Annex I of the EU Birds Directive.

Species of conservation concern that were recorded are discussed in more detail in this section. Species have been selected for detailed discussion on the basis of conservation status, vulnerability to wind farm developments and species sightings recorded on or near the proposed Wind Farm site, which will indicate potential links between species recorded at the proposed site and the surrounding environment. Target species recorded are shown below in Table 3-2. For site-specific hinterland survey results see Appendix 5 of this report.

3.3.1 Black-headed Gull

This Amber-listed Gull species was seen on six occasions during Hinterland surveys. Observations were made at Cabragh Wetlands (c. 6km from the proposed windfarm) of 30 gulls on 26th November 2020, 55 gulls on 16th January 2021, 105 gulls on 06th February and 68 gulls on 7th March 2021. A total of 45 birds were recorded at Ballydavid, Littleton (c. 7.5km from the proposed windfarm) on 07th March 2021 and one individual at Lisheen Bog (c. 8.3km from the proposed windfarm) on 27th July 2021.

3.3.2 Curlew

This Red-listed wader species was seen on three occasions during Hinterland surveys. Two of these were at Cabragh Wetlands; one involved four birds on 26th November 2020 and the other recorded 65 birds on 16th January 2021. The third observation was of 2 birds at Lisheen Bog on 27th July 2021.



3.3.3 Golden Plover

This Red-listed Annex 1 species was noted on six occasions during Hinterland surveys. Observations were made at Clonamuckoge Beg (c. 300m from the proposed windfarm) of 200 birds on 26th November 2020, 200 birds on 08th December 2020, 700 birds on 16th January 2021 and 150 birds on 6th February 2021. Five birds were recorded at Liathmore (c. 9.2km from the proposed windfarm) and 300 birds were recorded at Cabragh Wetlands, both on 6th February 2021.

3.3.4 Grey Heron

Green-listed Heron was noted on 17 occasions during Hinterland surveys. The sites with most heron sightings were Cabragh Wetlands (c. 6km from proposed windfarm) and The Tank (600 m from proposed Wind Farm). Heron were observed at Cabragh Wetlands and The Tank five times at each location in November and December 2020, January and March 2021. Numbers ranged from one individual to five birds. Grey heron were also observed four times at the Lisheen Bog, where two birds were recorded on 26th November 2020, a single heron was seen on 18th December 2020, a single Heron was seen on 26th June 2021 and three birds were recorded on 27th July 2021.

3.3.5 Greylag Goose

This Amber listed species was observed once during hinterland surveys; 12 birds were recorded at Cabragh Wetlands on 16th January 2021.

3.3.6 Lapwing

Red-listed lapwing was noted on 16 occasions during Hinterland surveys. Lapwing were seen seven times at Cabragh Wetlands, in November and December 2020, and January, February, March and June 2021, with 350, 300, 25, 400, 150, 28 and two birds recorded each visit respectively. The two birds recorded in on 26th June 2021 were considered a pair. Lapwing were recorded four times at Clonamuckoge Beg, with 180 birds recorded on 26th November 2020, 300 birds on 18th December 2020, 300 birds observed on 16th January 2021 and 26 birds on 06th February 2021. At Ballydavid, Littleton, 40 birds were recorded on 26th November 2020, 45 on 08th December 2020, and 75 birds were recorded on 16th January 2021. one pair of birds recorded at Lisheen Bog on 26th June 2021, and one individual at Littleton Bog on 27th July 2021.

3.3.7 Lesser Black-backed Gull

Amber-listed Lesser Black-backed Gull was noted on four occasions during Hinterland surveys, all observations being from Ballydavid, Littleton. The first observation was on 16th November 2020, the second on 6th February 2021, the third observation was on 7th of March 2021, and the final observation was on 26th June 2021. All observations were of single gulls, except the November observation which was of 8 birds.

3.3.8 Little Egret

Little Egret, an Annex 1 species, was noted on six occasions during Hinterland surveys. This species was observed at Lisheen Bog and Cabragh Wetlands.



It was observed at Lisheen Bog on 18th December 2020 with two birds recorded, and single birds were recorded there on 16th January, 06th February and 27th July 2021. It was observed at Cabragh Wetlands on 16th January and 27th July 2021, both records were of single birds.

3.3.9 Mute Swan

This Amber-listed swan species was noted on five occasions at four different sites during Hinterland surveys. Eight mute swan were seen at Cabragh Wetlands on 26th December 2021. It was seen once at The Tank where two mute swan were seen on 12th November 2020. Two mute swan were seen at Ballydavid, Littleton on 16th January 2021. Mute swans were seen at Clonamuckoge Beg twice, with six birds recorded on 06th February and four on 07th March 2021.

3.3.10 Peregrine

This Green-listed Annex I raptor species was seen three times during Hinterland surveys, twice at Loughmoe Castle (c. 3.4km from the proposed windfarm). Both observations were of single birds, made on 12th November 2020 and 6th February 2021. One peregrine was recorded at Lisheen Bog on 18th December 2020.

3.3.11 Ringed Plover

A single observation of this Amber-listed species was noted at Lisheen Bog on 26th June 2021. Two pairs were recorded performing distraction displays (breeding behaviour).

3.3.12 Snipe

Red-listed snipe was noted 15 times during Hinterland surveys. It was recorded at The Tank on 12th November, 26th November, 08th December 2020, 16th January, 06th February and 07th March 2021, with four, 15, 12, five, seven and five birds recorded per respective visit. Snipe was also recorded at Lisheen Bog on 16th January, 06th February, 07th March and 27th July, with two, three, one, and three birds recorded per respective visit.

Snipe were also recorded in Cabragh Wetlands, with 15 birds on 26th November, 8 on 8th December 2020, and four pairs observed on 26th June 2021. Snipe were also recorded at Ballydavid, Littleton, with five birds on 8th December 2020

3.3.13 Whooper swan

Annex 1 species Whooper Swan was seen on eight occasions during Hinterland surveys, all of which were throughout the winter season 2020/2021. Of these, five observations were at Liathmore, where the largest flock of 95 Whooper Swans was observed on the 08th December 2021. Further flocks of 26, 37, 22 and 60 swans were observed at this site on the 12th of November, 16th January, 6th February and 7th March 2020 respectively. At Clonamuckoge Beg, three swans were recorded on 26th November, five on 8th December 2020, and five swans were recorded on 16th January 2021.



Table 3-2: Target Bird Species Recorded During Year One Hinterland Surveys (IWeBS and Breeding Target Species)

Common Name	Scientific Name	Conservation Status	
		BoCCI*	Annex I**
Black-headed gull	<i>Chroicocephalus ridibundus</i>	Amber	No
Buzzard	<i>Buteo buteo</i>	Green	No
Coot	<i>Fulica atra</i>	Amber	No
Curlew	<i>Numenius arquata</i>	Red	No
Gadwall	<i>Anas querquedula</i>	Amber	No
Garganey	<i>Anas strepera</i>	Amber	No
Golden plover	<i>Pluvialis apricaria</i>	Red	Yes
Grey heron	<i>Ardea cinerea</i>	Green	No
Greylag goose	<i>Anser anser</i>	Amber	No
Lapwing	<i>Vanellus vanellus</i>	Red	No
Lesser black-backed gull	<i>Larus fuscus</i>	Amber	No
Little egret	<i>Egretta garzetta</i>	No	Yes
Little grebe	<i>Tachybaptus ruficollis</i>	Green	No
Mallard	<i>Anas platyrhynchos</i>	Amber	No
Moorhen	<i>Gallinula chloropus</i>	Green	No
Mute swan	<i>Cygnus olor</i>	Amber	No
Peregrine	<i>Falco peregrinus</i>	Green	Yes
Pintail	<i>Anas acuta</i>	Red	No
Ringed plover	<i>Charadrius hiaticula</i>	Amber	No
Shelduck	<i>Tadorna tadorna</i>	Amber	No
Shoveler	<i>Anas clypeata</i>	Red	No
Snipe	<i>Gallinago gallinago</i>	Red	No
Teal	<i>Aythya fuligula</i>	Amber	No



Common Name	Scientific Name	Conservation Status	
		BoCCI*	Annex I**
Water Rail	<i>Rallus aquaticus</i>	Green	No
Whooper swan	<i>Cygnus cygnus</i>	Amber	Yes
Wigeon	<i>Anas penelope</i>	Amber	No

* refers to the conservation status of the species according to Birds of Conservation Concern in Ireland.

**refers to species listed on Annex I of the EU Birds Directive; shown in bold.

3.4 Breeding Waders Survey

During the breeding wader surveys at hinterland sites on 19th May 2021, two pairs of ringed plover at Lisheen bog (c. 8.3km from the proposed windfarm), and two pairs at Littleton Bog (c. 7.5km from the proposed windfarm) exhibited breeding behaviour through distraction displays. Two pairs of curlew also exhibited distraction display at Littleton Bog during this breeding wader survey. Redshank and lapwing were recorded breeding at Lisheen bog, within an area that had been re-wetted.

During the breeding wader surveys within the proposed Wind Farm site on 28th May 2021, six pairs of snipe were recorded drumming, a breeding behaviour, onsite. Two pairs of snipe were recorded in the north east section of the site (ITM 613413 663065), c. 240m from turbine 8. Four pairs of snipe were recorded in the north of the site (ITM 612728 663358), c. 347m from turbine 6.

3.5 Breeding Bird Survey

The results of the breeding bird transect surveys in summer 2021 at Brittas are shown in Table 3-3.

A total of 49 species were recorded along the transects. Five red listed species was recorded during surveys: grey wagtail, kestrel, meadow pipit, snipe and swift. Grey wagtails were recorded during the breeding bird transect surveys. This is a riparian species, recorded on along streams near transects. One individual kestrel was recorded during the breeding bird transect surveys.

This species is widespread in Ireland, found in open habitats. 21 meadow pipit individuals were recorded during the surveys. Meadow pipit were confirmed breeding onsite. Four snipe were recorded during the breeding season, with this species known to breed in grassy tussocks associated with wet/boggy conditions. Three swift were recorded during the breeding transects. Swift breed throughout Ireland, typically in buildings.

A total of 12 Amber listed species were recorded: goldcrest, house martin, lesser black-backed gull, linnet, mallard, mute swan, sand martin, skylark, spotted flycatcher, starling, swallow, and willow warbler. Goldcrest are likely to breed in conifer plantations onsite. Starlings could use suitable deciduous trees and farm buildings for breeding, with the latter also suitable for house martins and swallows. Suitable buildings for breeding starlings, swallows and house martins are located onsite. Linnets are found in rough grassland and scrubby habitats.



Mallard and mute swan occur in almost all available wetland habitats. Sand martin are likely to breed in similar bank habitats to kingfisher, as well as in quarries. Skylarks are likely to breed in similar habitats to meadow pipits. Spotted flycatcher breeds in deciduous woodland, hedgerows and gardens. Willow warbler are commonly found in scrubby habitats along the edges of bogs and marshes, as well as in hedgerows and woodland.

The remaining 33 species are Green listed.

Two species listed under Annex I of the EU Birds Directive were recorded during breeding transect surveys: little egret and peregrine. Peregrine were recorded nesting at Brittas Castle onsite during transect surveys on 28th June 2021. One adult and one juvenile were recorded at the nest.



Table 3-3: Results of breeding bird transects surveys during summer 2021³

Common Name	Scientific Name	May			June			May			June			May			June			May			June		
		T1						T2						T3						T4					
		0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO
Blackbird	<i>Turdus merula</i>		1	1	4			2			3			9	7		1	1		2	4	1	3	1	
Blackcap	<i>Sylvia atricapilla</i>				5	2		2			1	1		4			2	2					2		
Blue tit	<i>Cyanistes caeruleus</i>	2			1									1											
Bullfinch	<i>Pyrrhula pyrrhula</i>	2						2														2			
Buzzard	<i>Buteo buteo</i>		2															1		1				1	
Chaffinch	<i>Fringilla coelebs</i>	8	1		7	2		5		1	4			1	2		2	2				3			
Chiffchaff	<i>Phylloscopus collybita</i>				1									2			1	1							
Dunnock	<i>Prunella modularis</i>		1		1	1		1	1		1			3			2								
Goldcrest	<i>Regulus regulus</i>				1						2						1								
Goldfinch	<i>Carduelis carduelis</i>				3									3			1	2							
Great tit	<i>Parus major</i>							1	1					1											
Grey heron	<i>Ardea cinerea</i>			1	2			1	1	1										1		1		1	
Grey wagtail	<i>Motacilla cinerea</i>									1	2											3			
Hooded crow	<i>Corvus cornix</i>						8							1	3				1		1				
House martin	<i>Delichon urbicum</i>																		4						
Jackdaw	<i>Corvus monedula</i>													9											
Jay	<i>Garrulus glandarius</i>	3																	2						

³ Zero values are not shown to increase readability.



Common Name	Scientific Name	May			June			May			June			May			June			May			June		
		T1						T2						T3						T4					
		0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO
Kestrel	<i>Falco tinnunculus</i>												1												
Lesser black-backed gull	<i>Larus fuscus</i>																								1
Lesser redpoll	<i>Carduelis cabaret</i>	2			2	3					1														
Linnet	<i>Linaria cannabina</i>							2			1														
Little egret	<i>Egretta garzetta</i>																							1	
Magpie	<i>Pica pica</i>				2								1												
Mallard	<i>Anas platyrhynchos</i>		3																						
Meadow pipit	<i>Anthus pratensis</i>				2	2		1	2	1	9	2	2							1					
Mistle thrush	<i>Turdus viscivorus</i>															1				1				1	
Mute swan	<i>Cygnus olor</i>			9						1															
Peregrine	<i>Falco peregrinus</i>																2								
Pheasant	<i>Phasianus colchicus</i>																		1						
Pied/white wagtail	<i>Motacilla alba</i>							1			2						3			3					
Reed bunting	<i>Emberiza schoeniclus</i>								2	1	5									3				1	
Reed warbler	<i>Acrocephalus scirpaceus</i>														1										
Robin	<i>Erithacus rubecula</i>	8			4						1			11	4		5	2			1			1	
Rook	<i>Corvus frugilegus</i>				1						1		3	4	3					3	12				
Sand Martin	<i>Carduelis spinus</i>							3				1		4						4				5	



Common Name	Scientific Name	May			June			May			June			May			June			May			June		
		T1						T2						T3						T4					
		0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO
Sedge Warbler	<i>Acrocephalus schoenobaenus</i>				2				2										5				9		
Skylark	<i>Alauda arvensis</i>								1		1	1	1												
Snipe	<i>Gallinago gallinago</i>			1				1			2														
Song thrush	<i>Turdus philomelos</i>				2	2	1	1		1	1	1		1	1		1	4		1		1			
Sparrowhawk	<i>Accipiter nisus</i>																	1							
Spotted flycatcher	<i>Muscicapa striata</i>													3			2								
Starling	<i>Sturnus vulgaris</i>										6			8											
Stonechat	<i>Saxicola torquata</i>										2								2	2					
Swallow	<i>Hirundo rustica</i>	6	2		10	1		2			2	2		13			4	25	2				4		
Swift	<i>Apus apus</i>				1								1										1		
Treecreeper	<i>Certhia familiaris</i>																1								
Willow warbler	<i>Phylloscopus trochilus</i>	3			3	2	1		3		2	1						1				3		1	1
Woodpigeon	<i>Columba palumbus</i>	8	1	4	2	8	1	4		1			1	13		1		1	3	5				2	2
Wren	<i>Troglodytes troglodytes</i>	3			11	1		5			4	2		5	7		14	4		2			4	3	
Total Number of Species	49																								



3.6 Wintering Bird Survey

The results of the wintering bird transect survey at Brittas are shown below. Table 3-4 details bird transects 1 to 4 surveyed during winter 2020/2021.

A total of 51 species were recorded along the transects. Five red listed species were recorded during surveys, namely grey wagtail, lapwing, meadow pipit, redwing, and snipe.

Thirteen amber listed species were recorded: black-headed gull, cormorant, goldcrest, greenfinch, house sparrow, kestrel, kingfisher, mallard, mute swan, skylark, starling, teal and whooper swan. The remaining 33 species are green listed. While kingfisher were recorded during the winter transects, and not the breeding transects, kingfisher are likely using the rivers and streams on site for foraging and could be breeding on the banks of these water features. Old nest holes were observed along the banks of the Suir River which borders and also runs through the site.

Four species listed under Annex I of the EU Birds Directive were recorded during winter transect surveys: kingfisher, peregrine, whooper swan and little egret.



Table 3-4: Results of wintering bird transects winter 2020/2021⁴

Common Name	Scientific Name	Jan			Feb			Mar			Jan			Feb			Mar			Jan			Feb			Mar			Jan			Feb			Mar		
		T1			T2			T3			T4			T5			T6			T7			T8			T9			T10			T11					
		0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO			
Blackbird	<i>Turdus merula</i>	6	4	1	4	3		5			5	1			1	2		10	4		3	4		2	1		7				1	2					
Black-headed gull	<i>Chroicocephalus ridibundus</i>						4																														
Blue tit	<i>Cyanistes caeruleus</i>				2			2			1			1				1			2			2			1										
Bullfinch	<i>Pyrrhula pyrrhula</i>				2			2			2																										
Buzzard	<i>Buteo buteo</i>			1		1		1	1					2	2								2				1				1						
Chaffinch	<i>Fringilla coelebs</i>	12	1	2		104		2	2	1	2			2		8	4		2				7		4	2	2		2		2		1				
Coal tit	<i>Periparus ater</i>																						1														
Cormorant	<i>Periparus ater</i>																													1	4						
Dunnock	<i>Prunella modularis</i>	4			4			2								3					1	3		2			1						1				
Fieldfare	<i>Turdus pilaris</i>			16			2							9		13														7							
Garden warbler	<i>Sylvia borin</i>																				2							2				3					
Goldcrest	<i>Regulus regulus</i>	2			2			1					4					3			4			1													
Goldfinch	<i>Carduelis carduelis</i>				1																																
Great tit	<i>Parus major</i>	2				1													1		3	1															
Greenfinch	<i>Carduelis chloris</i>																	3																			
Grey heron	<i>Ardea cinerea</i>							2				1																				1					
Grey wagtail	<i>Motacilla cinerea</i>										1																										
Hooded crow	<i>Corvus cornix</i>	3		2			7		1			6		1					2				3		4			2									
House sparrow	<i>Passer domesticus</i>																					2															
Jackdaw	<i>Corvus monedula</i>			2							2			4					11	13	4	12		5	2			2									
Jay	<i>Garrulus glandarius</i>																	1	1			2		2	1												
Kestrel	<i>Falco tinnunculus</i>											2																									
Kingfisher	<i>Alcedo atthis</i>	1						1																								1					
Lapwing	<i>Vanellus vanellus</i>						35								60																						
Lesser redpoll	<i>Egretta garzetta</i>																				3																
Little egret	<i>Linaria cannabina</i>														1																						
Long-tailed tit	<i>Aegithalos caudatus</i>				2																3			1													
Magpie	<i>Pica pica</i>			2	1						3						1					2		1													
Mallard	<i>Anas platyrhynchos</i>		2		2								2					14						2													
Meadow pipit	<i>Anthus pratensis</i>					1					2	18	2		1	1	2										8		1	1		1					
Mistle thrush	<i>Turdus viscivorus</i>			1		1										1						2	1	1		2		1									

⁴ Zero values are not shown to increase readability.



Common Name	Scientific Name	Jan			Feb			Mar			Jan			Feb			Mar			Jan			Feb			Mar			Jan			Feb			Mar		
		T1									T2									T3									T4								
		0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO	0-25m	25-100m	>100/FO			
Moorhen	<i>Gallinula chloropus</i>				1																																
Mute swan	<i>Cygnus olor</i>						4			17		6						4		2																	
Peregrine	<i>Falco peregrinus</i>																						1														
Pheasant	<i>Phasianus colchicus</i>	1																		1			1			1							1				
Pied/white wagtail	<i>Motacilla alba</i>																			1				1							1						
Raven	<i>Corvus corax</i>											1																									
Redwing	<i>Turdus iliacus</i>	30	5			2	22					4			20							14										1					
Reed bunting	<i>Emberiza schoeniclus</i>																																1				
Robin	<i>Erithacus rubecula</i>	9			8			6			4	1		1			3		1	6	2		7	4		5	5		2						5		
Rook	<i>Corvus frugilegus</i>			3			1		2	2			2		9				2			33		4	2	3	13	1			14		25				
Skylark	<i>Alauda arvensis</i>																	2													1						
Snipe	<i>Gallinago gallinago</i>		1	1							1	4															2				1						
Song thrush	<i>Turdus philomelos</i>	2	2		2	4	1	1	2					1									4	1			1	1			2			1	1		
Sparrowhawk	<i>Accipiter nisus</i>																											2									
Starling	<i>Sturnus vulgaris</i>		5	5		1	7					7	13		60	32				4	2		3			11											
Stonechat	<i>Saxicola torquata</i>	1									1	1															1						2				
Teal	<i>Anas crecca</i>	1																																			
Whooper swan	<i>Cygnus cygnus</i>			5			7											3																			
Woodpigeon	<i>Columba palumbus</i>	1		5		4		5	1	12	2			3			2	2	1	3	5	3	6		4	3	2	2	5		2		6		3		
Wren	<i>Troglodytes troglodytes</i>	10			3			4	1		4			1	2		2	3	1	6			5	2		4	1		4			1			6	3	
Total Number of Species		51																																			



3.7 Barn Owl Survey

One location (approx. 1.17 km northwest of the site) was identified as potentially suitable for barn owl occupancy within the search area encompassing the site boundary and a radius of 1.5 km beyond the flight activity survey area buffer. This location, an old farmhouse, was surveyed for evidence of barn owl. Barn owl ‘snoring’ was heard from the building during the dusk survey, before a single male emerged from the farmhouse and began hunting around the buildings.



4. DISCUSSION

FT carried out a full year of ornithological surveys at the proposed Brittas Wind Farm between October 2020 and August 2021 inclusive, with two rounds of VP surveys completed in August 2021. The following surveys were undertaken: Vantage point surveys, breeding & winter bird transect surveys, hinterland surveys, breeding wader surveys, and barn owl surveys.

In total there were 888 individual flight lines of 19 target species observed during the VP survey period.

Some target species were frequently or regularly sighted across seasons; these include black headed gull, buzzard and kestrel. Resident populations of these species stay in the vicinity of the proposed Brittas Wind Farm year-round and utilise the proposed site for hunting/ foraging. The following species have been observed hunting within the site: buzzard, kestrel and sparrowhawk.

The most sensitive species recorded within the flight activity survey area, flying at rotor swept heights and in considerable numbers is red listed/ Annex I golden plover. This species is a winter visitor in this region and has not been recorded breeding at the Brittas site. Whooper swans were recorded flying over the Brittas site in winter 2020/21 as well as grazing within the site in low numbers (up to 12 birds), notably on fields that flooded in winter. As these observations were recorded during the day, it is considered the site is used as a foraging area by limited numbers of whooper swans. Roosting sites for whooper swans were not identified at or near the site. A cormorant roost was observed onsite, along the River Suir (ITM 613253 661373).

Peregrine were observed nesting in Brittas Castle (ITM 612558 661504) and a heronry was observed along the woodland edge within the southern areas of the site (ITM 613090 661048). Snipe were recorded breeding onsite in the north and north-eastern areas of the site (ITM 613413 663065 and 612728 663358). Buzzard were recorded nesting to the west of the site, c. 1km offsite (ITM 610834 662539). Kestrel bred near the site, with three juvenile kestrels observed to have fledged from a nest east of VP2 (614514 663157).

Kingfisher were not recorded during breeding surveys, however their presence in winter and the availability of suitable nesting habitat along the Suir in this area means they are considered likely to breed within or near the site.

Meadow pipit were also confirmed breeding on site. All passerine species recorded within the 0-25m distance band during the breeding transect surveys are considered to be breeding within the site.

During winter and breeding bird transect surveys identified the riparian/ river habitat along the River Suir as high value bird habitat, with notable species such as grey wagtail and kingfisher recorded. The majority of species recorded during the transects surveys were small passerine species, unlikely to be vulnerable to significant effects from wind farm developments. Peregrine were recorded nesting onsite at Brittas Castle during transects surveys.

Hinterland surveys were conducted to show the general breeding occupancy and bird occupancy throughout the year in a c. 10 km radius around the proposed site. Hinterland sites that were identified as being of high value to bird species of conservation interest were Cabragh Wetlands, Clonamuckoge Beg, Liathmore and Lisheen Bog. Cabragh Wetlands is important for wintering birds with large flocks of curlew (up to 65 birds), lapwing (up to 400 birds) and golden plover (up to 300 birds), as well as breeding birds, with one pair of lapwing and four pairs of snipe observed in the breeding season. Clonamuckoge Beg is important for wintering birds with large flocks of lapwing (up to 300 birds) and golden plover (up to 700 birds). Liathmore is an important site for wintering whooper swan, with flock sizes of up to 95 swans recorded.



Lisheen Bog is important for breeding birds, with one pair of lapwing and two pairs of ringed plover observed in the breeding season. Peregrine were recorded at Loughmoe castle in the non-breeding season.

Species of note that were seen during Hinterland surveys, that were not recorded during the surveys within the proposed development site include: gadwall, garganey, greylag goose, pintail, shelduck and shoveler. These observations were from at Hinterland sites within 10 km of the site boundary, namely Cabragh Wetlands. The absence of these species on site indicates the habitats on the proposed Brittas Wind Farm site are not suitable for these wetland birds.

A barn owl breeding site was identified in a building approx. 1.17 km northwest of the site (ITM 611071 664291). Suitable foraging habitat is present on site in the form of rough grassland, field margins, hedgerows, and potentially in low-growing open scrub.



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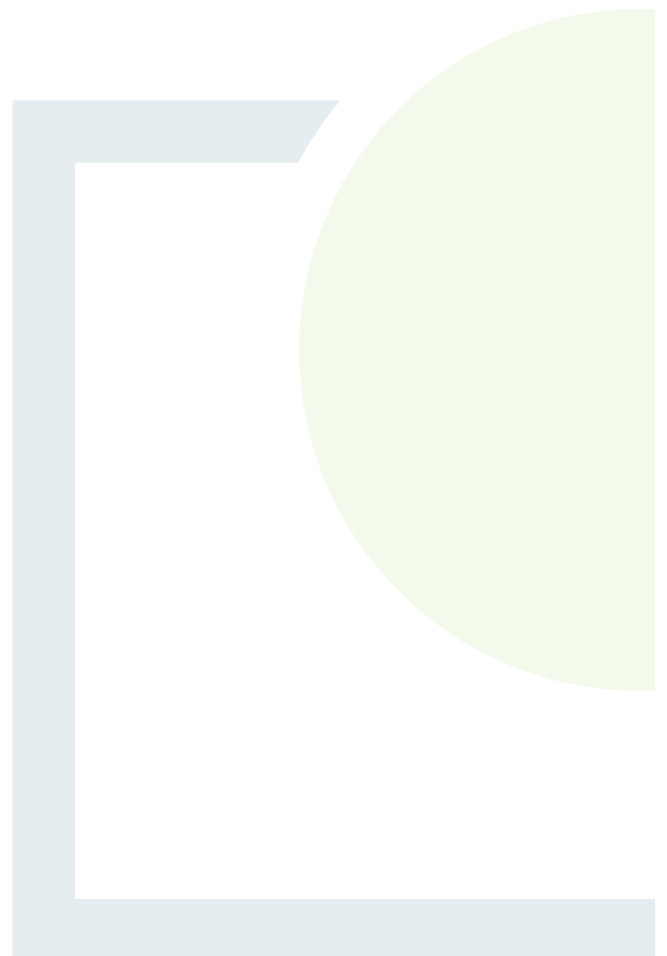
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CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

APPENDIX 1

VP Winter 2020/21 –
Survey Details



VP Winter 2020/21 - Survey Details

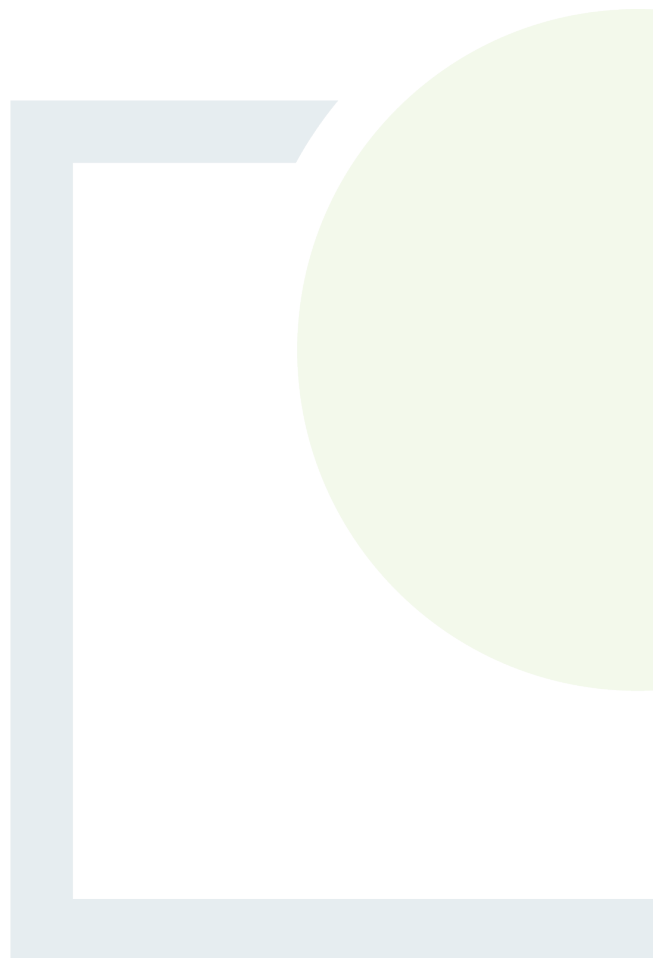
VP	Date	Observer	Start	End	Cloud (okta)	Visibility	Rain	Wind
1	05/11/2020	KC	12.20	15.20	8/8 (thin, high)	Good	Dry	F1-2 SW
1	28/11/2020	KC	08.15	11.15	8/8 (low)	Fair	Dry	F1 E
2	05/11/2020	KC	8.45	11.45	8/8 (thin, high)	Good	Dry	F1 SW
2	19/11/2020	KC	9.15	12.15	1/8	Good	Dry	F1 NW
3	19/11/2020	KC	12.45	15.45	2/8	V.good	Dry	F1 NW
3	28/11/2020	KC	11.30	14.30	8/8 (low)	Fair	Dry	F1 E
1	04/12/2020	KC	11.15	14.15	1/8	Excellent	Dry	F3 W
1	15/12/2020	KC	09.15	12.15	7/8	Good	Dry	F1 S
2	11/12/2020	KC	09.00	12.00	8/8	Good	Dry	F1 W
2	19/12/2020	KC	09.10	12.10	5/8	Good	Dry	F1 SW
3	11/12/2020	KC	12.30	15.30	8/8	Good	Dry	F3 W
3	15/12/2020	KC	12.30	15.30	3/8	Good	Dry	F2 S
1	20/12/2020	KC	09.50	12.50	2/8	Good	Dry	F1 S
1	29/12/2020	KC	09.10	12.10	3/8	Good	Dry	F3 NW
2	24/12/2020	KC	09.15	12.15	1/8	V.good	Dry	F1 N
2	30/12/2020	KC	12.45	15.45	4/8	Good	Dry	F2 NW
3	29/12/2020	KC	12.45	15.45	8/8	Good	Dry	F2 NW
3	30/12/2020	KC	09.15	12.15	2/8	Good	Dry	F2 NW
1	14/01/2021	KC	09.00	12.00	8/8	Good	Dry	F3 NW
1	26/01/2021	KC	13.00	16.00	8/8	Good	Dry	F1 SW
2	17/01/2021	KC	10.00	13.00	2/8	Good	Dry	F1 NW
2	28/01/2021	KC	11:40	14:40	8/8	Good	Dry	F2 SW
3	14/01/2021	KC	12:30	15:30	8/8	Good	Dry	F2 WNW
3	28/01/2021	KC	08:20	11:20	5/8	Good	Dry	F1 SW
1	05/02/2021	KC	08:10	11:10	7/8	Good	Dry	F1 W
1	22/02/2021	KC	09:00	12:00	0/8	Very good	Dry	F1 S
2	18/02/2021	KC	13:30	16:30	6/8	Good	Dry	F4 WSW
2	27/02/2021	KC	09:30	12:30	7/8	Good	Dry	F1 S
3	04/02/2021	KC	09:45	12:45	8/8	Good	Dry	F1 SW
3	16/02/2021	KC	14:30	17:30	5/8	Good	Dry	F1 SW
1	08/03/2021	KC	11:00	14:00	7/8	Good	Dry	F1 S
1	22/03/2021	KC	13:15	16:15	8/8	Good	Dry	F1 S
2	23/03/2021	KC	09:00	12:00	8/8	Good	Dry	F2 SW
2	30/03/2021	KC	08:30	11:30	1/8	Good	Dry	F1 SW
3	16/03/2021	KC	10:00	13:00	8/8	Good	Dry	F1 S
3	24/03/2021	KC	08:45	11:45	1/8	Good	Dry	F1 SW



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APPENDIX 2

VP Summer 2021 –
Survey Details



VP Summer 2021 - Survey Details

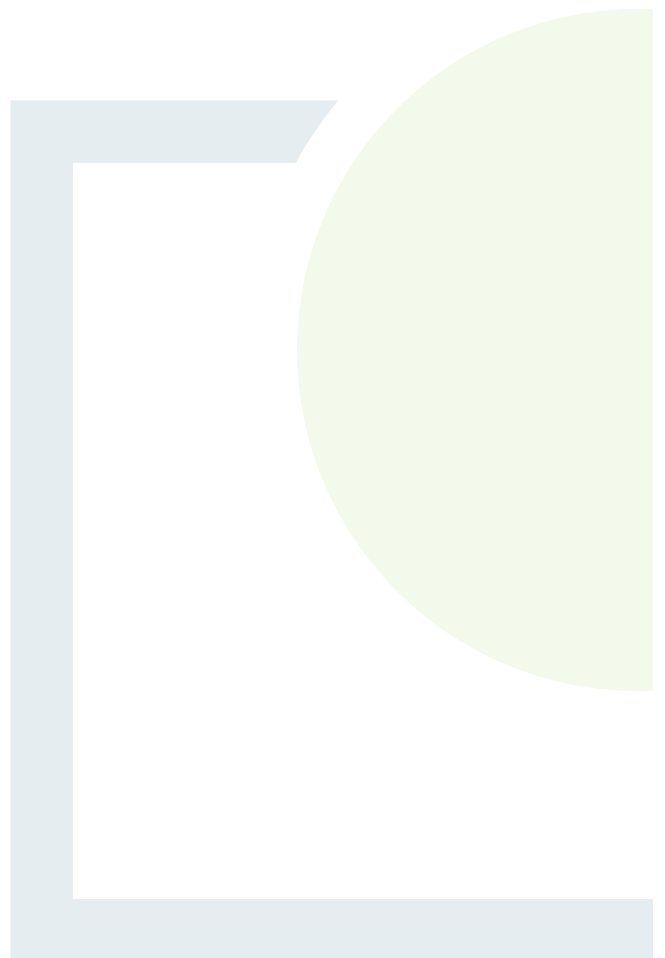
VP	Date	Observer	Start	End	Cloud (okta)	Visibility	Rain	Wind
1	08/04/2021	KC	09:45	12:45	5/8	Good	Dry	F2 W
1	24/04/2021	KC	10:45	13:45	1/8	Very good	Dry	F2 E
2	15/04/2021	KC	11:45	14:45	1/8	Very good	Dry	F1 W
2	21/04/2021	KC	11:20	14:20	2/8	Very good	Dry	F1 E
3	14/04/2021	KC	11:45	14:45	5/8	Good	Dry	F2 W
3	28/04/2021	KC	15:00	18:00	7/8	Good	Dry	F2 N
1	25/05/2021	KC	15:30	18:30	7/8	Good	Dry	F1 NW
1	30/05/2021	KC	14:00	17:00	5/8	Good	Dry	F1 S
2	26/05/2021	KC	17:00	20:00	3/8	Good	Dry/ light drizzle	F1 S
2	30/05/2021	KC	17:15	20:15	5/8	Good	Dry	F1 S
3	11/05/2021	KC	09:00	12:00	3/8	Good	Dry	F2 S
3	31/05/2021	KC	14:00	17:00	1/8	Good	Dry	F3 SE
1	19/06/2021	KC	08.15	11.15	6/8.	Good	No data	F1 S
1	30/06/2021	KC	17.00	20.00	1/8.	v Good	No data	F1 NW
2	17/06/2021	KC	13.15	16.15	7/8.	V. Good	None	F1 S
2	30/06/2021	KC	08.15	11.15	0/8.	v Good	No data	Calm
3	15/06/2021	KC	11:00	14:00	7/8.	V. good	None	F3 S
3	25/06/2021	KC	09:00	12:00	8/8.	Good	No data	F3 N
1	15/07/2021	KC	14.30.	16.30.	5/8.	Good	No data	F1 NW
1	24/07/2021	KC	08.40	11.40	1/8.	good	No data	F1 NE
2	15/07/2021	KC	11.00	14.00	4/8.	Good	No data	F1-2 NW
2	21/07/2021	KC	09.12	12.12	2/8.	v. Good	No data	F1 SE
3	19/07/2021	KC	10.00	13.00	0/8	v.good	No data	calm
3	24/07/2021	KC	12.00	15.00	6/8.	good	No data	F1 NE
1	29/07/2021	KC	12.00	15.00	4/8.	good	No data	F1 NW
2	26/07/2021	KC	08.15	11.15	8/8.	fair	No data	F1 NW
3	26/07/2021	KC	11.30	14.30	6/8.	good	No data	F1 NW
1	24/08/2021	KC	13.00	16.00	3/8.	good	No data	F1 NW
1	26/08/2021	KC	09.30	12.30	0/8	v. Good	No data	calm
2	10/08/2021	KC	09.00	12:00	6/8.	good	No data	F1 S
2	24/08/2021	KC	9.30	12.30	2/8.	good	No data	F1 NW
3	10/08/2021	KC	12.30	15.30	7/8.	good	No data	F1 S
3	24/08/2021	KC	16.30	19.30	2/8.	good	No data	F1 NW
1	26/08/2021	KC	12.40	15.40	0/8.	v good	No data	F1 SE
2	02/09/2021	KC	09.30	12.30	8/8.	good	No data	F1 E
3	02/09/2021	KC	13.00	16.00	8/8.	good	No data	F1 E



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APPENDIX 3

Winter VP Surveys 2020/21
and Summer VP Surveys 2021
raw flight line data



Winter Survey 2020/21 Bird Flightline Data

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
1	04/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	3		11.31	Out	57		57				
1	04/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	60		12.27	Out	141	70	71				
1	20/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	20		9.56	In	26		26				
1	20/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>				Out	40		40				
1	20/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	2		11.41	Out	70			70			
1	29/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	45		9.19	In	7		7				
1	29/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>				Out	8		8				
1	29/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	55		9.40	In	64		64				
1	29/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	120		10.12	In	120		90	30			
1	29/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	120		10.22	In	77		17	60			
1	29/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	28		11.54	In	64			64			
1	29/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	120		12.05	In	66			66			
2	19/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	4		10.00	In	42						

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	19/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	9		10.30	In	91		91				
3	29/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	11		12.47	In	51		51				
3	29/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	40		12.52	In	22		22				
3	29/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	16		13.06	In	79		79				
3	29/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	200		13.52	In	46	10	36				
3	29/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	40		13.55	In	42	10	32				
3	29/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	35		15.06	In	13			13			
3	30/12/2020	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	1		11.16	In	45		45				
1	14/01/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	16		9.12	Out	121		121				
1	14/01/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	4		9.21	Out	34		34				
1	14/01/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	13		10.07	Out	19		19				
1	14/01/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	10		11.51	Out	107		107				
1	26/01/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	1		14.24	Out	25			25			
1	26/01/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	2		15.15	Out	27		27				

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	28/01/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	6		14:14	In	21		21				
1	05/02/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	25		09:21	In	12		12				
1	05/02/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	25		09:21	Out	10		10				
1	22/03/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	3		13:22	Out	43		43				
1	22/03/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	35		13:25	Out	66		66				
1	05/11/2020	Buzzard	<i>Buteo buteo</i>	1		13.08	Out	12	12					
1	28/11/2020	Buzzard	<i>Buteo buteo</i>	1		10.39	In	24		24				
2	05/11/2020	Buzzard	<i>Buteo buteo</i>	1		8.48	Out	10		10				
2	05/11/2020	Buzzard	<i>Buteo buteo</i>	1		8.51	Out	58	45	13				
2	05/11/2020	Buzzard	<i>Buteo buteo</i>	1		8.57	In	19	19					
2	05/11/2020	Buzzard	<i>Buteo buteo</i>	1		11.14	In	29	7	22				
2	19/11/2020	Buzzard	<i>Buteo buteo</i>	1		9.51	In	24	24					Hunting/perching
2	19/11/2020	Buzzard	<i>Buteo buteo</i>	1		9.56	In	26	26					
3	19/11/2020	Buzzard	<i>Buteo buteo</i>	1		13.19	Out	58		58				
3	19/11/2020	Buzzard	<i>Buteo buteo</i>	1		13.31	Out	11	11					
1	04/12/2020	Buzzard	<i>Buteo buteo</i>	2		12.10	In	62	10	52				
1	04/12/2020	Buzzard	<i>Buteo buteo</i>	1		12.12	In	65			65			
1	04/12/2020	Buzzard	<i>Buteo buteo</i>	2		13.30	In	92		52	40			
1	04/12/2020	Buzzard	<i>Buteo buteo</i>	1		13.35	In	37		37				
1	04/12/2020	Buzzard	<i>Buteo buteo</i>	2		13.37	In	31		31				

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
1	15/12/2020	Buzzard	<i>Buteo buteo</i>	2		11.19	In	362		20	30	312		
1	20/12/2020	Buzzard	<i>Buteo buteo</i>	1		12.15	Out	10		10				
1	29/12/2020	Buzzard	<i>Buteo buteo</i>	1		9.45	Out	19		19				
2	11/12/2020	Buzzard	<i>Buteo buteo</i>	1		9.14	In	16		16				
2	11/12/2020	Buzzard	<i>Buteo buteo</i>	1		11.21	In	69			69			
2	11/12/2020	Buzzard	<i>Buteo buteo</i>	1		11.38	In	22		22				
2	19/12/2020	Buzzard	<i>Buteo buteo</i>	1		10.58	In	64		64				
2	30/12/2020	Buzzard	<i>Buteo buteo</i>	1		14.08	In	49		49				
3	11/12/2020	Buzzard	<i>Buteo buteo</i>	2		12.35	Out	56		56				
3	11/12/2020	Buzzard	<i>Buteo buteo</i>	1		14.14	Out	14	14					
3	15/12/2020	Buzzard	<i>Buteo buteo</i>	1		12.59	Out	31		31				
3	15/12/2020	Buzzard	<i>Buteo buteo</i>	1		13.04	Out	32		32				
3	15/12/2020	Buzzard	<i>Buteo buteo</i>	1		13.51	Out	16		16				
3	29/12/2020	Buzzard	<i>Buteo buteo</i>	1		13.39	Out	40		40				
3	29/12/2020	Buzzard	<i>Buteo buteo</i>	1		15.14	Out	78		78				
3	30/12/2020	Buzzard	<i>Buteo buteo</i>	1		9.44	Out	29		29				
1	14/01/2021	Buzzard	<i>Buteo buteo</i>	1		10.47	Out	40		40				
1	14/01/2021	Buzzard	<i>Buteo buteo</i>				In	52		52				
1	14/01/2021	Buzzard	<i>Buteo buteo</i>	1		10.50	Out	63		63				
1	14/01/2021	Buzzard	<i>Buteo buteo</i>				In	60		60				
1	14/01/2021	Buzzard	<i>Buteo buteo</i>	1		11.39	Out	25		25				
1	26/01/2021	Buzzard	<i>Buteo buteo</i>	1		13.52	In	22			22			
1	26/01/2021	Buzzard	<i>Buteo buteo</i>	1		15.06	Out	41			41			

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
1	26/01/2021	Buzzard	<i>Buteo buteo</i>	1		15:18	In	14	14					
1	26/01/2021	Buzzard	<i>Buteo buteo</i>	2		15:40	Out	15		15				
2	17/01/2021	Buzzard	<i>Buteo buteo</i>	1		10:13	Out	41		41				
2	17/01/2021	Buzzard	<i>Buteo buteo</i>	1		12:55	In	18		18				
2	28/01/2021	Buzzard	<i>Buteo buteo</i>	1		12:49	In	22	22					
3	14/01/2021	Buzzard	<i>Buteo buteo</i>	1		12:58	Out	55		55				
3	14/01/2021	Buzzard	<i>Buteo buteo</i>	1		12:59	Out	44		44				
3	14/01/2021	Buzzard	<i>Buteo buteo</i>	1		13:23	Out	19	19					
3	14/01/2021	Buzzard	<i>Buteo buteo</i>	1		13:29	Out	49			49			
3	14/01/2021	Buzzard	<i>Buteo buteo</i>	1		13:32	Out	90			90			
3	14/01/2021	Buzzard	<i>Buteo buteo</i>	1		13:40	Out	75		75				
3	14/01/2021	Buzzard	<i>Buteo buteo</i>	1		13:53	Out	43		43				
3	14/01/2021	Buzzard	<i>Buteo buteo</i>	1		14:02	Out	23	23					
1	05/02/2021	Buzzard	<i>Buteo buteo</i>	1		09:35	Out	20	20					
1	05/02/2021	Buzzard	<i>Buteo buteo</i>	1		09:35	In	40	40					
1	05/02/2021	Buzzard	<i>Buteo buteo</i>	1		10:42	In	36			36			
1	22/02/2021	Buzzard	<i>Buteo buteo</i>	2		10:30	Out	80			80			
1	22/02/2021	Buzzard	<i>Buteo buteo</i>	2		10:30	In	89			89			
2	18/02/2021	Buzzard	<i>Buteo buteo</i>	2		13:53	Out	97		40	57			
2	18/02/2021	Buzzard	<i>Buteo buteo</i>	1		16:07	In	12	12					
2	18/02/2021	Buzzard	<i>Buteo buteo</i>	1		16:19	In	17		17				
2	27/02/2021	Buzzard	<i>Buteo buteo</i>	1		09:31	Out	15		15				
2	27/02/2021	Buzzard	<i>Buteo buteo</i>	1		11:12	Out	33	33					

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	27/02/2021	Buzzard	<i>Buteo buteo</i>	1		11:37	In	121				121		Soaring
2	27/02/2021	Buzzard	<i>Buteo buteo</i>	1		11:56	In	99				99		Soaring
2	27/02/2021	Buzzard	<i>Buteo buteo</i>	3		12:14	Out	23		23				
3	04/02/2021	Buzzard	<i>Buteo buteo</i>	1		09:51	Out	27	27					Some flooding in places along the river
3	04/02/2021	Buzzard	<i>Buteo buteo</i>	1		12:12	In	302			302			
3	16/02/2021	Buzzard	<i>Buteo buteo</i>	1		15:25	In	19		19				
3	16/02/2021	Buzzard	<i>Buteo buteo</i>	1		15:49	Out	72			72			
3	16/02/2021	Buzzard	<i>Buteo buteo</i>	1		16:06	In	30		30				
1	08/03/2021	Buzzard	<i>Buteo buteo</i>	1		11:20	In	244				244		
1	08/03/2021	Buzzard	<i>Buteo buteo</i>	1		11:32	In	218				218		
1	08/03/2021	Buzzard	<i>Buteo buteo</i>	4		11:46	Out	189				189		
1	08/03/2021	Buzzard	<i>Buteo buteo</i>	1		12:57	In	78			78			
1	08/03/2021	Buzzard	<i>Buteo buteo</i>	1		13:26	Out	28		28				
1	22/03/2021	Buzzard	<i>Buteo buteo</i>	2		13:45	Out	173			173			
1	22/03/2021	Buzzard	<i>Buteo buteo</i>	2		15:35	In	106			106			
2	23/03/2021	Buzzard	<i>Buteo buteo</i>	1		09:36	In	39		39				
2	23/03/2021	Buzzard	<i>Buteo buteo</i>	1		09:39	In	120			120			
2	23/03/2021	Buzzard	<i>Buteo buteo</i>	2		10:10	In	63			63			
2	23/03/2021	Buzzard	<i>Buteo buteo</i>	2		11:11	In	138				138		
2	23/03/2021	Buzzard	<i>Buteo buteo</i>	1		11:31	Out	31		31				
2	30/03/2021	Buzzard	<i>Buteo buteo</i>	1		09:10	In	243			243			
2	30/03/2021	Buzzard	<i>Buteo buteo</i>	2		09:30	Out	85			85			
2	30/03/2021	Buzzard	<i>Buteo buteo</i>	1		09:48	In	171		171				

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	30/03/2021	Buzzard	<i>Buteo buteo</i>	1		09:54	Out	56		56				
2	30/03/2021	Buzzard	<i>Buteo buteo</i>	1		09:56	In	199			199			
2	30/03/2021	Buzzard	<i>Buteo buteo</i>	1		11:41	Out	67			67			
2	30/03/2021	Buzzard	<i>Buteo buteo</i>	1		12:04	In	36		36				
3	16/03/2021	Buzzard	<i>Buteo buteo</i>	1		10:44	Out	82			82			
3	16/03/2021	Buzzard	<i>Buteo buteo</i>	2		11:21	In	43				43		Soaring
3	16/03/2021	Buzzard	<i>Buteo buteo</i>	1		11:32	Out	101			101			
3	16/03/2021	Buzzard	<i>Buteo buteo</i>	2		11:43	Out	67		67				
3	16/03/2021	Buzzard	<i>Buteo buteo</i>	1		11:46	Out	83						
3	16/03/2021	Buzzard	<i>Buteo buteo</i>	1		11:49	In	517				517		Soaring
3	16/03/2021	Buzzard	<i>Buteo buteo</i>	2		12:03	In	23				23		Soaring
3	16/03/2021	Buzzard	<i>Buteo buteo</i>	2		12:28	In	216				216		Soaring
3	16/03/2021	Buzzard	<i>Buteo buteo</i>	2		12:42	In	41				41		Soaring
3	24/03/2021	Buzzard	<i>Buteo buteo</i>	2		09:22	Out	95			95			
3	24/03/2021	Buzzard	<i>Buteo buteo</i>	2		10:15	Out	194		194				
3	24/03/2021	Buzzard	<i>Buteo buteo</i>	1		10:34	In	71				71		
3	24/03/2021	Buzzard	<i>Buteo buteo</i>	1		11:06	In	98				98		
3	24/03/2021	Buzzard	<i>Buteo buteo</i>	2		11:25	In	178				178		
3	24/03/2021	Buzzard	<i>Buteo buteo</i>	1		11:40	In	38			38			
2	05/11/2020	Cormorant	<i>Phalacrocorax carbo</i>	1		12.40	Out	16	16					
2	28/11/2020	Cormorant	<i>Phalacrocorax carbo</i>	2		8.45	Out	16		16				
2	28/11/2020	Cormorant	<i>Phalacrocorax carbo</i>	2		9.10	Out	8		8				
2	28/11/2020	Cormorant	<i>Phalacrocorax carbo</i>	1		10.08	In	35		35				

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	28/11/2020	Cormorant	<i>Phalacrocorax carbo</i>				Out	30		30				
2	28/11/2020	Cormorant	<i>Phalacrocorax carbo</i>	4		10.25	In	25	5	20				
2	28/11/2020	Cormorant	<i>Phalacrocorax carbo</i>				Out	21		21				
2	28/11/2020	Cormorant	<i>Phalacrocorax carbo</i>	1		12.06	Out	71				71		
2	20/12/2020	Cormorant	<i>Phalacrocorax carbo</i>	1		11.27	Out	49	49					
2	29/12/2020	Cormorant	<i>Phalacrocorax carbo</i>	1		9.20	In	10	4	6				
2	29/12/2020	Cormorant	<i>Phalacrocorax carbo</i>	1		11.17	In	10		10				
2	29/12/2020	Cormorant	<i>Phalacrocorax carbo</i>	6		N/A								On flooded fields on site.
2	19/12/2020	Cormorant	<i>Phalacrocorax carbo</i>	1		11.51	In	65	10	55				
2	30/12/2020	Cormorant	<i>Phalacrocorax carbo</i>	1		15.03	In	152		152				
2	29/12/2020	Cormorant	<i>Phalacrocorax carbo</i>	1		13.20	In	91		91				
2	30/12/2020	Cormorant	<i>Phalacrocorax carbo</i>	11		9.40	In	120			120			
2	14/01/2021	Cormorant	<i>Phalacrocorax carbo</i>	6		9.07	Out	22		22				
2	14/01/2021	Cormorant	<i>Phalacrocorax carbo</i>	2		10.02	Out	17		17				
2	14/01/2021	Cormorant	<i>Phalacrocorax carbo</i>	1		11.26	Out	24		24				
2	14/01/2021	Cormorant	<i>Phalacrocorax carbo</i>	2		11.31	In	49		49				
2	14/01/2021	Cormorant	<i>Phalacrocorax carbo</i>	1		11.44	In	41		41				5 in roost
2	26/01/2021	Cormorant	<i>Phalacrocorax carbo</i>	2		15.35	In	14		14				
2	17/01/2021	Cormorant	<i>Phalacrocorax carbo</i>	1		10.14	In	140			140			
2	17/01/2021	Cormorant	<i>Phalacrocorax carbo</i>				Out	30			30			
2	28/01/2021	Cormorant	<i>Phalacrocorax carbo</i>	1		12:48	In	16		16				
2	05/02/2021	Cormorant	<i>Phalacrocorax carbo</i>	5		08:27	In	25		25				
2	05/02/2021	Cormorant	<i>Phalacrocorax carbo</i>	7		08:55	Out	15		15				

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	22/02/2021	Cormorant	<i>Phalacrocorax carbo</i>	4		09:15	In	20		20				
2	22/02/2021	Cormorant	<i>Phalacrocorax carbo</i>	4		09:34	In	16		16				
2	22/02/2021	Cormorant	<i>Phalacrocorax carbo</i>	4		09:34	Out	20		20				
2	18/02/2021	Cormorant	<i>Phalacrocorax carbo</i>	2		13:51	In	78		78				
2	18/02/2021	Cormorant	<i>Phalacrocorax carbo</i>	1		15:51	In	51		51				
2	18/02/2021	Cormorant	<i>Phalacrocorax carbo</i>	1		15:51	Out	20		20				
2	27/02/2021	Cormorant	<i>Phalacrocorax carbo</i>	1		09:45	In	27		27				
2	27/02/2021	Cormorant	<i>Phalacrocorax carbo</i>	2		10:12	In	90		90				
2	27/02/2021	Cormorant	<i>Phalacrocorax carbo</i>	2		10:12	Out	12		12				
2	27/02/2021	Cormorant	<i>Phalacrocorax carbo</i>	2		12:04	In	79			79			
2	16/02/2021	Cormorant	<i>Phalacrocorax carbo</i>	2		17:24	In	27		27				
2	08/03/2021	Cormorant	<i>Phalacrocorax carbo</i>	1		11:10	Out	8		8				
2	22/03/2021	Cormorant	<i>Phalacrocorax carbo</i>	1		14:12	In	33		33				
2	22/03/2021	Cormorant	<i>Phalacrocorax carbo</i>	3		15:50	In	26		26				
2	23/03/2021	Cormorant	<i>Phalacrocorax carbo</i>	2		09:23	In	35		35				
2	05/11/2020	Golden Plover	<i>Pluvialis apricaria</i>	200		11.03	Out	77				45	32	
3	19/11/2020	Golden Plover	<i>Pluvialis apricaria</i>	20		13.16	Out	74				74		
3	19/11/2020	Golden Plover	<i>Pluvialis apricaria</i>	220		14.49	In	86			86			
3	19/11/2020	Golden Plover	<i>Pluvialis apricaria</i>	200		15.08	In	220					220	
3	28/11/2020	Golden Plover	<i>Pluvialis apricaria</i>	500		11.43	Out	216		20	10	10	176	
3	28/11/2020	Golden Plover	<i>Pluvialis apricaria</i>	600		12.34	In	206				206		
3	28/11/2020	Golden Plover	<i>Pluvialis apricaria</i>				Out	420				420		
3	28/11/2020	Golden Plover	<i>Pluvialis apricaria</i>	600		12.55	Out	75			75			

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	28/11/2020	Golden Plover	<i>Pluvialis apricaria</i>	600		13.01	In	250				250		
3	28/11/2020	Golden Plover	<i>Pluvialis apricaria</i>				Out	53			53			
1	15/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	25		11.06	In	38			38			
1	15/12/2020	Golden Plover	<i>Pluvialis apricaria</i>				Out	30				30		
2	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	1		9.19	In	57		57				
2	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>				Out	20		20				
2	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		10.00	Out	440	10	30	60	140	200	Estimate
2	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		10.08	Out	236	10	30	60	136		Estimate
2	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		10.20	Out	344	10	30	60	244		Train passed
2	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		10.42	Out							Train passed
2	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		10.57	Out	385	10	30	145	200		
2	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		11.07	Out	369	10	20	339			
2	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	350		11.14	Out	51	10	20	21			
2	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		11.24	Out	397	10	30	60	297		
2	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		11.46	Out	106	10	20	76			
2	19/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		10.02	Out	180	10	20	60	90		
2	24/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	250		9.21	Out	202	10	20	60	112		
2	24/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	300		9.35	Out	245	10	20	60	155		
2	24/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	13		10.24	In	95			95			
2	24/12/2020	Golden Plover	<i>Pluvialis apricaria</i>				Out	20	10	10				
2	24/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	500		11.52	Out	87	10	20	57			
2	24/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		12.05	Out	95	10	20	65			
2	30/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	450		13.50	Out	265	10	20	60	75	100	

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	30/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	450		14.50	Out	76	10	20	46			
2	30/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	650		15.32	Out	237	10	20	60	60	87	
3	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		12.37	Out	376	10	30	60	276		
3	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	350		12.47	Out	100	10	20	70			
3	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		12.49	In	120				120		
3	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>				Out	320	10	30	60	220		
3	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		13.02	Out	555	10	30	60	455		
3	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	400		13.27	Out	391	10	30	60	291		Train
3	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		13.29	Out	287	10	30	60	187		Train
3	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	700		13.34	In	214			60	154		
3	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>				Out	40	10	30				
3	11/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	20		14.24	In	12				12		
3	15/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	22		13.15	Out	18		18				
3	15/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	200		14.16	Out	67				67		
3	15/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	350		14.56	Out	867					867	
3	29/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	60		12.20	In	155				155		
3	29/12/2020	Golden Plover	<i>Pluvialis apricaria</i>				Out	30				30		
3	30/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	200		9.18	In	60				60		
3	30/12/2020	Golden Plover	<i>Pluvialis apricaria</i>				Out	114				114		
3	30/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	200		9.24	In	213					213	
3	30/12/2020	Golden Plover	<i>Pluvialis apricaria</i>				Out	20		20				
3	30/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	35		9.53	In	127			127			
3	30/12/2020	Golden Plover	<i>Pluvialis apricaria</i>				Out	219			219			

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	30/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	450		10.10	Out	75	10	20	45			Train
3	30/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	450		10.19	Out	40	5	10	25			
3	30/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	450		11.23	Out	169		30	139			
3	30/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	15		11.54	In	28	10	18				
3	30/12/2020	Golden Plover	<i>Pluvialis apricaria</i>	450		11.58	Out	265	10	30	60	165		
2	17/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	500		10.42	Out	175	10	20	145			
2	17/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	700		11.11	Out	183	10	20	153			
2	17/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	350		11.24	Out	44	10	20	14			
2	28/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	300		12:31	Out	470		70	400			
2	28/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	50		12:35	Out	26				26		
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	700		12:36	Out	129			129			
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	700		12:36	In	112			112			
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	700		12:40	Out	149		149				
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	700		12:40	In	77		77				
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	700		12:44	Out	13		13				
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	700		12:44	In	10		10				
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	700		13:00	In	80		20	60			
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	700		13:00	Out	20	10	10				
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	400		13:15	In	37		37				
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	400		13:15	Out	10	10					
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	300		13:20	In	61	10	20	31			
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	500		13:55	In	43	10	33				
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	700		13:56	In	301			301			

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	700		13:56	Out	55	10	45				
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	2		15:16	In	95	30	65				
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	700		15:24	In	189			189			
3	14/01/2021	Golden Plover	<i>Pluvialis apricaria</i>	700		15:24	Out	64		20	44			
3	28/05/2021	Golden Plover	<i>Pluvialis apricaria</i>	130		09:26	Out	104			104			
3	28/06/2021	Golden Plover	<i>Pluvialis apricaria</i>	130		09:26	In	100			100			
3	28/10/2021	Golden Plover	<i>Pluvialis apricaria</i>	400		09:57	Out	228				228		
3	28/11/2021	Golden Plover	<i>Pluvialis apricaria</i>	400		09:57	In	111				111		
3	28/01/2022	Golden Plover	<i>Pluvialis apricaria</i>	250		10:04	Out	228					228	
3	28/02/2022	Golden Plover	<i>Pluvialis apricaria</i>	250		10:04	In	240					240	
3	28/03/2022	Golden Plover	<i>Pluvialis apricaria</i>	120		10:17	Out	342				342		
3	28/04/2022	Golden Plover	<i>Pluvialis apricaria</i>	400		10:27	Out	351				351		
3	28/05/2022	Golden Plover	<i>Pluvialis apricaria</i>	400		10:27	In	175				175		
3	28/06/2022	Golden Plover	<i>Pluvialis apricaria</i>	400		10:38	Out	125				126		
3	28/07/2022	Golden Plover	<i>Pluvialis apricaria</i>	400		10:40	Out	104			104			
3	28/08/2022	Golden Plover	<i>Pluvialis apricaria</i>	600		10:43	Out	210				210		
3	28/12/2022	Golden Plover	<i>Pluvialis apricaria</i>	70		11:04	In	96			96			
1	05/02/2021	Golden Plover	<i>Pluvialis apricaria</i>	30		09:31	Out	94				94		
1	22/02/2021	Golden Plover	<i>Pluvialis apricaria</i>	14		11:32	In	15		15				
1	22/02/2021	Golden Plover	<i>Pluvialis apricaria</i>	14		11:32	Out	20		20				
1	22/02/2021	Golden Plover	<i>Pluvialis apricaria</i>	1		11:51	In	17	17					
3	04/02/2021	Golden Plover	<i>Pluvialis apricaria</i>	300		10:27	In	381		81	100	200		
3	04/02/2021	Golden Plover	<i>Pluvialis apricaria</i>	300		11:09	Out	166			166			

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	16/02/2021	Golden Plover	<i>Pluvialis apricaria</i>	350		14:48	In	300				300		
3	16/02/2021	Golden Plover	<i>Pluvialis apricaria</i>	350		14:48	Out	73				73		
3	16/02/2021	Golden Plover	<i>Pluvialis apricaria</i>	120		15:06	Out	290			50	240		
3	16/02/2021	Golden Plover	<i>Pluvialis apricaria</i>	120		15:06	In	27		27				
3	16/02/2021	Golden Plover	<i>Pluvialis apricaria</i>	80		15:15	Out	100				100		
3	16/02/2021	Golden Plover	<i>Pluvialis apricaria</i>	80		15:15	In	72				72		
2	30/03/2021	Golden Plover	<i>Pluvialis apricaria</i>	5		10:59	Out	44			44			
1	05/11/2020	Grey Heron	<i>Ardea cinerea</i>	1		13.02	In	27	27					
3	19/11/2020	Grey Heron	<i>Ardea cinerea</i>	1		12.53	Out	83		83				
3	19/11/2020	Grey Heron	<i>Ardea cinerea</i>	1		14.16	In	19	19					
1	15/12/2020	Grey Heron	<i>Ardea cinerea</i>	2		10.47	In	17		17				
1	15/12/2020	Grey Heron	<i>Ardea cinerea</i>				Out	10		10				
1	20/12/2020	Grey Heron	<i>Ardea cinerea</i>	1		11.14	In	52	52					
1	29/12/2020	Grey Heron	<i>Ardea cinerea</i>	5		N/A								On flooded fields on site.
2	19/12/2020	Grey Heron	<i>Ardea cinerea</i>	1		9.25	In	26		26				
2	19/12/2020	Grey Heron	<i>Ardea cinerea</i>	1		11.43	Out	76		76				
1	14/01/2021	Grey Heron	<i>Ardea cinerea</i>	1		9.31	In	15	7	8				
2	17/01/2021	Grey Heron	<i>Ardea cinerea</i>	1		10.12	Out	46		46				
2	17/01/2021	Grey Heron	<i>Ardea cinerea</i>	5		10.27	In	167			167			
2	17/01/2021	Grey Heron	<i>Ardea cinerea</i>	1		11:39	In	134		134				
3	14/01/2021	Grey Heron	<i>Ardea cinerea</i>	1		12:34	Out	22	22					
1	22/02/2021	Grey Heron	<i>Ardea cinerea</i>	6		10:26	Out	123		123				
2	27/02/2021	Grey Heron	<i>Ardea cinerea</i>	2		09:54	In	18		18				

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
1	08/03/2021	Grey Heron	<i>Ardea cinerea</i>	2		11:17	In	71		71				
2	30/03/2021	Grey Heron	<i>Ardea cinerea</i>	1		09:05	In	27		27				
3	24/03/2021	Grey Heron	<i>Ardea cinerea</i>	1		09:42	Out	148		148				
2	24/12/2020	Hen Harrier	<i>Circus cyaneus</i>	1	M	11.18	Out	137				137		
2	05/11/2020	Kestrel	<i>Falco tinnunculus</i>	1		9.06	Out	55		55				
2	19/11/2020	Kestrel	<i>Falco tinnunculus</i>	1	F	10.36	In	201		201				Hunting
2	19/11/2020	Kestrel	<i>Falco tinnunculus</i>	1	M	10.51	In	8	8					
3	19/11/2020	Kestrel	<i>Falco tinnunculus</i>	1		14.12	In	58	58					
3	19/11/2020	Kestrel	<i>Falco tinnunculus</i>	1		14.17	In	17	17					
3	28/11/2020	Kestrel	<i>Falco tinnunculus</i>	1		11.42	Out	5	5					
1	04/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		12.12	In	65			65			Mobbing BZ (Obs. 3 above)
1	04/12/2020	Kestrel	<i>Falco tinnunculus</i>	1	F	13.06	Out	246		246				Hunting
1	15/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		9.34	Out	25		25				
1	15/12/2020	Kestrel	<i>Falco tinnunculus</i>	1	F	9.38	Out	11	11					
1	15/12/2020	Kestrel	<i>Falco tinnunculus</i>	1	F	9.39	Out	11	11					
1	15/12/2020	Kestrel	<i>Falco tinnunculus</i>	1	F	10.19	Out	25	25					
1	15/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		10.44	In	42	42					
1	15/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		11.33	Out	10	10					
1	20/12/2020	Kestrel	<i>Falco tinnunculus</i>	1	F	10.45	In	33	33					
1	29/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		10.10	Out	17		17				
2	11/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		9.26	In	25	25					
2	11/12/2020	Kestrel	<i>Falco tinnunculus</i>	1	M	11.40	In	76		76				
2	19/12/2020	Kestrel	<i>Falco tinnunculus</i>	1	M	9.10	In	294		294				Hunting

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	19/12/2020	Kestrel	<i>Falco tinnunculus</i>	1	M	9.29	In	53		53				
2	19/12/2020	Kestrel	<i>Falco tinnunculus</i>	1	M	9.31	In	178		178				
2	19/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		9.45	In	13	13					
2	19/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		10.59	In	129		129				
2	24/12/2020	Kestrel	<i>Falco tinnunculus</i>	1	M	11.35	In	45	45					
2	24/12/2020	Kestrel	<i>Falco tinnunculus</i>	2	M	11.45	Out	23	23					
2	30/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		14.53	In	84		84				
2	30/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		14.56	In	91		91				
2	30/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		15.28	In	66	10	56				
3	11/12/2020	Kestrel	<i>Falco tinnunculus</i>	1	M	13.39	Out	41	41					
3	11/12/2020	Kestrel	<i>Falco tinnunculus</i>	1	M	13.59	Out	25	25					
3	15/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		12.58	Out	59		59				
3	15/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		13.01	In	75	20	55				
3	15/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		13.23	Out	20		20				
3	15/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		13.46	Out	28		28				
3	15/12/2020	Kestrel	<i>Falco tinnunculus</i>	1	M	14.15	Out	272		272				
3	15/12/2020	Kestrel	<i>Falco tinnunculus</i>	1	M	14.21	Out	37		37				
3	30/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		9.31	Out	6		6				
3	30/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		10.44	In	51		51				
3	30/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		11.43	In	30		30				
3	30/12/2020	Kestrel	<i>Falco tinnunculus</i>	1		12.10	In	27		27				
1	14/01/2021	Kestrel	<i>Falco tinnunculus</i>	1		9.00	Out	40		40				
1	14/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	9.56	In	182		182				

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
1	14/01/2021	Kestrel	<i>Falco tinnunculus</i>	1		10.31	In	33		33				
1	14/01/2021	Kestrel	<i>Falco tinnunculus</i>	1		10.36	In	38		38				
1	14/01/2021	Kestrel	<i>Falco tinnunculus</i>	1		11.17	Out	10	10					
1	14/01/2021	Kestrel	<i>Falco tinnunculus</i>	1		11.41	Out	16		16				
1	26/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	F	13.36	In	17		17				
1	26/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	F	13.40	Out	44		44				
1	26/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	F	13.42	Out	23		23				
1	26/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	F	13.46	In	110		110				
1	26/01/2021	Kestrel	<i>Falco tinnunculus</i>				Out	23		23				
1	26/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	F	14.30	In	58		58				
1	26/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	F	15.01	In	41		41				
1	26/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	F	15.05	Out	20		20				
2	17/01/2021	Kestrel	<i>Falco tinnunculus</i>	1		10.24	In	37		37				
2	17/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	10.56	In	38		38				
2	17/01/2021	Kestrel	<i>Falco tinnunculus</i>	1		11:31	In	136		30	106			
2	17/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	12:26	In	29		29				
2	17/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	12:29	In	80		80				
2	28/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	11:54	In	42		42				
2	28/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	F	11:59	In	57		57				
2	28/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	14:09	In	27		27				
2	28/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	14:10	In	15		15				
3	14/01/2021	Kestrel	<i>Falco tinnunculus</i>	1		13:28	Out	47		47				
3	14/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	14:44	Out	20	20					

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	14/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	F	14:50	In	233		30	203			
3	14/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	F	15:03	Out	33		33				
3	14/01/2021	Kestrel	<i>Falco tinnunculus</i>	1	F	15:19	In	70		70				
3	28/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		09:04	Out	21		21				
1	05/02/2021	Kestrel	<i>Falco tinnunculus</i>	1		09:58	In	18		18				
1	05/02/2021	Kestrel	<i>Falco tinnunculus</i>	1		11:05	Out	17		17				
1	22/02/2021	Kestrel	<i>Falco tinnunculus</i>	1		11:15	In	188	188					
2	18/02/2021	Kestrel	<i>Falco tinnunculus</i>	1		15:38	In	156		156				
2	18/02/2021	Kestrel	<i>Falco tinnunculus</i>	1		15:45	In	49		49				
3	16/02/2021	Kestrel	<i>Falco tinnunculus</i>	1		15:57	Out	86			86			
3	16/02/2021	Kestrel	<i>Falco tinnunculus</i>	1		17:11	In	17	17					
1	08/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		12:20	Out	72		72				
1	08/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		12:22	Out	42		42				
1	08/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		12:32	Out	21		21				
1	08/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		12:32	In	30		30				
1	22/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		14:03	Out	92		92				
1	22/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		14:21	In	22		22				
1	22/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		16:12	In	34		34				
2	23/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		10:47	Out	44		44				
2	23/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		11:49	Out	21		21				
2	30/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		09:01	In	28		28				
2	30/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		09:04	Out	14		14				
2	30/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		10:16	In	35		35				

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	30/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		11:18	In	186		186				
2	30/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		12:21	Out	15		15				
3	16/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		10:31	In	28		28				
3	16/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		11:02	In	29		29				
3	24/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		08:55	Out	14		14				
3	24/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		10:24	In	134		134				
3	24/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		10:31	Out	15	15					
3	24/03/2021	Kestrel	<i>Falco tinnunculus</i>	1		11:15	In	28		28				
2	19/11/2020	Lapwing	<i>Vanellus vanellus</i>	200		9.36	In	45			45			
2	19/11/2020	Lapwing	<i>Vanellus vanellus</i>				Out	90				90		
3	19/11/2020	Lapwing	<i>Vanellus vanellus</i>	50		14.23	In	54		54				
3	19/11/2020	Lapwing	<i>Vanellus vanellus</i>	400		15.08	Out	245	40	205				
3	28/11/2020	Lapwing	<i>Vanellus vanellus</i>	400		11.50	Out	241		10	10		221	
3	28/11/2020	Lapwing	<i>Vanellus vanellus</i>	28		11.58	In	45			45			
3	28/11/2020	Lapwing	<i>Vanellus vanellus</i>				Out	209				209		
3	28/11/2020	Lapwing	<i>Vanellus vanellus</i>	10		12.04	In	99			40	59		
3	28/11/2020	Lapwing	<i>Vanellus vanellus</i>	30		12.56	Out	125		30	95			
3	28/11/2020	Lapwing	<i>Vanellus vanellus</i>	200		14.19	Out	168		40	128			
1	15/12/2020	Lapwing	<i>Vanellus vanellus</i>	12		11.13	In	27	27					
1	15/12/2020	Lapwing	<i>Vanellus vanellus</i>	8		11.17	In	26		26				
1	20/12/2020	Lapwing	<i>Vanellus vanellus</i>	1		10.10	In	42	5	37				
1	20/12/2020	Lapwing	<i>Vanellus vanellus</i>	5		10.24	In	20		20				
1	20/12/2020	Lapwing	<i>Vanellus vanellus</i>				Out	22		22				

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
1	29/12/2020	Lapwing	<i>Vanellus vanellus</i>	2		10.16	In	92			92			
1	29/12/2020	Lapwing	<i>Vanellus vanellus</i>	90		11.33	Out	114		44	70			
1	29/12/2020	Lapwing	<i>Vanellus vanellus</i>	40		11.39	In	22			22			
1	29/12/2020	Lapwing	<i>Vanellus vanellus</i>				Out	55			55			
1	29/12/2020	Lapwing	<i>Vanellus vanellus</i>	30		11.50	In	90	10	80				
1	29/12/2020	Lapwing	<i>Vanellus vanellus</i>	45		N/A								On flooded fields on site.
2	11/12/2020	Lapwing	<i>Vanellus vanellus</i>	300		10.20	Out	80	25	55				
2	11/12/2020	Lapwing	<i>Vanellus vanellus</i>	300		10.57	Out	360	10	20	330			
2	19/12/2020	Lapwing	<i>Vanellus vanellus</i>	250		10.15	Out	179	10	10	159			
2	19/12/2020	Lapwing	<i>Vanellus vanellus</i>	300		11.19	Out	112	10	20	82			
2	19/12/2020	Lapwing	<i>Vanellus vanellus</i>	150		11.27	In	158				158		
2	19/12/2020	Lapwing	<i>Vanellus vanellus</i>				Out	260				260		
2	19/12/2020	Lapwing	<i>Vanellus vanellus</i>	150		11.35	Out	422	10	20	60	332		
2	19/12/2020	Lapwing	<i>Vanellus vanellus</i>	150		11.46	Out	71	10	61				
2	19/12/2020	Lapwing	<i>Vanellus vanellus</i>	150		12.03	Out	109	10	20	79			
2	24/12/2020	Lapwing	<i>Vanellus vanellus</i>	300		9.21	Out	120	10	20	90			
2	24/12/2020	Lapwing	<i>Vanellus vanellus</i>	250		9.35	Out	245	10	20	215			
2	24/12/2020	Lapwing	<i>Vanellus vanellus</i>	300		9.40	Out	104	10	20	74			
2	24/12/2020	Lapwing	<i>Vanellus vanellus</i>	300		9.43	Out	206	10	20	176			
2	24/12/2020	Lapwing	<i>Vanellus vanellus</i>	300		9.52	Out	72	10	62				
2	24/12/2020	Lapwing	<i>Vanellus vanellus</i>	30		10.34	In	32		32				
2	24/12/2020	Lapwing	<i>Vanellus vanellus</i>				Out	10	10					
2	24/12/2020	Lapwing	<i>Vanellus vanellus</i>	300		10.42	Out	93	10	83				

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	24/12/2020	Lapwing	<i>Vanellus vanellus</i>	300		11.44	Out	128	10	20	98			
2	24/12/2020	Lapwing	<i>Vanellus vanellus</i>	300		11.50	Out	46	10	36				
2	30/12/2020	Lapwing	<i>Vanellus vanellus</i>	400		13.12	Out	101	10	20	71			
2	30/12/2020	Lapwing	<i>Vanellus vanellus</i>	400		13.50	Out	265	10	20	60	175		
2	30/12/2020	Lapwing	<i>Vanellus vanellus</i>	18		14.14	Out	91	5	10	76			
2	30/12/2020	Lapwing	<i>Vanellus vanellus</i>	400		14.31	Out	42	5	37				
2	30/12/2020	Lapwing	<i>Vanellus vanellus</i>	400		14.46	Out	75	5	70				
3	11/12/2020	Lapwing	<i>Vanellus vanellus</i>	350		14.07	Out	47	10	37				
3	11/12/2020	Lapwing	<i>Vanellus vanellus</i>	350		14.17	Out	351	10	30	60	251		
3	11/12/2020	Lapwing	<i>Vanellus vanellus</i>	400		12.25	Out	131	10	30	60	31		
3	11/12/2020	Lapwing	<i>Vanellus vanellus</i>	12		14.43	In	39		39				
3	11/12/2020	Lapwing	<i>Vanellus vanellus</i>				Out	40		40				
3	15/12/2020	Lapwing	<i>Vanellus vanellus</i>	300		13.17	Out	84	10	20	54			
3	15/12/2020	Lapwing	<i>Vanellus vanellus</i>	12		14.04	In	16		16				
3	15/12/2020	Lapwing	<i>Vanellus vanellus</i>				Out	10	10					
3	29/12/2020	Lapwing	<i>Vanellus vanellus</i>	400		13.29	In	110		50	60			
3	29/12/2020	Lapwing	<i>Vanellus vanellus</i>				Out	101	10	50	41			
3	29/12/2020	Lapwing	<i>Vanellus vanellus</i>	500		14.20	In	598			85	513		
3	29/12/2020	Lapwing	<i>Vanellus vanellus</i>				Out	231			46	185		
3	29/12/2020	Lapwing	<i>Vanellus vanellus</i>	500		14.36	In	528			38	380	110	
3	29/12/2020	Lapwing	<i>Vanellus vanellus</i>				Out	305				163	142	
3	29/12/2020	Lapwing	<i>Vanellus vanellus</i>	500		15.21	Out	525				325	200	
3	29/12/2020	Lapwing	<i>Vanellus vanellus</i>	150		15.35	In	71		21	50			

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	30/12/2020	Lapwing	<i>Vanellus vanellus</i>	24		10.04	Out	136	10	20	106			
3	30/12/2020	Lapwing	<i>Vanellus vanellus</i>	1		10.40	In	84			84			
3	30/12/2020	Lapwing	<i>Vanellus vanellus</i>	40		11.26	Out	48		48				
3	30/12/2020	Lapwing	<i>Vanellus vanellus</i>	1		11.35	In	42	5	37				
3	30/12/2020	Lapwing	<i>Vanellus vanellus</i>	400		11.58	Out	275	10	30	235			
1	14/01/2021	Lapwing	<i>Vanellus vanellus</i>	5		10.42	In	21			21			
2	17/01/2021	Lapwing	<i>Vanellus vanellus</i>	120		10.37	Out	26	10	16				
2	17/01/2021	Lapwing	<i>Vanellus vanellus</i>	250		11.22	Out	84	10	20	153			
2	28/01/2021	Lapwing	<i>Vanellus vanellus</i>	70		12:43	Out	132		132				
2	28/01/2021	Lapwing	<i>Vanellus vanellus</i>	120		13:27	Out	63			63			
3	14/01/2021	Lapwing	<i>Vanellus vanellus</i>	70		12:54	Out	20	10	10				
3	14/01/2021	Lapwing	<i>Vanellus vanellus</i>	70		12:54	In	18		18				
3	28/07/2021	Lapwing	<i>Vanellus vanellus</i>	200		09:26	Out	34			34			
3	28/08/2021	Lapwing	<i>Vanellus vanellus</i>	200		09:26	In	90			90			
3	28/09/2021	Lapwing	<i>Vanellus vanellus</i>	125		09:31	Out	791	10	20	761			
3	28/09/2022	Lapwing	<i>Vanellus vanellus</i>	200		10:43	Out	138				138		
3	28/10/2022	Lapwing	<i>Vanellus vanellus</i>	200		10:43	In	112				112		
3	28/11/2022	Lapwing	<i>Vanellus vanellus</i>	200		10:48	In	279				279		
3	28/01/2023	Lapwing	<i>Vanellus vanellus</i>	200		11:16	In	45			45			
3	28/02/2023	Lapwing	<i>Vanellus vanellus</i>	200		11:16	Out	70			70			
1	05/02/2021	Lapwing	<i>Vanellus vanellus</i>	100		08:51	In	330			330			
1	05/02/2021	Lapwing	<i>Vanellus vanellus</i>	100		08:51	Out	20			20			
1	05/02/2021	Lapwing	<i>Vanellus vanellus</i>	100		08:57	In	57			57			

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
1	05/02/2021	Lapwing	<i>Vanellus vanellus</i>	100		08:57	Out	39			39			
1	05/02/2021	Lapwing	<i>Vanellus vanellus</i>	100		09:00	Out	13			13			
1	05/02/2021	Lapwing	<i>Vanellus vanellus</i>	100		09:00	In	110		10	100			
1	05/02/2021	Lapwing	<i>Vanellus vanellus</i>	100		09:06	In	48		48				On flooded field beside the Suir - 10 WS, 3 MS, 1 ET
1	05/02/2021	Lapwing	<i>Vanellus vanellus</i>	100		09:59	Out	10		10				
1	05/02/2021	Lapwing	<i>Vanellus vanellus</i>	100		09:59	In	101		101				
1	22/02/2021	Lapwing	<i>Vanellus vanellus</i>	5		09:48	In	22		22				
1	22/02/2021	Lapwing	<i>Vanellus vanellus</i>	5		11:26	In	10		10				
1	22/02/2021	Lapwing	<i>Vanellus vanellus</i>	5		11:26	Out	14		14				
2	18/02/2021	Lapwing	<i>Vanellus vanellus</i>	80		14:00	Out	289		50	239			
3	04/02/2021	Lapwing	<i>Vanellus vanellus</i>	120		09:57	Out	120			120			
3	04/02/2021	Lapwing	<i>Vanellus vanellus</i>	120		09:57	In	43		43				
3	04/02/2021	Lapwing	<i>Vanellus vanellus</i>	120		10:10	In	234		34	50	150		
3	04/02/2021	Lapwing	<i>Vanellus vanellus</i>	300		10:37	In	51				51		
3	04/02/2021	Lapwing	<i>Vanellus vanellus</i>	300		10:37	Out	130				130		
3	04/02/2021	Lapwing	<i>Vanellus vanellus</i>	350		10:47	Out	213			213			
3	04/02/2021	Lapwing	<i>Vanellus vanellus</i>	40		11:07	Out	90			90			
3	04/02/2021	Lapwing	<i>Vanellus vanellus</i>	40		11:07	In	208			208			
3	04/02/2021	Lapwing	<i>Vanellus vanellus</i>	300		11:35	Out	620		120	500			
3	04/02/2021	Lapwing	<i>Vanellus vanellus</i>	350		11:50	Out	354				354		
3	04/02/2021	Lapwing	<i>Vanellus vanellus</i>	350		11:56	Out	135			135			
3	04/02/2021	Lapwing	<i>Vanellus vanellus</i>	350		12:02	Out	55		55				

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	04/02/2021	Lapwing	<i>Vanellus vanellus</i>	18		12:05	In	107	27	80				
1	05/11/2020	Lesser Black-backed Gull	<i>Larus fuscus</i>	5		12.42	In	24		24				Flying NE
1	05/11/2020	Lesser Black-backed Gull	<i>Larus fuscus</i>				Out	45		45				
1	05/11/2020	Lesser Black-backed Gull	<i>Larus fuscus</i>	4		12.52	Out	17	17					Flying NE
1	05/11/2020	Lesser Black-backed Gull	<i>Larus fuscus</i>	1		13.12	Out	22			22			Flying NE
1	05/11/2020	Lesser Black-backed Gull	<i>Larus fuscus</i>	1		15.02	Out	39			39			Flying SW
1	05/11/2020	Lesser Black-backed Gull	<i>Larus fuscus</i>	5		15.08	In	34	14	20				
3	15/12/2020	Lesser Black-backed Gull	<i>Larus fuscus</i>	1		14.53	In	117				117		
1	22/02/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	21		09:08	In	50				50		
1	22/02/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	21		09:08	Out	31				31		
2	18/02/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	2		14:14	Out	22		22				
2	18/02/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	2		14:14	In	40		40				
2	27/02/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	18		10:19	Out	146			146			
3	16/02/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	1		16:51	Out	61			61			
1	05/11/2020	Little Egret	<i>Egretta garzetta</i>	1		13.17	In	19	19					

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	05/11/2020	Little Egret	<i>Egretta garzetta</i>	2		10.33	In	19	19					
2	19/11/2020	Little Egret	<i>Egretta garzetta</i>	1		9.28	In	17	17					
1	29/12/2020	Little Egret	<i>Egretta garzetta</i>	1		N/A								On flooded fields on site.
2	11/12/2020	Little Egret	<i>Egretta garzetta</i>	2		10.38	In	27	27					
2	30/12/2020	Little Egret	<i>Egretta garzetta</i>	1		13.57	In	52		52				
2	30/12/2020	Little Egret	<i>Egretta garzetta</i>	1		14.18	In	46		46				
1	14/01/2021	Little Egret	<i>Egretta garzetta</i>	1		9.53	In	20		20				
1	26/01/2021	Little Egret	<i>Egretta garzetta</i>	1		13.17	Out	17	17					
1	26/01/2021	Little Egret	<i>Egretta garzetta</i>	1		15.21	Out	16	16					
1	05/02/2021	Little Egret	<i>Egretta garzetta</i>	1		10:28	In	12	12					
1	22/02/2021	Little Egret	<i>Egretta garzetta</i>	2		11:14	In	13	13					
2	18/02/2021	Little Egret	<i>Egretta garzetta</i>	1		14:52	In	11	11					
2	18/02/2021	Little Egret	<i>Egretta garzetta</i>	1		16:00	In	22	22					
1	22/03/2021	Little Egret	<i>Egretta garzetta</i>	3		13:27	Out	10	10					
1	22/03/2021	Little Egret	<i>Egretta garzetta</i>	3		13:27	In	19		19				
1	22/03/2021	Little Egret	<i>Egretta garzetta</i>	1		13:53	Out	10		10				
1	22/03/2021	Little Egret	<i>Egretta garzetta</i>	4		14:16	In	44	44					
2	11/12/2020	Merlin	<i>Falco columbarius</i>	1		10.55	In	10		10				Chased by HC
2	11/12/2020	Merlin	<i>Falco columbarius</i>				Out	17		17				
2	24/12/2020	Merlin	<i>Falco columbarius</i>	1	M	9.45	In	14	14					
3	11/12/2020	Merlin	<i>Falco columbarius</i>	1		14.00	Out	18	18					
3	11/12/2020	Merlin	<i>Falco columbarius</i>	1		14.09	Out	9	9					
3	28/12/2021	Merlin	<i>Falco columbarius</i>	1		10:01	Out	15	15					

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	16/02/2021	Merlin	<i>Falco columbarius</i>	1		14:54	Out	22	22					
1	28/11/2020	Mute Swan	<i>Cygnus olor</i>	1		8.56	In	14		14				
2	05/11/2020	Mute Swan	<i>Cygnus olor</i>	6		11.22	In	24	24					2 adults
3	19/11/2020	Mute Swan	<i>Cygnus olor</i>	1		13.41	Out	71	20	51				
3	28/11/2020	Mute Swan	<i>Cygnus olor</i>	1		13.11	Out	131			131			
1	20/12/2020	Mute Swan	<i>Cygnus olor</i>	6		12.14	In	40		40				
1	20/12/2020	Mute Swan	<i>Cygnus olor</i>				Out	19		19				
1	29/12/2020	Mute Swan	<i>Cygnus olor</i>	3		N/A								On flooded fields on site.
2	19/12/2020	Mute Swan	<i>Cygnus olor</i>	7		9.30	In	54	54					
2	19/12/2020	Mute Swan	<i>Cygnus olor</i>	4		9.37	In	52	52					
2	24/12/2020	Mute Swan	<i>Cygnus olor</i>	2		9.28	In	20	20					
2	30/12/2020	Mute Swan	<i>Cygnus olor</i>	3		15.25	Out	23		23				
3	30/12/2020	Mute Swan	<i>Cygnus olor</i>	3		11.41	Out	58	10	48				
3	28/01/2021	Mute Swan	<i>Cygnus olor</i>	2		08:42	Out	30		30				
3	28/02/2021	Mute Swan	<i>Cygnus olor</i>	2		08:42	In	34		34				
2	27/02/2021	Mute Swan	<i>Cygnus olor</i>	2		09:56	In	71		71				
2	27/02/2021	Mute Swan	<i>Cygnus olor</i>	2		09:56	Out	30		30				
2	27/02/2021	Mute Swan	<i>Cygnus olor</i>	2		10:18	In	85			85			
2	27/02/2021	Mute Swan	<i>Cygnus olor</i>	2		10:18	Out	10			10			
3	19/11/2020	Peregrine	<i>Falco peregrinus</i>	1		14.08	Out	18		18				
2	30/12/2020	Peregrine	<i>Falco peregrinus</i>	1		13.32	In	129		129				
1	14/01/2021	Peregrine	<i>Falco peregrinus</i>	2		11.58	In	45	5	40				Calling
3	16/03/2021	Peregrine	<i>Falco peregrinus</i>	1		12:19	Out	69		69				Soaring

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	16/03/2021	Peregrine	<i>Falco peregrinus</i>	1		12:21	Out	279			279			Displaying
1	28/11/2020	Snipe	<i>Gallinago gallinago</i>	1		10.51	Out	3	3					
1	04/12/2020	Snipe	<i>Gallinago gallinago</i>	1		13.00	Out	6	6					
2	11/12/2020	Snipe	<i>Gallinago gallinago</i>	3		9.04	Out	17	17					
2	19/12/2020	Snipe	<i>Gallinago gallinago</i>	1		9.28	Out	6	6					
1	22/03/2021	Snipe	<i>Gallinago gallinago</i>	2		14:45	Out	5	5					
2	30/03/2021	Snipe	<i>Gallinago gallinago</i>	2		08:44	Out	6	6					
2	30/03/2021	Snipe	<i>Gallinago gallinago</i>	1		09:18	Out	18	18					
3	28/11/2020	Sparrowhawk	<i>Accipiter nisus</i>	1		11.33	Out	39	39					Hunting
3	28/11/2020	Sparrowhawk	<i>Accipiter nisus</i>	1		12.21	Out	12	12					
1	04/12/2020	Sparrowhawk	<i>Accipiter nisus</i>	1		14.05	Out	17	17					Hunting
1	15/12/2020	Sparrowhawk	<i>Accipiter nisus</i>	3		11.37	In	72		72				2 x F, 1 x M
1	15/12/2020	Sparrowhawk	<i>Accipiter nisus</i>	3		11.41	In	71		48				
1	15/12/2020	Sparrowhawk	<i>Accipiter nisus</i>	1		11.46	In	48		48				Hunting
2	19/12/2020	Sparrowhawk	<i>Accipiter nisus</i>	1		10.28	In	138		138				Mobbed by magpies
2	24/12/2020	Sparrowhawk	<i>Accipiter nisus</i>	1	M	10.59	In	46	46					
2	24/12/2020	Sparrowhawk	<i>Accipiter nisus</i>	1		11.33	In	26	26					
2	30/12/2020	Sparrowhawk	<i>Accipiter nisus</i>	1		12.58	In	17	17					
3	30/12/2020	Sparrowhawk	<i>Accipiter nisus</i>	1	F	9.37	In	47		47				
3	30/12/2020	Sparrowhawk	<i>Accipiter nisus</i>	1	F	11.29	Out	117		117				
3	30/12/2020	Sparrowhawk	<i>Accipiter nisus</i>	1	F	11.31	Out	24		24				
3	30/12/2020	Sparrowhawk	<i>Accipiter nisus</i>	1	F	11.34	Out	26		26				
1	26/01/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		14.41	In	21			21			
1	26/01/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		14.44	In	24		24				

VP no.	Date	Common Name	Scientific Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	17/01/2021	Sparrowhawk	<i>Accipiter nisus</i>	2		10:53	In	36		36				
2	17/01/2021	Sparrowhawk	<i>Accipiter nisus</i>	1	M	11:44	In	25	25					
2	28/01/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		13:48	In	17	17					
3	14/01/2021	Sparrowhawk	<i>Accipiter nisus</i>	1	M	13:17	Out	15	15					
3	14/01/2021	Sparrowhawk	<i>Accipiter nisus</i>	1	M	13:18	Out	11	11					
2	18/02/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		15:10	In	7	7					
2	27/02/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		10:55	Out	26			26			
2	27/02/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		11:46	In	28			28			
3	04/02/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		12:29	In	7	7					
1	08/03/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		13:39	Out	12	12					
2	23/03/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		10:19	In	14	14					
2	30/03/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		10:03	In	15	15					Hunting
1	15/12/2020	Whooper Swan	<i>Cygnus cygnus</i>	2		9:50	In	9	9					2 Adults
1	15/12/2020	Whooper Swan	<i>Cygnus cygnus</i>				Out	10	10					
1	15/12/2020	Whooper Swan	<i>Cygnus cygnus</i>	5		10:35	In	10	10					2 adults and 3 Juveniles
1	15/12/2020	Whooper Swan	<i>Cygnus cygnus</i>				Out	11	11					
1	20/12/2020	Whooper Swan	<i>Cygnus cygnus</i>	5		9:58	In	10	10					
1	20/12/2020	Whooper Swan	<i>Cygnus cygnus</i>				Out	22		22				
1	29/12/2020	Whooper Swan	<i>Cygnus cygnus</i>	4		9:59	In	19	10	9				
1	29/12/2020	Whooper Swan	<i>Cygnus cygnus</i>	12		N/A								On flooded fields on site.
3	30/12/2020	Whooper Swan	<i>Cygnus cygnus</i>	2		10:06	In	22	10	12				
3	28/04/2021	Whooper Swan	<i>Cygnus cygnus</i>	5		09:16	In	36	10	26				
1	05/02/2021	Whooper Swan	<i>Cygnus cygnus</i>	2		09:44	In	35		35				
1	29/12/2020	Wigeon	<i>Anas penelope</i>	7		N/A								On flooded fields on site.

Summer Survey 2021 Bird Flightline Data

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
1	24/04/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	4		11:14	Out	20		20				
1	24/04/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	4		11:14	In	108		108				
1	24/04/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	6		11:22	Out	92		92				
1	25/05/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	4		17:03	Out	71		71				
1	25/05/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	2		17:41	Out	68		68				
1	30/05/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	8		14:20	Out	24		24				
3	31/05/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	1		15:18	Out	10		10				
3	31/05/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	1		15:18	In	35		35				
3	15/06/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	1		15.41	out	173		173				
3	15/06/2021	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	1		16.38	out	32	32					
1	08/04/2021	Buzzard	<i>Buteo buteo</i>	1		10:25	In	32			32			
1	08/04/2021	Buzzard	<i>Buteo buteo</i>	2		10:34	In	349				349		
1	08/04/2021	Buzzard	<i>Buteo buteo</i>	3		10:43	In	109			109			

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
1	08/04/2021	Buzzard	<i>Buteo buteo</i>	1		12:05	Out	37			37			
1	08/04/2021	Buzzard	<i>Buteo buteo</i>	1		12:26	In	77				77		
1	24/04/2021	Buzzard	<i>Buteo buteo</i>	1		10:57	Out	35		35				
1	24/04/2021	Buzzard	<i>Buteo buteo</i>	1		11:33	In	151			151			
1	24/04/2021	Buzzard	<i>Buteo buteo</i>	1		12:00	Out	270				100	170	
1	24/04/2021	Buzzard	<i>Buteo buteo</i>	1		13:21	Out	49			49			
2	15/04/2021	Buzzard	<i>Buteo buteo</i>	2		12:01	In	194				194		
2	15/04/2021	Buzzard	<i>Buteo buteo</i>	2		12:30	In	21				21		
2	15/04/2021	Buzzard	<i>Buteo buteo</i>	1		12:45	In	103				103		
2	15/04/2021	Buzzard	<i>Buteo buteo</i>	1		14:07	In	144			144			
2	15/04/2021	Buzzard	<i>Buteo buteo</i>	1		14:37	In	54			54			
2	21/04/2021	Buzzard	<i>Buteo buteo</i>	2		11:55	In	94				94		
2	21/04/2021	Buzzard	<i>Buteo buteo</i>	3		12:15	In	120			120			
2	21/04/2021	Buzzard	<i>Buteo buteo</i>	1		12:22	In	90				90		
2	21/04/2021	Buzzard	<i>Buteo buteo</i>	1		12:28	In	85			85			
2	21/04/2021	Buzzard	<i>Buteo buteo</i>	2		13:11	In	24			24			
2	21/04/2021	Buzzard	<i>Buteo buteo</i>	2		13:44	Out	61		61				
3	14/04/2021	Buzzard	<i>Buteo buteo</i>	1		13:03	Out	34			34			
3	14/04/2021	Buzzard	<i>Buteo buteo</i>	1		13:41	In	185				185		
3	14/04/2021	Buzzard	<i>Buteo buteo</i>	1		14:10	In	107				107		
3	14/04/2021	Buzzard	<i>Buteo buteo</i>	1		14:38	Out	63		63				

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	28/04/2021	Buzzard	<i>Buteo buteo</i>	1		15:45	In	61			61			
3	28/04/2021	Buzzard	<i>Buteo buteo</i>	1		15:56	Out	14		14				
3	28/04/2021	Buzzard	<i>Buteo buteo</i>	1		16:38	Out	19			19			
3	28/04/2021	Buzzard	<i>Buteo buteo</i>	1		16:40	In	37				37		
3	28/04/2021	Buzzard	<i>Buteo buteo</i>	1		16:58	Out	104		104				
3	28/04/2021	Buzzard	<i>Buteo buteo</i>	1		17:39	In	71			71			
3	28/04/2021	Buzzard	<i>Buteo buteo</i>	1		17:43	Out	37		37				
1	25/05/2021	Buzzard	<i>Buteo buteo</i>	1		16:35	In	91			91			
1	25/05/2021	Buzzard	<i>Buteo buteo</i>	1		17:11	Out	26			26			
1	25/05/2021	Buzzard	<i>Buteo buteo</i>	1		17:13	Out	15			15			
1	25/05/2021	Buzzard	<i>Buteo buteo</i>	1		18:12	In	112			112			
1	25/05/2021	Buzzard	<i>Buteo buteo</i>	1		18:18	Out	46		46				
1	30/05/2021	Buzzard	<i>Buteo buteo</i>	1		14:11	In	106			106			
1	30/05/2021	Buzzard	<i>Buteo buteo</i>	1		14:22	In	58		58				
1	30/05/2021	Buzzard	<i>Buteo buteo</i>	1		14:54	In	180			180			
1	30/05/2021	Buzzard	<i>Buteo buteo</i>	1		14:54	Out	59			59			
1	30/05/2021	Buzzard	<i>Buteo buteo</i>	1		15:31	In	168			168			
1	30/05/2021	Buzzard	<i>Buteo buteo</i>	1		16:28	Out	57	57					
2	26/05/2021	Buzzard	<i>Buteo buteo</i>	1		17:59	Out	30		30				
2	26/05/2021	Buzzard	<i>Buteo buteo</i>	1		18:10	In	12	12					
2	26/05/2021	Buzzard	<i>Buteo buteo</i>	1		19:03	Out	36		36				

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	26/05/2021	Buzzard	<i>Buteo buteo</i>	1		19:17	In	68	68					
2	26/05/2021	Buzzard	<i>Buteo buteo</i>	1		19:56	In	121		121				
2	30/05/2021	Buzzard	<i>Buteo buteo</i>	1		17:43	In	46						
2	30/05/2021	Buzzard	<i>Buteo buteo</i>	1		18:40	In	149		149				
2	30/05/2021	Buzzard	<i>Buteo buteo</i>	1		19:20	Out	27	27					
3	11/05/2021	Buzzard	<i>Buteo buteo</i>	1		09:10	Out	60	60					
3	11/05/2021	Buzzard	<i>Buteo buteo</i>	3		09:38	Out	264			264			
3	11/05/2021	Buzzard	<i>Buteo buteo</i>	1		09:55	In	114			114			
3	11/05/2021	Buzzard	<i>Buteo buteo</i>	1		10:26	Out	31		31				
3	11/05/2021	Buzzard	<i>Buteo buteo</i>	3		11:36	In	48			48			
3	11/05/2021	Buzzard	<i>Buteo buteo</i>	1		11:47	Out	17		17				
3	31/05/2021	Buzzard	<i>Buteo buteo</i>	1		14:41	Out	34		34				
3	31/05/2021	Buzzard	<i>Buteo buteo</i>	4		14:49	Out	77			77			
3	31/05/2021	Buzzard	<i>Buteo buteo</i>	1		14:55	Out	43	43					
3	31/05/2021	Buzzard	<i>Buteo buteo</i>	1		15:05	In	32		32				
3	31/05/2021	Buzzard	<i>Buteo buteo</i>	1		15:10	In	27		27				
3	31/05/2021	Buzzard	<i>Buteo buteo</i>	1		15:21	In	138			138			
3	31/05/2021	Buzzard	<i>Buteo buteo</i>	1		15:40	Out	158			158			
3	31/05/2021	Buzzard	<i>Buteo buteo</i>	1		16:23	Out	150		150				
3	15/06/2021	Buzzard	<i>Buteo buteo</i>	1		15:08	out	51		51				
3	15/06/2021	Buzzard	<i>Buteo buteo</i>	1		15:16	in	130	130					

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	15/06/2021	Buzzard	<i>Buteo buteo</i>	1		15.31	out	186		186				
3	15/06/2021	Buzzard	<i>Buteo buteo</i>	1		16.15	out	137		137				
3	15/06/2021	Buzzard	<i>Buteo buteo</i>	1		16.39	In	203			203			
3	15/06/2021	Buzzard	<i>Buteo buteo</i>	3		17.23	in	110		110				
2	17/06/2021	Buzzard	<i>Buteo buteo</i>	2		13.44	out	161			161			
2	17/06/2021	Buzzard	<i>Buteo buteo</i>	1		14.59	in	54		54				
2	17/06/2021	Buzzard	<i>Buteo buteo</i>	1		15.16	in	43		43				
2	17/06/2021	Buzzard	<i>Buteo buteo</i>	1		15.55	out	78		78				
1	19/06/2021	Buzzard	<i>Buteo buteo</i>	1		8:52	in	10		10				
1	19/06/2021	Buzzard	<i>Buteo buteo</i>	1		8:52	out	12		12				
1	19/06/2021	Buzzard	<i>Buteo buteo</i>	1		10.16	out	30		30				
1	19/06/2021	Buzzard	<i>Buteo buteo</i>	1		10.16	in	44		44				
1	19/06/2021	Buzzard	<i>Buteo buteo</i>	1		10.56	in	13		13				
1	19/06/2021	Buzzard	<i>Buteo buteo</i>	1		11.09	in	124			124			
3	25/06/2021	Buzzard	<i>Buteo buteo</i>	1		10.56	out	42	42					
3	25/06/2021	Buzzard	<i>Buteo buteo</i>	1		11.02	in	28		28				
3	25/06/2021	Buzzard	<i>Buteo buteo</i>	1		11.05	out	117			117			
3	25/06/2021	Buzzard	<i>Buteo buteo</i>	1		11.09	out	67		67				
3	25/06/2021	Buzzard	<i>Buteo buteo</i>	1		11.18	out	35	35					
3	25/06/2021	Buzzard	<i>Buteo buteo</i>	1		11.21	in	26			26			
3	25/06/2021	Buzzard	<i>Buteo buteo</i>	1		11.26	in	215		215				

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	25/06/2021	Buzzard	<i>Buteo buteo</i>	1		11.45	in	24		24				
2	30/06/2021	Buzzard	<i>Buteo buteo</i>	1		10.56	in	68			68			
2	30/06/2021	Buzzard	<i>Buteo buteo</i>	2		11.12	out	45			45			
1	30/06/2021	Buzzard	<i>Buteo buteo</i>	1		19.23	out	15		15				
1	30/06/2021	Buzzard	<i>Buteo buteo</i>	1		19.41	out	12		12				
2	15/07/2021	Buzzard	<i>Buteo buteo</i>	1		11.51	out	74		74				
2	15/07/2021	Buzzard	<i>Buteo buteo</i>	1		12.43	out	42		42				
2	15/07/2021	Buzzard	<i>Buteo buteo</i>	1		13.17	in	33		33				
1	15/07/2021	Buzzard	<i>Buteo buteo</i>	1		15.05	out	19		19				
1	15/07/2021	Buzzard	<i>Buteo buteo</i>	1		16.23	in	77			77			
1	15/07/2021	Buzzard	<i>Buteo buteo</i>	1		17.21	out	34			34			
3	19/07/2021	Buzzard	<i>Buteo buteo</i>	1		10.24	in	164			164			
3	19/07/2021	Buzzard	<i>Buteo buteo</i>	1		10.24	out	49			49			
3	19/07/2021	Buzzard	<i>Buteo buteo</i>	1		11.02	in	100		100				
3	19/07/2021	Buzzard	<i>Buteo buteo</i>	1		11.51	in	241			241			
3	19/07/2021	Buzzard	<i>Buteo buteo</i>	1		11.55	out	476			476			
3	19/07/2021	Buzzard	<i>Buteo buteo</i>	1		12.04	out	191		191				
2	21/07/2021	Buzzard	<i>Buteo buteo</i>	1		9.32	in	91			91			very warm
2	21/07/2021	Buzzard	<i>Buteo buteo</i>	1		10.44	out	122			122			
1	24/07/2021	Buzzard	<i>Buteo buteo</i>	1		11.06	in	38		38				
1	24/07/2021	Buzzard	<i>Buteo buteo</i>	1		11.28	out	55		55				

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	24/07/2021	Buzzard	<i>Buteo buteo</i>	2		12.48	out	275		275				
3	24/07/2021	Buzzard	<i>Buteo buteo</i>	1		13.41	out	23	23					
3	24/07/2021	Buzzard	<i>Buteo buteo</i>	1		13.48	in	84		84				
3	24/07/2021	Buzzard	<i>Buteo buteo</i>	1		14.08	out	41		41				
3	24/07/2021	Buzzard	<i>Buteo buteo</i>	1		14.42	out	134			134			
2	26/07/2021	Buzzard	<i>Buteo buteo</i>	1		10.07	in	44		44				
2	26/07/2021	Buzzard	<i>Buteo buteo</i>	1		10.28	out	44			44			
3	26/07/2021	Buzzard	<i>Buteo buteo</i>	1		12.07	out	39		39				
3	26/07/2021	Buzzard	<i>Buteo buteo</i>	1		13.16	in	93			93			
3	26/07/2021	Buzzard	<i>Buteo buteo</i>	1		14.07	out	143			143			
1	29/07/2021	Buzzard	<i>Buteo buteo</i>	1		12.17	in	141			141			
1	29/07/2021	Buzzard	<i>Buteo buteo</i>	1		12.17	out	62			62			
1	29/07/2021	Buzzard	<i>Buteo buteo</i>	1		12.47	in	27	27					
1	29/07/2021	Buzzard	<i>Buteo buteo</i>	2		13.28	in	27		27				
1	29/07/2021	Buzzard	<i>Buteo buteo</i>	1		14.31	out	104		104				
1	29/07/2021	Buzzard	<i>Buteo buteo</i>	1		14.51	in	41		41				
2	10/08/2021	Buzzard	<i>Buteo buteo</i>	1		9.48	in	12	12					
2	10/08/2021	Buzzard	<i>Buteo buteo</i>	1		10.07	in	46		46				
2	10/08/2021	Buzzard	<i>Buteo buteo</i>	1		11.11	out	51			51			
3	10/08/2021	Buzzard	<i>Buteo buteo</i>	1		13.46	in	180		180				
3	10/08/2021	Buzzard	<i>Buteo buteo</i>	1		13.46	out	210		210				

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	10/08/2021	Buzzard	<i>Buteo buteo</i>	1		14.42	out	111		111				
3	10/08/2021	Buzzard	<i>Buteo buteo</i>	1		14.49	out	93			93			
3	10/08/2021	Buzzard	<i>Buteo buteo</i>	1		15.02	in	64		64				
2	24/08/2021	Buzzard	<i>Buteo buteo</i>	1		10.12	out	144			144			
2	24/08/2021	Buzzard	<i>Buteo buteo</i>	1		11.04	in	52		52				
2	24/08/2021	Buzzard	<i>Buteo buteo</i>	1		12.11	in	48		48				
1	24/08/2021	Buzzard	<i>Buteo buteo</i>	1		13.58	in	135			135			
1	24/08/2021	Buzzard	<i>Buteo buteo</i>	1		14.52	out	47		47				
1	24/08/2021	Buzzard	<i>Buteo buteo</i>	1		15.17	in	83		83				
1	24/08/2021	Buzzard	<i>Buteo buteo</i>	1		15.56	out	38		38				
3	24/08/2021	Buzzard	<i>Buteo buteo</i>	1		16.37	out	52	52					Dog walker on site near VP
3	24/08/2021	Buzzard	<i>Buteo buteo</i>	2		16.55	out	193		193				
3	24/08/2021	Buzzard	<i>Buteo buteo</i>	1		17.26	out	290				290		
3	24/08/2021	Buzzard	<i>Buteo buteo</i>	1		18.55	in	51		51				
1	26/08/2021	Buzzard	<i>Buteo buteo</i>	1		11.25	out	176				176		
1	26/08/2021	Buzzard	<i>Buteo buteo</i>	2		12.11	in	73		73				
2	26/08/2021	Buzzard	<i>Buteo buteo</i>	1		13.22	out	24	24					
2	26/08/2021	Buzzard	<i>Buteo buteo</i>	1		13.33	in	287			287			
2	26/08/2021	Buzzard	<i>Buteo buteo</i>	2		13.57	in	16	16					
2	26/08/2021	Buzzard	<i>Buteo buteo</i>	1		14.27	out	33		33				
2	26/08/2021	Buzzard	<i>Buteo buteo</i>	1		14.39	out	26		26				

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	26/08/2021	Buzzard	<i>Buteo buteo</i>	1		15.11	in	20	20					
1	02/09/2021	Buzzard	<i>Buteo buteo</i>	1		9.58	out	18	18					
1	02/09/2021	Buzzard	<i>Buteo buteo</i>	1		10.31	out	137			137			
1	02/09/2021	Buzzard	<i>Buteo buteo</i>	2		11.11	in	58		58				
1	02/09/2021	Buzzard	<i>Buteo buteo</i>	1		12.18	in	46			46			
3	02/09/2021	Buzzard	<i>Buteo buteo</i>	1		13.11	out	26		26				
3	02/09/2021	Buzzard	<i>Buteo buteo</i>	2		13.36	out	137			137			
3	02/09/2021	Buzzard	<i>Buteo buteo</i>	2		14.28	in	188			188			
3	02/09/2021	Buzzard	<i>Buteo buteo</i>	1		15.13	in	58		58				
1	08/04/2021	Cormorant	<i>Phalacrocorax carbo</i>	1		10:08	Out	7		7				
1	08/04/2021	Cormorant	<i>Phalacrocorax carbo</i>	1		10:08	In	30		30				
3	10/08/2021	Curlew	<i>Numenius arquata</i>	1		13.53	out	157			157			
1	08/04/2021	Grey Heron	<i>Ardea cinerea</i>	1		09:48	In	20		20				
1	08/04/2021	Grey Heron	<i>Ardea cinerea</i>	1		09:48	Out	11		11				
1	08/04/2021	Grey Heron	<i>Ardea cinerea</i>	1		09:53	Out	39		39				
1	08/04/2021	Grey Heron	<i>Ardea cinerea</i>	1		09:53	In	30		30				
1	24/04/2021	Grey Heron	<i>Ardea cinerea</i>	1		12:26	In	23		23				
2	15/04/2021	Grey Heron	<i>Ardea cinerea</i>	1		12:03	In	22		22				
2	21/04/2021	Grey Heron	<i>Ardea cinerea</i>	1		11:43	Out	48		48				
3	14/04/2021	Grey Heron	<i>Ardea cinerea</i>	1		12:40	In	227		227				
3	28/04/2021	Grey Heron	<i>Ardea cinerea</i>	1		16:22	Out	30		30				

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	28/04/2021	Grey Heron	<i>Ardea cinerea</i>	1		16:22	In	146		146				
1	25/05/2021	Grey Heron	<i>Ardea cinerea</i>	1		17:57	In	32		32				
2	26/05/2021	Grey Heron	<i>Ardea cinerea</i>	1		19:47	In	51		51				
2	30/05/2021	Grey Heron	<i>Ardea cinerea</i>	1		17:50	In	100			100			
3	11/05/2021	Grey Heron	<i>Ardea cinerea</i>	1		09:34	In	30		30				
3	11/05/2021	Grey Heron	<i>Ardea cinerea</i>	1		09:34	Out	139		139				
3	11/05/2021	Grey Heron	<i>Ardea cinerea</i>	1		10:50	In	20		20				
3	31/05/2021	Grey Heron	<i>Ardea cinerea</i>	1		16:51	In	17		17				
3	15/06/2021	Grey Heron	<i>Ardea cinerea</i>	1		17.11	in	34	34					
2	17/06/2021	Grey Heron	<i>Ardea cinerea</i>	1		14.04	out	53	53					
1	30/06/2021	Grey Heron	<i>Ardea cinerea</i>	1		18.07	in	15		15				
1	29/07/2021	Grey Heron	<i>Ardea cinerea</i>	1		14.02	in	13	13					
2	24/08/2021	Grey Heron	<i>Ardea cinerea</i>	2		9.38	in	21	21					
3	24/08/2021	Grey Heron	<i>Ardea cinerea</i>	1		18.18	in	26		26				
1	02/09/2021	Grey Heron	<i>Ardea cinerea</i>	1		9.38	in	13	13					
3	02/09/2021	Grey Heron	<i>Ardea cinerea</i>	1		13.22	in	16		16				
3	02/09/2021	Grey Heron	<i>Ardea cinerea</i>	1		15.44	in	29		29				
2	15/04/2021	Herring Gull	<i>Larus argentatus</i>	1		13:40	In	39		39				
1	08/04/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	11:39	Out	42		42				
1	08/04/2021	Kestrel	<i>Falco tinnunculus</i>	1		12:36	In	14	14					
1	24/04/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	12:51	Out	34		34				

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	15/04/2021	Kestrel	<i>Falco tinnunculus</i>	2		12:04	In	57		57				
2	15/04/2021	Kestrel	<i>Falco tinnunculus</i>	1		12:21	Out	165		165				
2	15/04/2021	Kestrel	<i>Falco tinnunculus</i>	1		12:58	In	338		338				
2	21/04/2021	Kestrel	<i>Falco tinnunculus</i>	1		11:31	Out	66		66				
2	21/04/2021	Kestrel	<i>Falco tinnunculus</i>	1		11:37	Out	76		76				
2	21/04/2021	Kestrel	<i>Falco tinnunculus</i>	1		11:41	Out	169		169				
2	21/04/2021	Kestrel	<i>Falco tinnunculus</i>	1		13:27	Out	179		179				
2	21/04/2021	Kestrel	<i>Falco tinnunculus</i>	1		14:09	In	27		27				
3	14/04/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	12:09	Out	16		16				
3	14/04/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	13:26	Out	10		10				
3	14/04/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	13:34	Out	146		146				
3	28/04/2021	Kestrel	<i>Falco tinnunculus</i>	1		15:25	In	93		93				
3	28/04/2021	Kestrel	<i>Falco tinnunculus</i>	1		16:21	In	12		12				
3	28/04/2021	Kestrel	<i>Falco tinnunculus</i>	1		16:26	In	8		8				
3	28/04/2021	Kestrel	<i>Falco tinnunculus</i>	1		17:17	Out	23	23					
3	28/04/2021	Kestrel	<i>Falco tinnunculus</i>	1		17:28	Out	12	12					
1	25/05/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	15:39	Out	19	19					
1	25/05/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	15:40	In	44	44					
1	25/05/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	15:40	Out	32	32					
1	25/05/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	15:44	In	62	62					
1	25/05/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	15:44	Out	30	30					

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
1	25/05/2021	Kestrel	<i>Falco tinnunculus</i>	1		16:50	Out	44		44				
1	25/05/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	17:22	Out	26	26					
1	30/05/2021	Kestrel	<i>Falco tinnunculus</i>	1		15:59	In	170		170				
1	30/05/2021	Kestrel	<i>Falco tinnunculus</i>	2	M+F	16:17	Out	92		92				
1	30/05/2021	Kestrel	<i>Falco tinnunculus</i>	2	M+F	16:17	In	171		171				
1	30/05/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	16:39	In	48	48					
1	30/05/2021	Kestrel	<i>Falco tinnunculus</i>	1	F	16:54	Out	34	34					
2	30/05/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	17:15	Out	173		173				
2	30/05/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	17:15	In	40		40				
2	30/05/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	17:17	In	145	145					
2	30/05/2021	Kestrel	<i>Falco tinnunculus</i>	1	M	18:06	Out	243		243				
2	30/05/2021	Kestrel	<i>Falco tinnunculus</i>	1	F	18:33	Out	38						
2	30/05/2021	Kestrel	<i>Falco tinnunculus</i>	1	F	18:46	Out	120	120					
3	11/05/2021	Kestrel	<i>Falco tinnunculus</i>	1		10:21	Out	77	77					
3	11/05/2021	Kestrel	<i>Falco tinnunculus</i>	1		11:14	Out	16		16				
3	31/05/2021	Kestrel	<i>Falco tinnunculus</i>	1		16:02	Out	52		52				
3	31/05/2021	Kestrel	<i>Falco tinnunculus</i>	1		16:07	Out	22		22				
2	17/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		13.15	out	49	49					
2	17/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		13.29	out	50	50					
2	17/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		13.3	out	62	62					
2	17/06/2021	Kestrel	<i>Falco tinnunculus</i>	1	male	13.42	out	73	50					

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	17/06/2021	Kestrel	<i>Falco tinnunculus</i>	1	male	13.42	in		23					
2	17/06/2021	Kestrel	<i>Falco tinnunculus</i>	1	male	13.54	out	425	425					
2	17/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		14.08	out	100	100					
2	17/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		14.17	out	103	103					
2	17/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		15.34	out	67	67					
2	17/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		16.11	out	22	22					
1	19/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		10.51	in	20	20					
1	19/06/2021	Kestrel	<i>Falco tinnunculus</i>	1	male	10.57	out	37	37					
1	19/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		11:00	out	88	88					
3	25/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		9.51	out	20		20				
3	25/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		10.4	in	65		65				
3	25/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		10.43	out	13		13				
3	25/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		10.44	out	133			133			
3	25/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		11.23	in	113		113				
2	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	1	female	8.19	out	13	13					
2	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	2		8.58	out	66	66					
2	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	3		9.54	out	57	57					3 juveniles
2	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		9.59	out	13	13					
2	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		10.01	out	40	40					
2	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	4		10.04	out	59						
2	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		10.38	out	12						

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
1	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		17.13	out	13	13					
1	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		17.14	in	15	15					
1	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		17.23	in	14	14					
1	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		18	in	11	11					
1	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		18.43	out	8	8					
1	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		18.46	out	15						
1	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		19.19	out	36		36				
1	30/06/2021	Kestrel	<i>Falco tinnunculus</i>	1		19.52	in	23	23					
2	15/07/2021	Kestrel	<i>Falco tinnunculus</i>	1	male	11.11	in	66	66					
2	15/07/2021	Kestrel	<i>Falco tinnunculus</i>	1	male	11.39	in	23	23					
1	15/07/2021	Kestrel	<i>Falco tinnunculus</i>	1	male	15.15	in	158			158			
3	19/07/2021	Kestrel	<i>Falco tinnunculus</i>	1		12.48	in	27		27				
2	21/07/2021	Kestrel	<i>Falco tinnunculus</i>	1		11.26	in	16	16					
1	24/07/2021	Kestrel	<i>Falco tinnunculus</i>	1	male	9.57	in	212	212					
1	24/07/2021	Kestrel	<i>Falco tinnunculus</i>	1	male	10.28	in	28	28					
3	24/07/2021	Kestrel	<i>Falco tinnunculus</i>	1		12.28	in	39	39					
2	26/07/2021	Kestrel	<i>Falco tinnunculus</i>	1		10.07	in	68		68				
2	26/07/2021	Kestrel	<i>Falco tinnunculus</i>	1		11.07	in	51	51					
1	29/07/2021	Kestrel	<i>Falco tinnunculus</i>	1		13.36	out	29		29				
2	10/08/2021	Kestrel	<i>Falco tinnunculus</i>	1		11.16	in	30	30					
2	10/08/2021	Kestrel	<i>Falco tinnunculus</i>	1		11.48	in	24	24					

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	10/08/2021	Kestrel	<i>Falco tinnunculus</i>	1	female	15.17	out	28	28					
2	24/08/2021	Kestrel	<i>Falco tinnunculus</i>	1		9.48	out	41		41				
2	24/08/2021	Kestrel	<i>Falco tinnunculus</i>	1		10.28	in	12	12					
1	24/08/2021	Kestrel	<i>Falco tinnunculus</i>	1		13.36	out	14	14					
1	24/08/2021	Kestrel	<i>Falco tinnunculus</i>	1		13.39	out	10	10					
2	26/08/2021	Kestrel	<i>Falco tinnunculus</i>	1		13.37	out	108	108					
2	26/08/2021	Kestrel	<i>Falco tinnunculus</i>	1		13.41	in	42	42					
2	26/08/2021	Kestrel	<i>Falco tinnunculus</i>	1		15.27	in	12	12					
1	02/09/2021	Kestrel	<i>Falco tinnunculus</i>	1		10.16	out	44		44				
1	02/09/2021	Kestrel	<i>Falco tinnunculus</i>	1		12.07	out	18		18				
3	02/09/2021	Kestrel	<i>Falco tinnunculus</i>	1		15.26	out	17		17				
2	26/05/2021	Lapwing	<i>Vanellus vanellus</i>	1		17:15	Out	47	47					
2	26/05/2021	Lapwing	<i>Vanellus vanellus</i>	1		19:25	Out	11	11					
2	30/05/2021	Lapwing	<i>Vanellus vanellus</i>	1		17:21	In	15	15					
2	30/05/2021	Lapwing	<i>Vanellus vanellus</i>	1		17:44	Out	200		200				
2	30/05/2021	Lapwing	<i>Vanellus vanellus</i>	1		17:44	In	16		16				
2	30/05/2021	Lapwing	<i>Vanellus vanellus</i>	1		18:26	In	131	131					
2	30/05/2021	Lapwing	<i>Vanellus vanellus</i>	1		18:36	In	101	20					
2	30/05/2021	Lapwing	<i>Vanellus vanellus</i>	1		18:36	Out	81	81					
2	30/05/2021	Lapwing	<i>Vanellus vanellus</i>	1		19:06	In	36	36					
2	17/06/2021	Lapwing	<i>Vanellus vanellus</i>	1		14.04	out	50	50					

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
2	17/06/2021	Lapwing	<i>Vanellus vanellus</i>	1		14.04	in	47	47					
2	17/06/2021	Lapwing	<i>Vanellus vanellus</i>	1		15.49	in	31	31					
3	25/06/2021	Lapwing	<i>Vanellus vanellus</i>	8		10.13	out	34		34				
2	30/06/2021	Lapwing	<i>Vanellus vanellus</i>	6		8.55	out	140		140				
2	30/06/2021	Lapwing	<i>Vanellus vanellus</i>	8		9.01	out	77	77					
2	26/05/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	1		17:38	In	63		63				
2	26/05/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	1		17:38	Out	60		60				
2	30/06/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	1		8.33	in	23		23				
2	15/07/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	4		13.12	in	58		58				
3	24/07/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	6		13.05	out	169			169			
2	26/07/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	1		9.55	out	30		30				
2	26/07/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	1		9.55	in	12		12				
2	26/07/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	1		10.02	in	155		155				
3	26/07/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	4		14.19	in	77			77			
2	24/08/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	1		11.41	out	78			78			

VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
3	02/09/2021	Lesser Black-backed Gull	<i>Larus fuscus</i>	4		14:34	out	336				336		farmer collecting round bales
1	08/04/2021	Little Egret	<i>Egretta garzetta</i>	4		10:54	In	18	18					
2	15/04/2021	Little Egret	<i>Egretta garzetta</i>	5		12:06	In	12	12					
2	15/04/2021	Little Egret	<i>Egretta garzetta</i>	5		13:06	In	11	11					
2	21/04/2021	Little Egret	<i>Egretta garzetta</i>	2		12:41	In	20	20					
2	26/05/2021	Little Egret	<i>Egretta garzetta</i>	2		18:19	Out	325		325				
2	26/05/2021	Little Egret	<i>Egretta garzetta</i>	1		18:46	In	13	13					
2	30/05/2021	Little Egret	<i>Egretta garzetta</i>	1		17:35	In	81	81					
2	17/06/2021	Little Egret	<i>Egretta garzetta</i>	2		14:52	out	60			60			
2	17/06/2021	Little Egret	<i>Egretta garzetta</i>	2		14:52	in	63			63			
1	15/07/2021	Little Egret	<i>Egretta garzetta</i>	2		17:06	in	26		26				
1	24/08/2021	Little Egret	<i>Egretta garzetta</i>	2		14:18	out	16	16					
3	24/08/2021	Little Egret	<i>Egretta garzetta</i>	2		19:09	in	28		28				
1	30/05/2021	Mute Swan	<i>Cygnus olor</i>	2		14:37	In	31		31				
3	11/05/2021	Mute Swan	<i>Cygnus olor</i>	2		10:08	In	26		26				
3	31/05/2021	Mute Swan	<i>Cygnus olor</i>	2		15:11	In	68	68					
1	24/04/2021	Peregrine	<i>Falco peregrinus</i>	1		11:41	Out	13			13			
1	24/04/2021	Peregrine	<i>Falco peregrinus</i>	1		11:41	In	10		10				
1	30/05/2021	Peregrine	<i>Falco peregrinus</i>	1		16:10	Out	229			229			
3	24/08/2021	Peregrine	<i>Falco peregrinus</i>	1		17:04	out	131			131			
1	26/08/2021	Peregrine	<i>Falco peregrinus</i>	1		11:14	in	6	6					

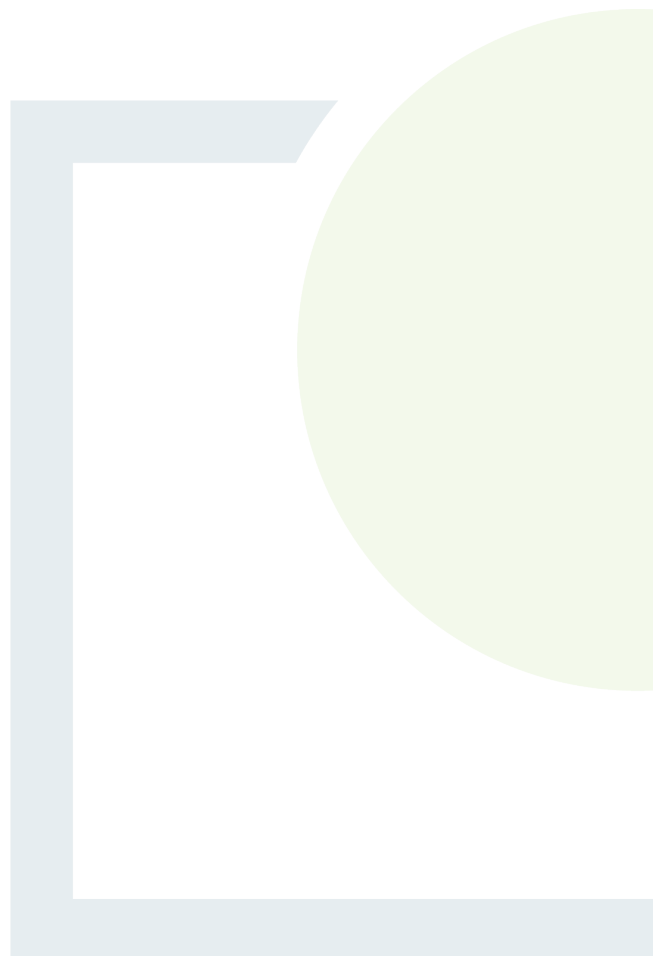
VP no.	Date	Common Name	Latin Name	Species Quantity	Sex	Time of Observation	Inside / Outside Buffer	Total Duration (s)	0-20 m (s)	20-50 m (s)	50-100 m (s)	100-200 m (s)	>200 m (s)	Notes
1	26/08/2021	Peregrine	<i>Falco peregrinus</i>	1		11.18	out	9		9				
1	26/08/2021	Peregrine	<i>Falco peregrinus</i>	2		11.19	out	230				150		calling
1	26/08/2021	Peregrine	<i>Falco peregrinus</i>	2		11.19	in					80		
1	02/09/2021	Peregrine	<i>Falco peregrinus</i>	1		10.36	in	12			12			
3	02/09/2021	Snipe	<i>Gallinago gallinago</i>	2		13.59	out	116	116					
3	02/09/2021	Snipe	<i>Gallinago gallinago</i>	2		14.51	out	42	42					
1	24/04/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		13:35	In	12	12					
2	15/04/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		13:04	In	119			119			
2	15/04/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		14:27	Out	7	7					
2	21/04/2021	Sparrowhawk	<i>Accipiter nisus</i>	2		11:33	In	138			138			
2	21/04/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		12:00	In	167			167			
3	14/04/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		14:02	In	48			48			
1	25/05/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		16:11	In	24	10	14				
3	11/05/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		11:10	Out	8	8					
3	15/06/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		17.46	out	8	8					
2	15/07/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		13.52	in	10	10					
3	26/07/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		13.36	out	12	12					
3	10/08/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		13.44	out	23	23					
3	24/08/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		19.23	out	8	8					
1	02/09/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		11.33	out	9	9					
3	02/09/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		13.01	out	13	13					
3	02/09/2021	Sparrowhawk	<i>Accipiter nisus</i>	1		13.47	in	36	36					

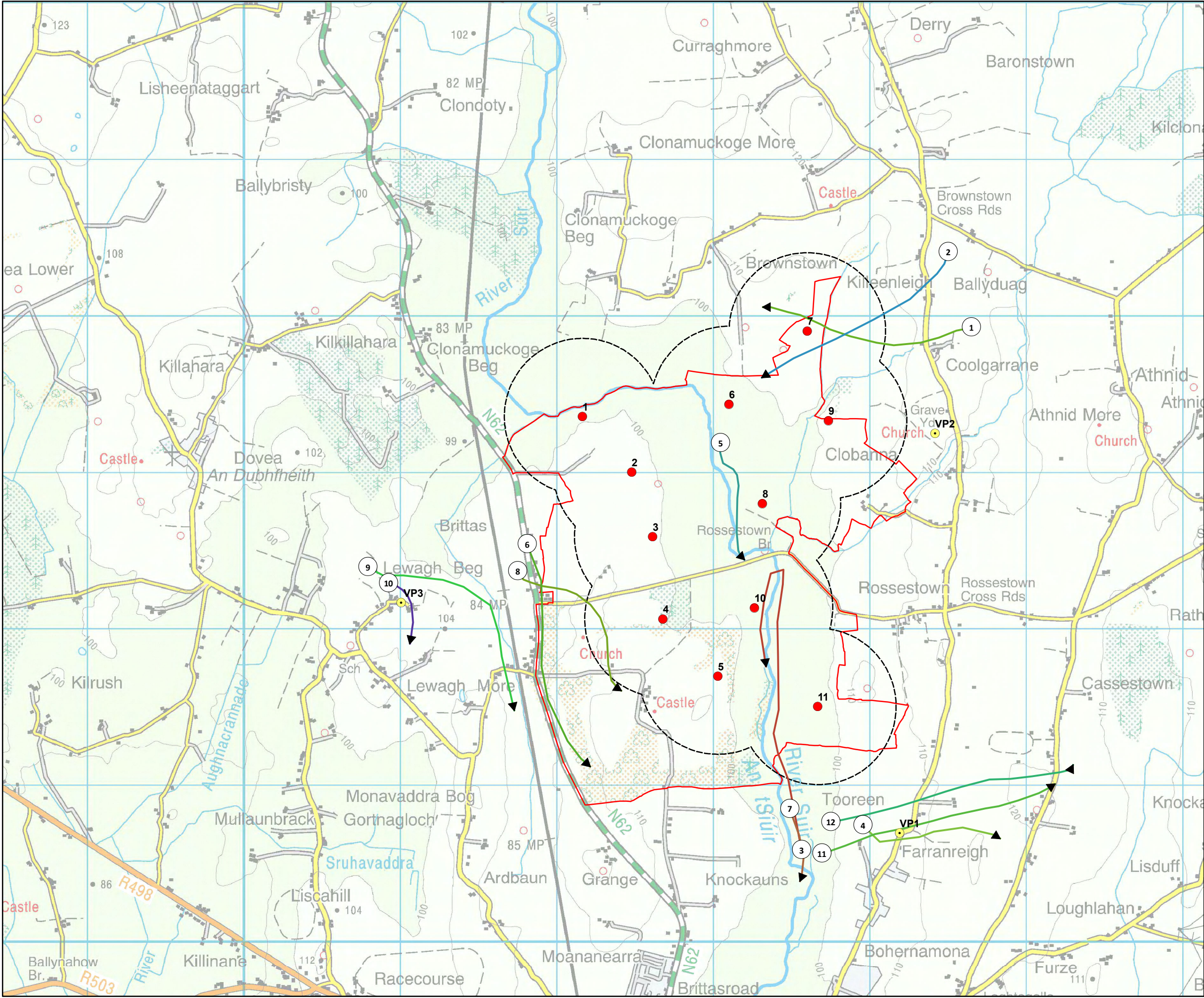


CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE
& PLANNING

APPENDIX 4

Target Species Flight Line
Maps





Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 30/06/2021, 10:19

2, 10/08/2021, 10:53

3, 24/04/2021, 11:14

4, 24/04/2021, 11:22

5, 21/07/2021, 12:03

6, 24/07/2021, 12:24

7, 30/05/2021, 14:20

8, 31/05/2021, 15:18

9, 15/06/2021, 15:41

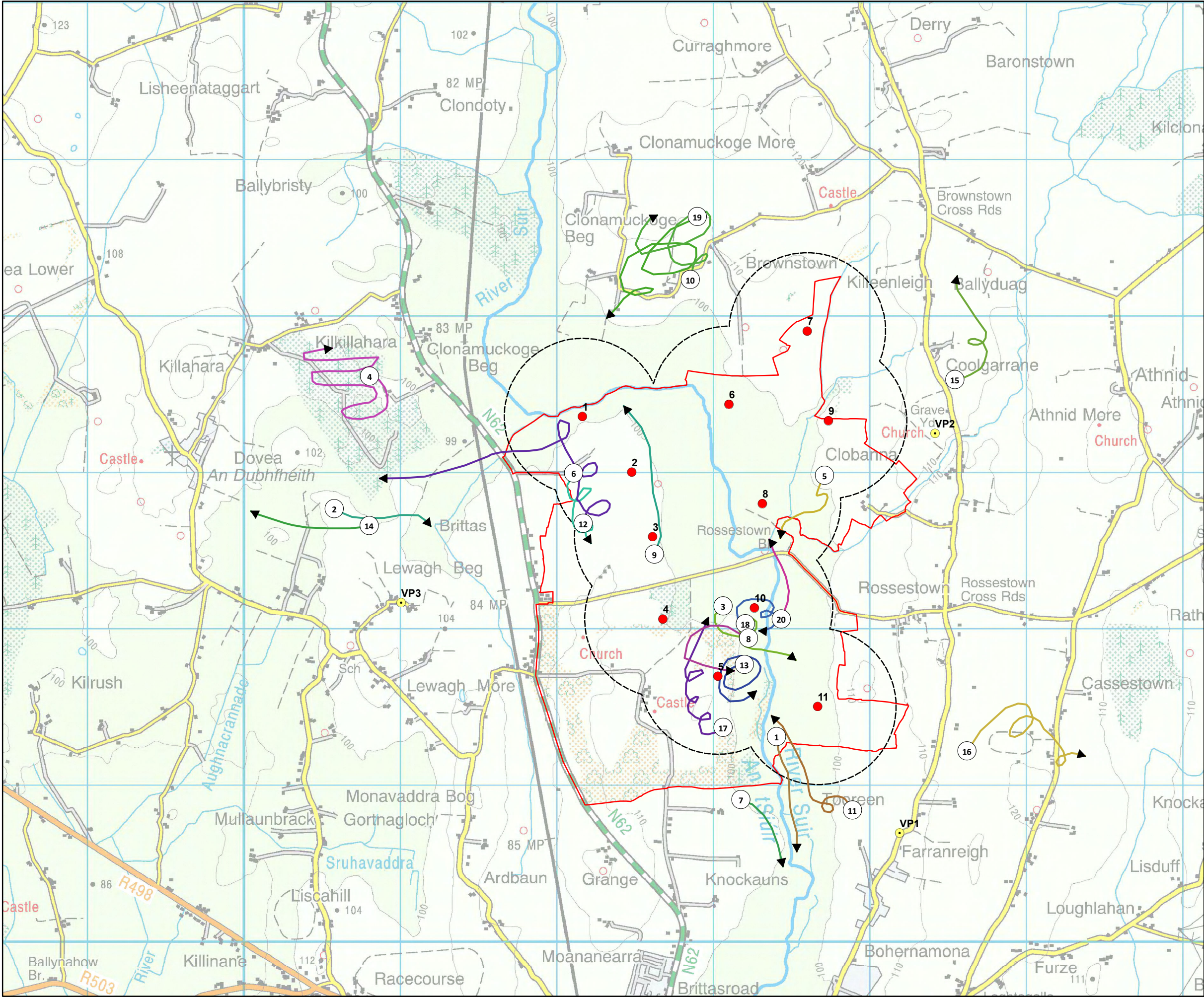
10, 15/06/2021, 16:38

11, 25/05/2021, 17:03

12, 25/05/2021, 17:41

TITLE: <div>Summer Flightlines 2021 Black-headed Gull</div>	
PROJECT: <div>Brittias Wind Farm, Co. Tipperary</div>	
FIGURE NO: <div>-</div>	
CLIENT: <div>Enerco</div>	
SCALE: <div>1:24000</div>	REVISION: <div>0</div>
DATE: <div>17/02/2022</div>	PAGE SIZE: <div>A3</div>





Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 19/06/2021, 08:52

2, 11/05/2021, 09:10

3, 21/07/2021, 09:32

4, 11/05/2021, 09:38

5, 10/08/2021, 09:48

6, 11/05/2021, 09:55

7, 02/09/2021, 09:58

8, 26/07/2021, 10:07

9, 10/08/2021, 10:07

10, 24/08/2021, 10:12

11, 19/06/2021, 10:16

12, 19/07/2021, 10:24

13, 08/04/2021, 10:25

14, 11/05/2021, 10:26

15, 26/07/2021, 10:28

16, 02/09/2021, 10:31

17, 08/04/2021, 10:34

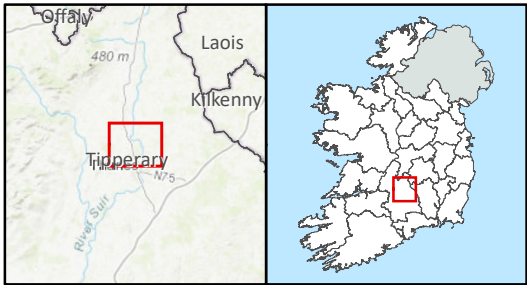
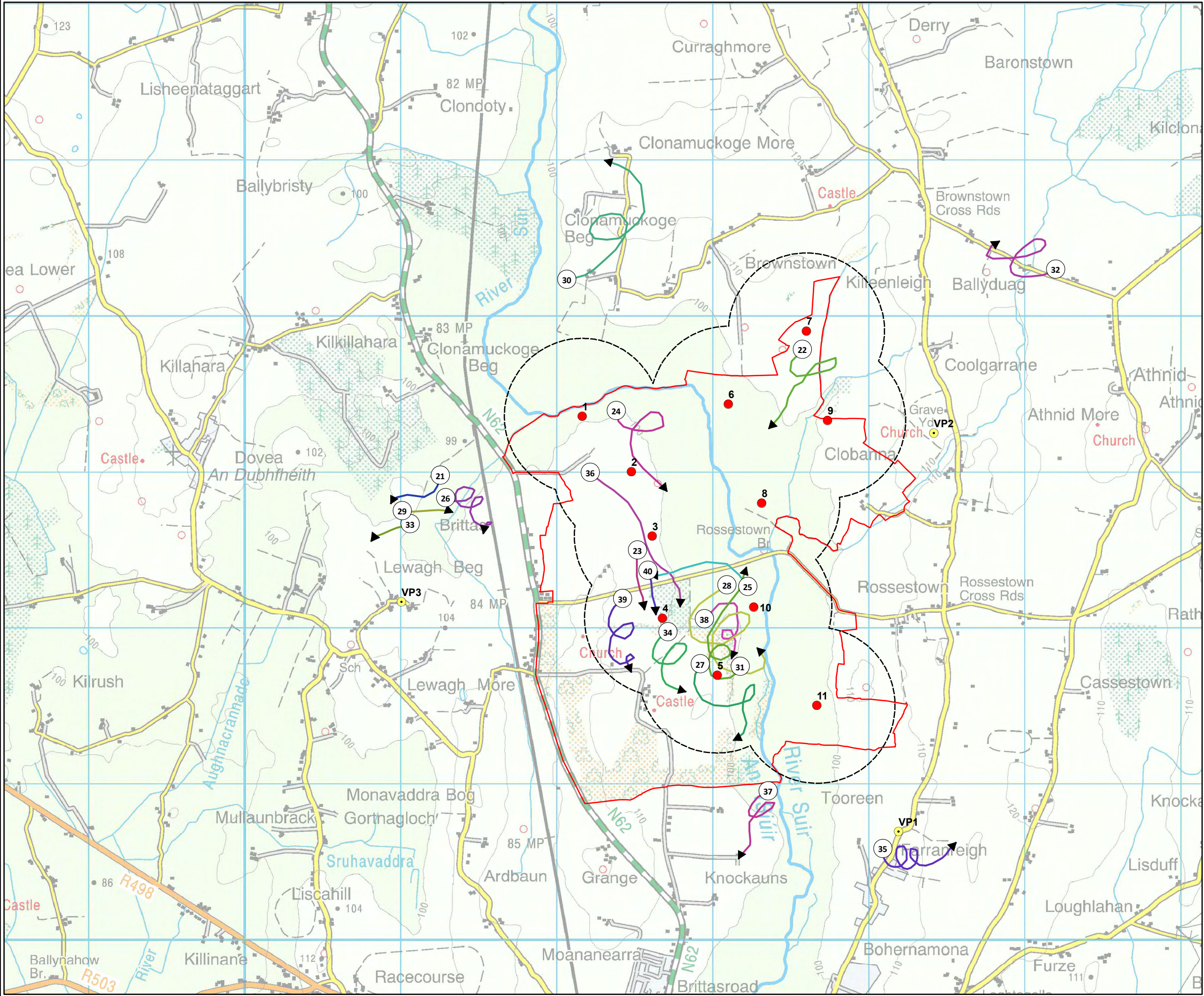
18, 08/04/2021, 10:43

19, 21/07/2021, 10:44

20, 19/06/2021, 10:56

TITLE:		Summer Flightlines 2021 Buzzard 1	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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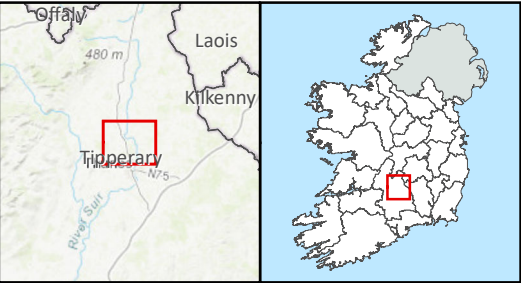
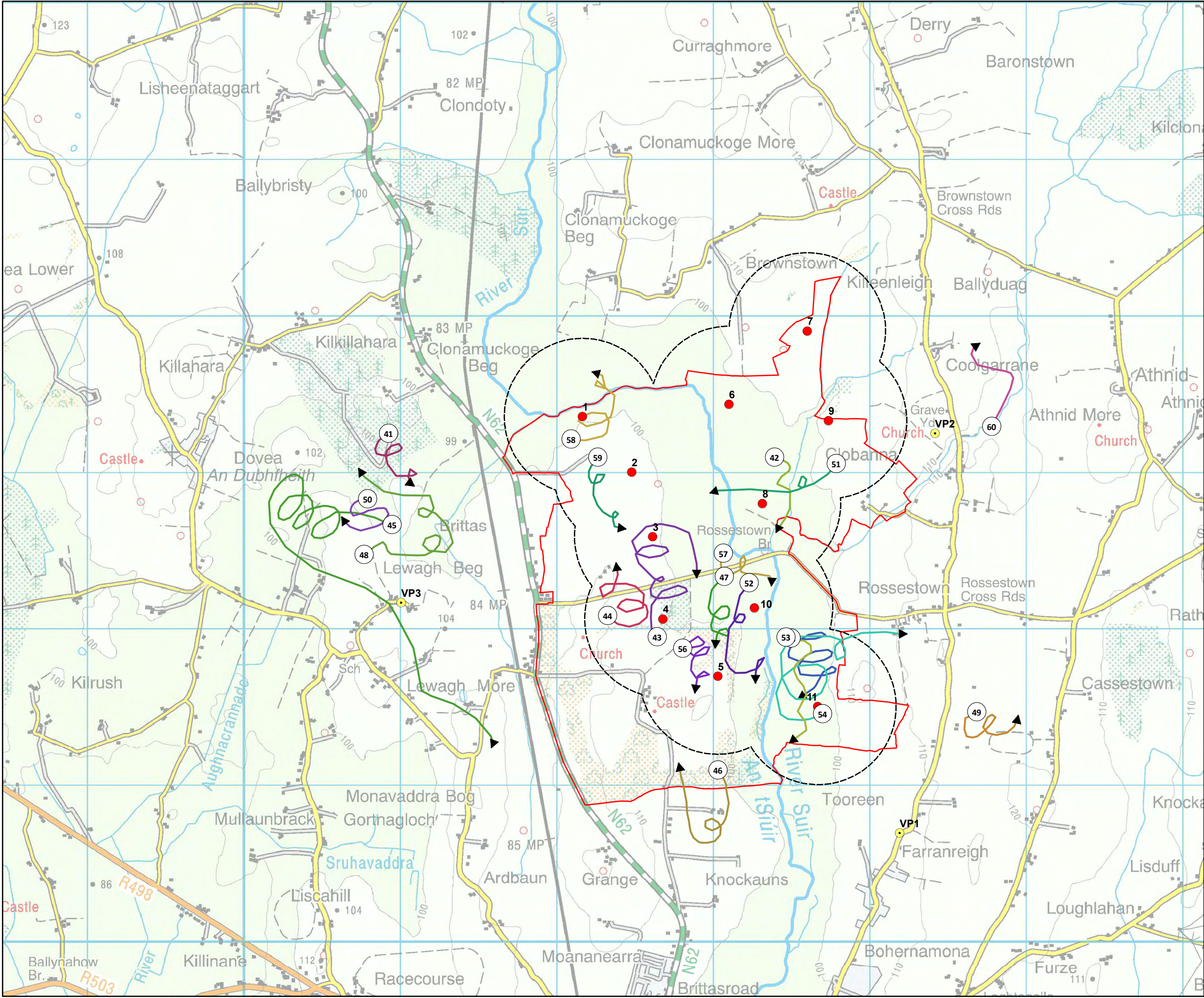
Legend

- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 21, 25/06/2021, 10:56
- 22, 30/06/2021, 10:56
- 23, 25/06/2021, 11:02
- 24, 19/07/2021, 11:02
- 25, 24/08/2021, 11:04
- 26, 25/06/2021, 11:05
- 27, 24/07/2021, 11:06
- 28, 19/06/2021, 11:09
- 29, 25/06/2021, 11:09
- 30, 10/08/2021, 11:11
- 31, 02/09/2021, 11:11
- 32, 30/06/2021, 11:12
- 33, 25/06/2021, 11:18
- 34, 25/06/2021, 11:21
- 35, 26/08/2021, 11:25
- 36, 25/06/2021, 11:26
- 37, 24/07/2021, 11:28
- 38, 24/04/2021, 11:33
- 39, 11/05/2021, 11:36
- 40, 25/06/2021, 11:45

TITLE: Summer Flightlines 2021 Buzzard 2	
PROJECT: Brittis Wind Farm, Co. Tipperary	
FIGURE NO: -	
CLIENT: Enerco	
SCALE: 1:24000	REVISION: 0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

41, 11/05/2021, 11:47

42, 15/07/2021, 11:51

43, 19/07/2021, 11:51

44, 21/04/2021, 11:55

45, 19/07/2021, 11:55

46, 24/04/2021, 12:00

47, 15/04/2021, 12:01

48, 19/07/2021, 12:04

49, 08/04/2021, 12:05

50, 26/07/2021, 12:07

51, 24/08/2021, 12:11

52, 26/08/2021, 12:11

53, 21/04/2021, 12:15

54, 29/07/2021, 12:17

55, 02/09/2021, 12:18

56, 21/04/2021, 12:22

57, 08/04/2021, 12:26

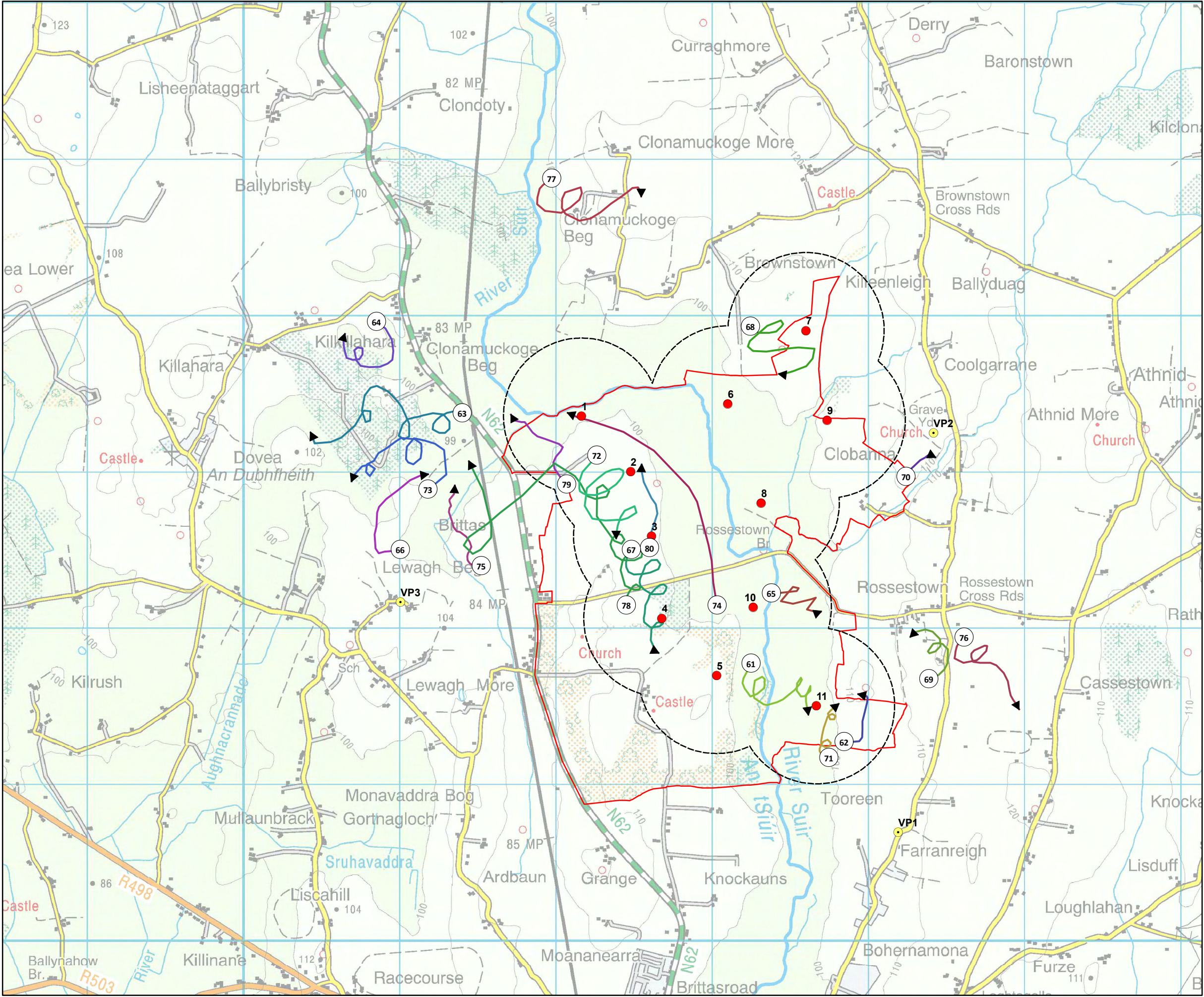
58, 21/04/2021, 12:28

59, 15/04/2021, 12:30

60, 15/07/2021, 12:43

TITLE:		Summer Flightlines 2021 Buzzard 3	
PROJECT:		Brittias Wind Farm, Co. Tipperary	
FIGURE NO:		-	
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SCALE:	1:24000	REVISION:	0
DATE:	17/02/2022	PAGE SIZE:	A3





Legend

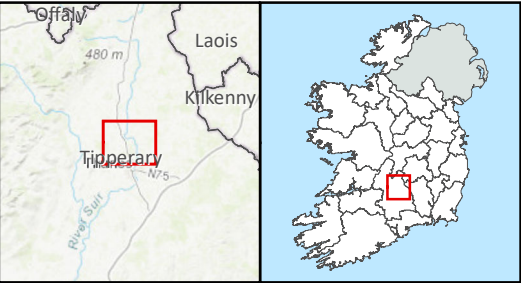
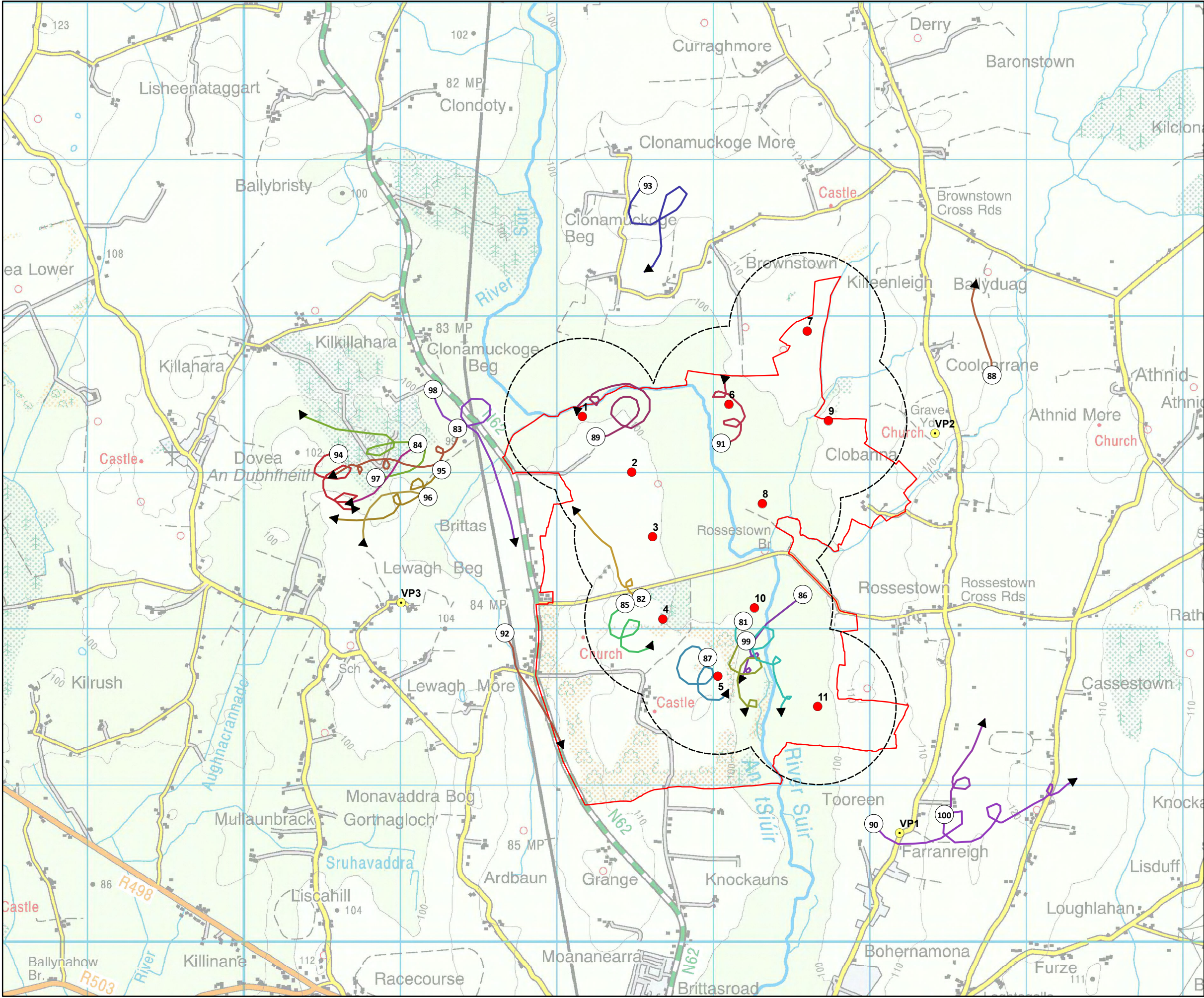
- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 61, 15/04/2021, 12:45
- 62, 29/07/2021, 12:47
- 63, 24/07/2021, 12:48
- 64, 14/04/2021, 13:03
- 65, 21/04/2021, 13:11
- 66, 02/09/2021, 13:11
- 67, 26/07/2021, 13:16
- 68, 15/07/2021, 13:17
- 69, 24/04/2021, 13:21
- 70, 26/08/2021, 13:22
- 71, 29/07/2021, 13:28
- 72, 26/08/2021, 13:33
- 73, 02/09/2021, 13:36
- 74, 14/04/2021, 13:41
- 75, 24/07/2021, 13:41
- 76, 21/04/2021, 13:44
- 77, 17/06/2021, 13:44
- 78, 10/08/2021, 13:46
- 79, 24/07/2021, 13:48
- 80, 26/08/2021, 13:57

TITLE: Summer Flightlines 2021 Buzzard 4	
PROJECT: Brittias Wind Farm, Co. Tipperary	
FIGURE NO: -	
CLIENT: Enerco	
SCALE: 1:24000	REVISION: 0
DATE: 17/02/2022	PAGE SIZE: A3





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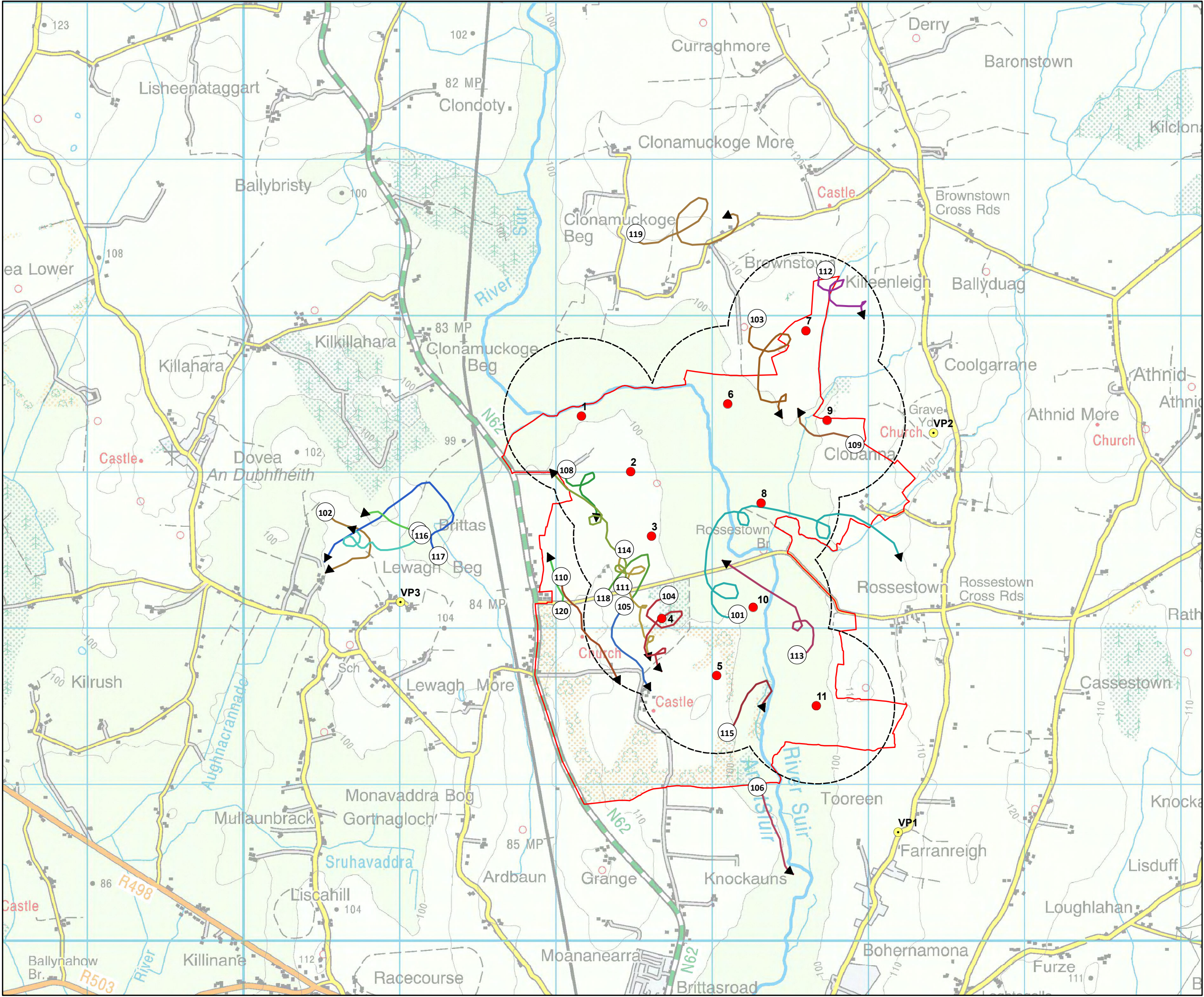
- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 81, 24/08/2021, 13:58
- 82, 15/04/2021, 14:07
- 83, 26/07/2021, 14:07
- 84, 24/07/2021, 14:08
- 85, 14/04/2021, 14:10
- 86, 30/05/2021, 14:11
- 87, 30/05/2021, 14:22
- 88, 26/08/2021, 14:27
- 89, 02/09/2021, 14:28
- 90, 29/07/2021, 14:31
- 91, 15/04/2021, 14:37
- 92, 14/04/2021, 14:38
- 93, 26/08/2021, 14:39
- 94, 31/05/2021, 14:41
- 95, 24/07/2021, 14:42
- 96, 10/08/2021, 14:42
- 97, 31/05/2021, 14:49
- 98, 10/08/2021, 14:49
- 99, 29/07/2021, 14:51
- 100, 24/08/2021, 14:52

TITLE: Summer Flightlines 2021 Buzzard 5	
PROJECT: Brittis Wind Farm, Co. Tipperary	
FIGURE NO: -	
CLIENT: Enerco	
SCALE: 1:24000	REVISION: 0
DATE: 17/02/2022	PAGE SIZE: A3





Legend

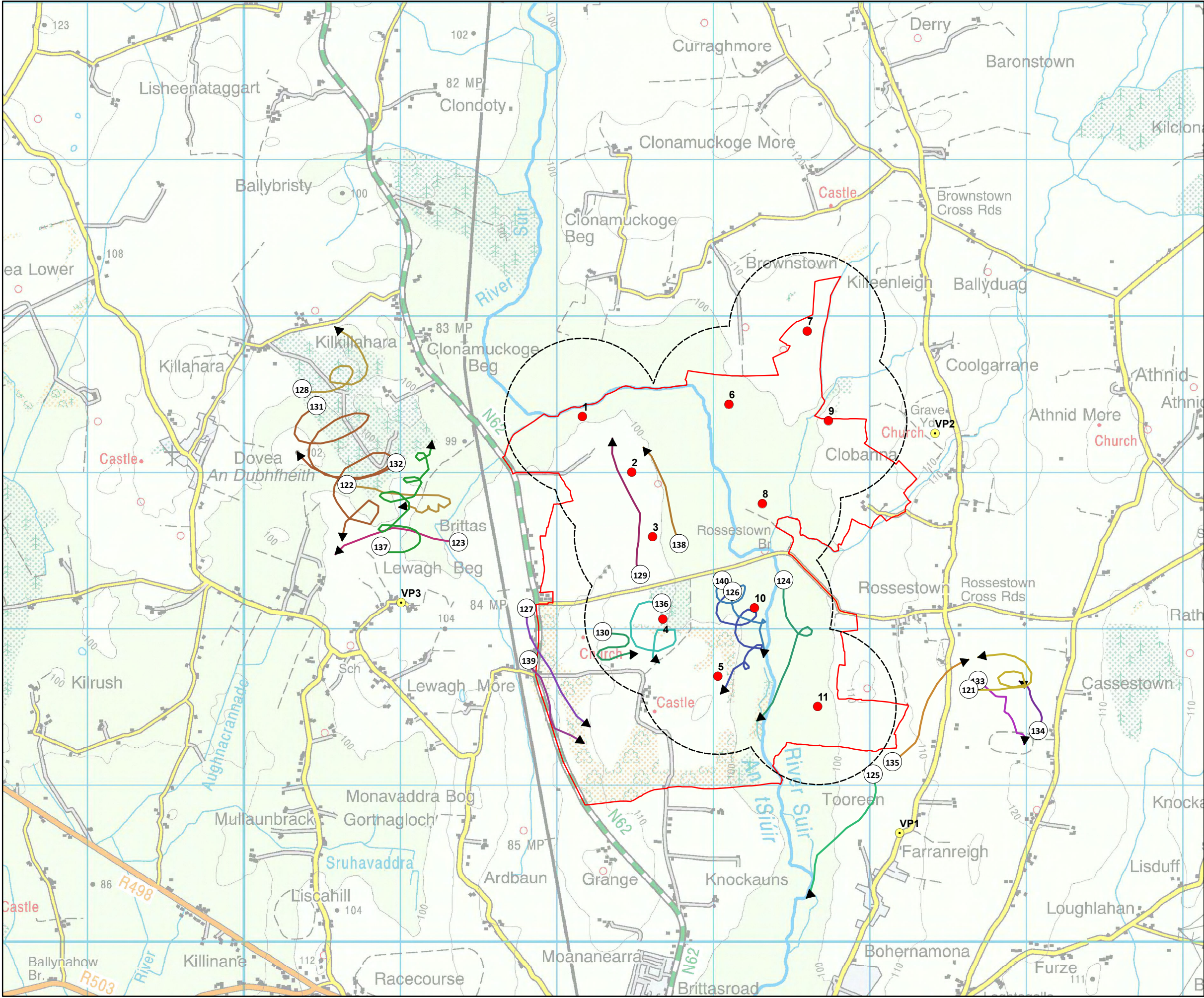
- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

101	30/05/2021	14:54
102	31/05/2021	14:55
103	17/06/2021	14:59
104	10/08/2021	15:02
105	31/05/2021	15:05
106	15/07/2021	15:05
107	15/06/2021	15:08
108	31/05/2021	15:10
109	26/08/2021	15:11
110	02/09/2021	15:13
111	15/06/2021	15:16
112	17/06/2021	15:16
113	24/08/2021	15:17
114	31/05/2021	15:21
115	30/05/2021	15:31
116	15/06/2021	15:31
117	31/05/2021	15:40
118	28/04/2021	15:45
119	17/06/2021	15:55
120	28/04/2021	15:56

TITLE: Summer Flightlines 2021 Buzzard 6	
PROJECT: Brittis Wind Farm, Co. Tipperary	
FIGURE NO: -	
CLIENT: Enerco	
SCALE: 1:24000	REVISION: 0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

121, 24/08/2021, 15:56

122, 15/06/2021, 16:15

123, 31/05/2021, 16:23

124, 15/07/2021, 16:23

125, 30/05/2021, 16:28

126, 25/05/2021, 16:35

127, 24/08/2021, 16:37

128, 28/04/2021, 16:38

129, 15/06/2021, 16:39

130, 28/04/2021, 16:40

131, 24/08/2021, 16:55

132, 28/04/2021, 16:58

133, 25/05/2021, 17:11

134, 25/05/2021, 17:13

135, 15/07/2021, 17:21

136, 15/06/2021, 17:23

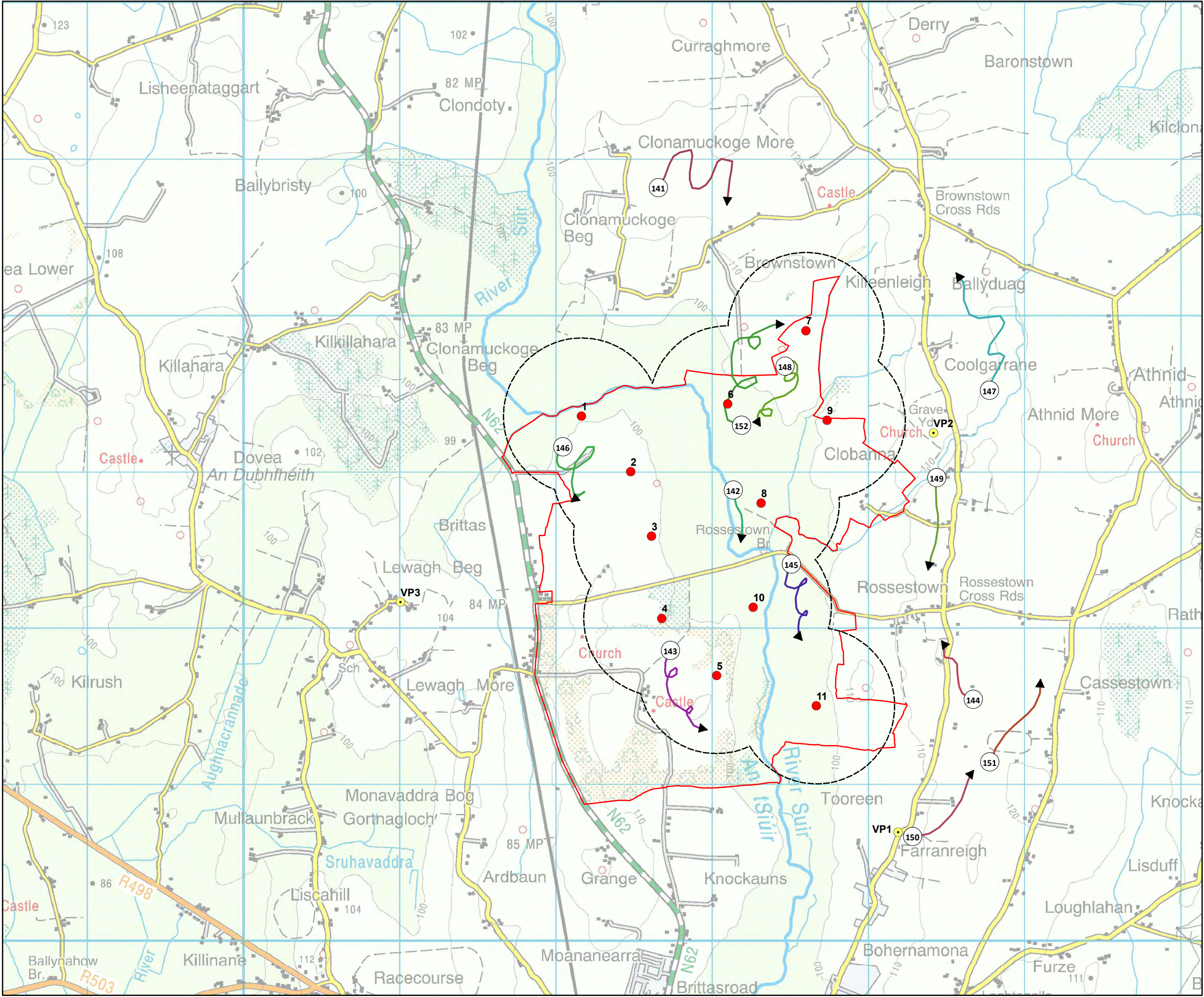
137, 24/08/2021, 17:26

138, 28/04/2021, 17:39

139, 28/04/2021, 17:43

140, 30/05/2021, 17:43

TITLE:		Summer Flightlines 2021 Buzzard 7	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

141, 26/05/2021, 17:59

142, 26/05/2021, 18:10

143, 25/05/2021, 18:12

144, 25/05/2021, 18:18

145, 30/05/2021, 18:40

146, 24/08/2021, 18:55

147, 26/05/2021, 19:03

148, 26/05/2021, 19:17

149, 30/05/2021, 19:20

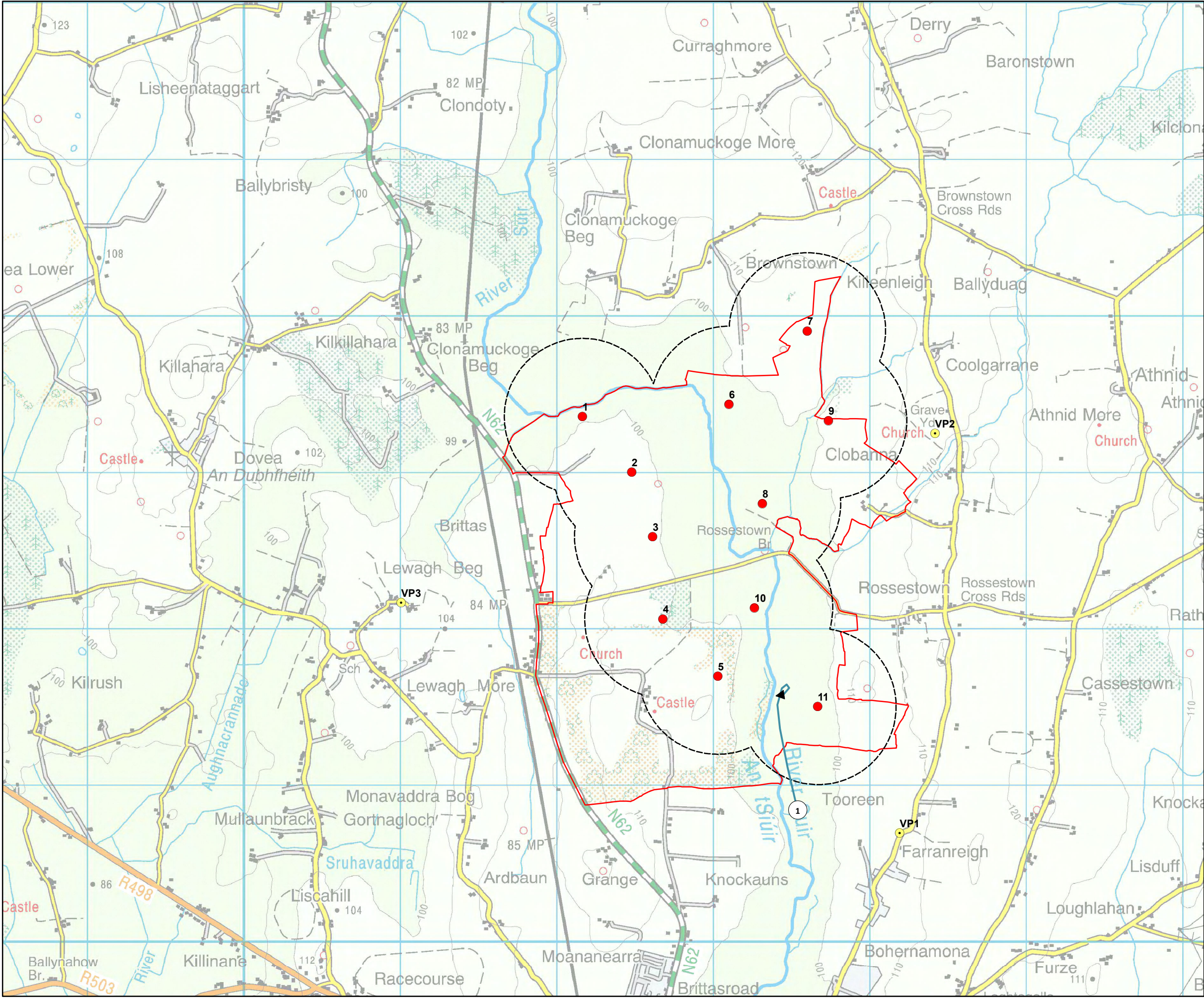
150, 30/06/2021, 19:23

151, 30/06/2021, 19:41

152, 26/05/2021, 19:56

TITLE:		Summer Flightlines 2021 Buzzard 8	
PROJECT:		Brittias Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
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		Cork Dublin Carlow www.fehilytimoney.ie	





Legend

Vantage Point Locations

Turbine Locations

Site Boundary

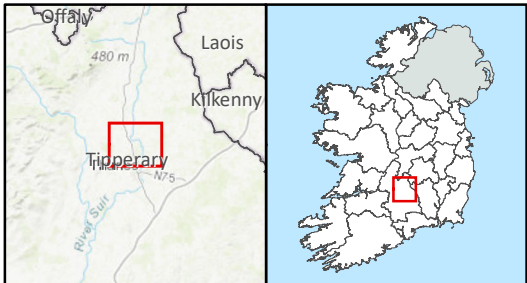
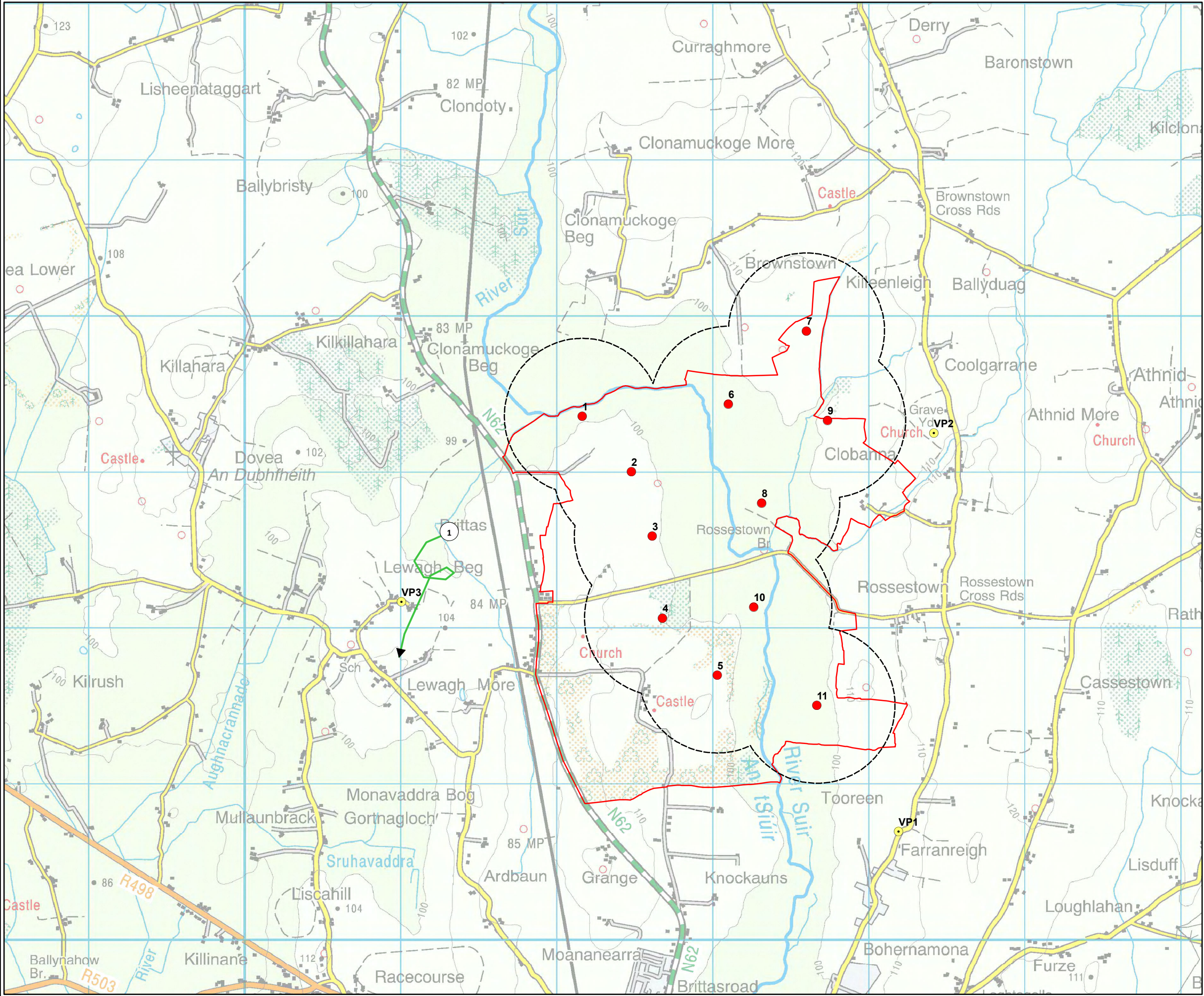
Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 08/04/2021, 10:08

TITLE:		Summer Flightlines 2021 Cormorant	
PROJECT:		Brittias Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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		Cork Dublin Carlow www.fehilytimoney.ie	





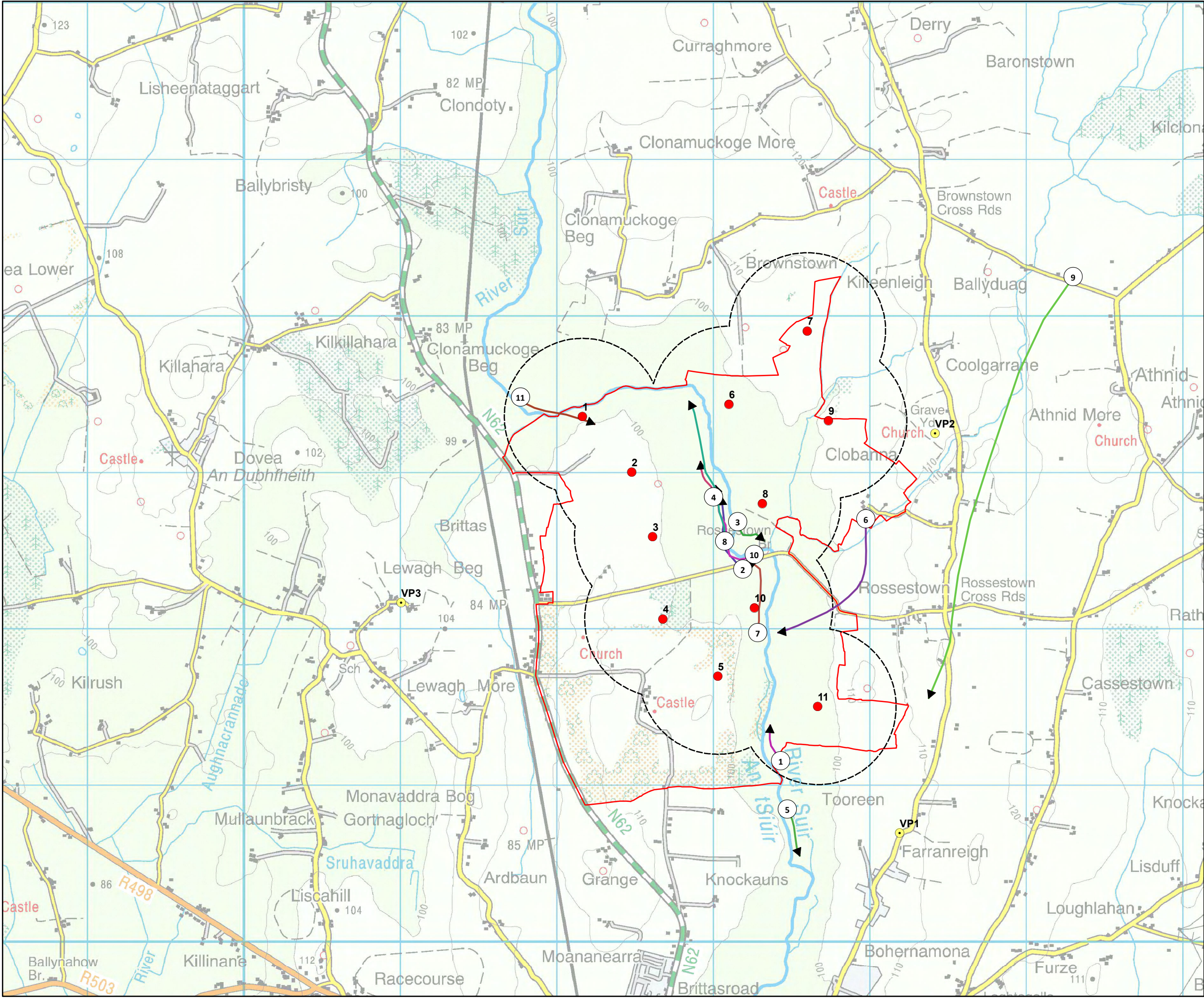
Legend

- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 10/08/2021, 13:53

TITLE:		Summer Flightlines 2021 Curlew	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 08/04/2021, 10:54

2, 15/04/2021, 12:06

3, 21/04/2021, 12:41

4, 15/04/2021, 13:06

5, 24/08/2021, 14:18

6, 17/06/2021, 14:52

7, 15/07/2021, 17:06

8, 30/05/2021, 17:35

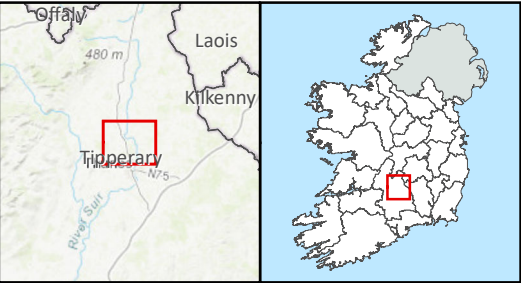
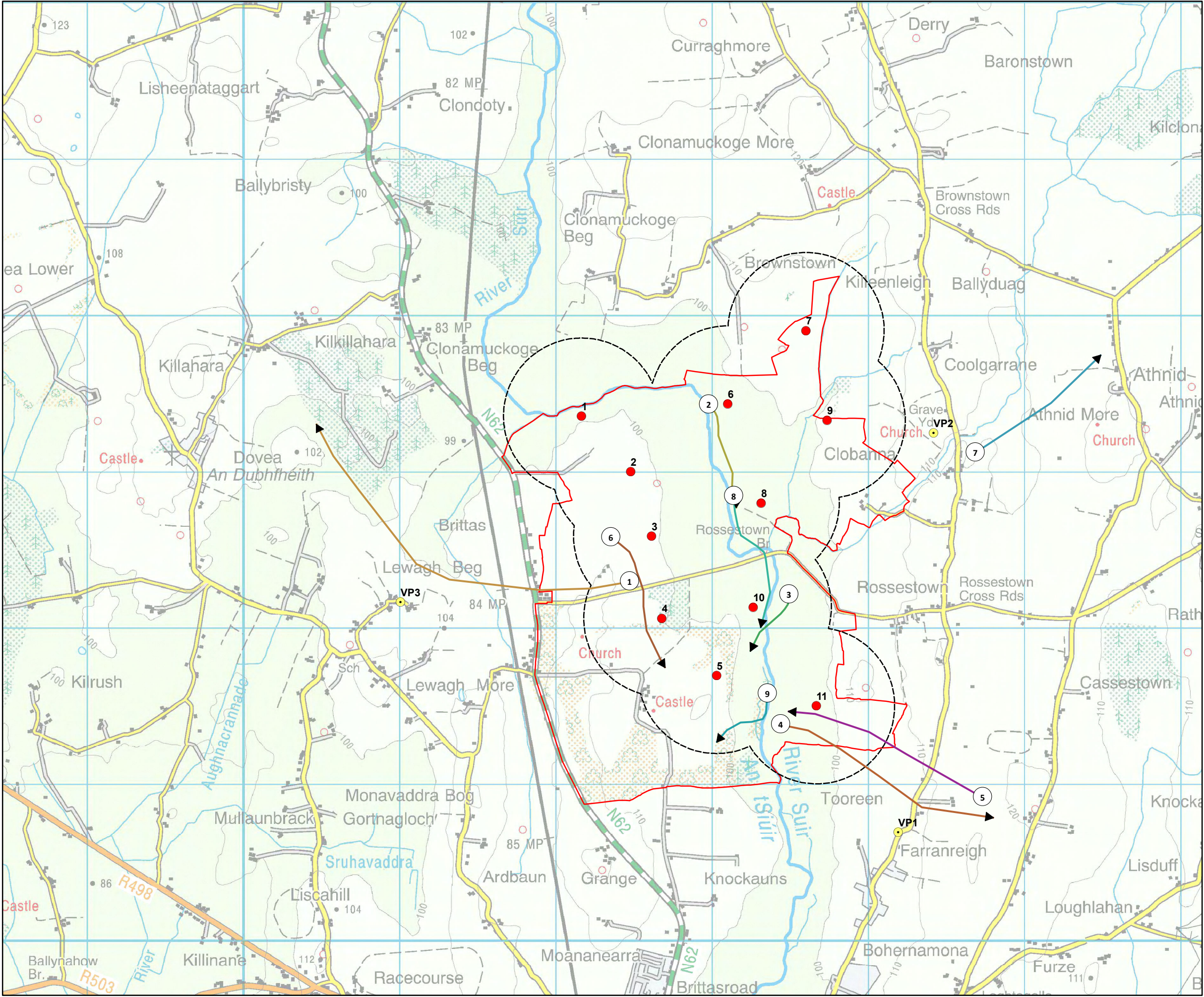
9, 26/05/2021, 18:19

10, 26/05/2021, 18:46

11, 24/08/2021, 19:09

TITLE:		Summer Flightlines 2021 Little Egret	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 11/05/2021, 09:34

2, 24/08/2021, 09:38

3, 02/09/2021, 09:38

4, 08/04/2021, 09:48

5, 08/04/2021, 09:53

6, 11/05/2021, 10:50

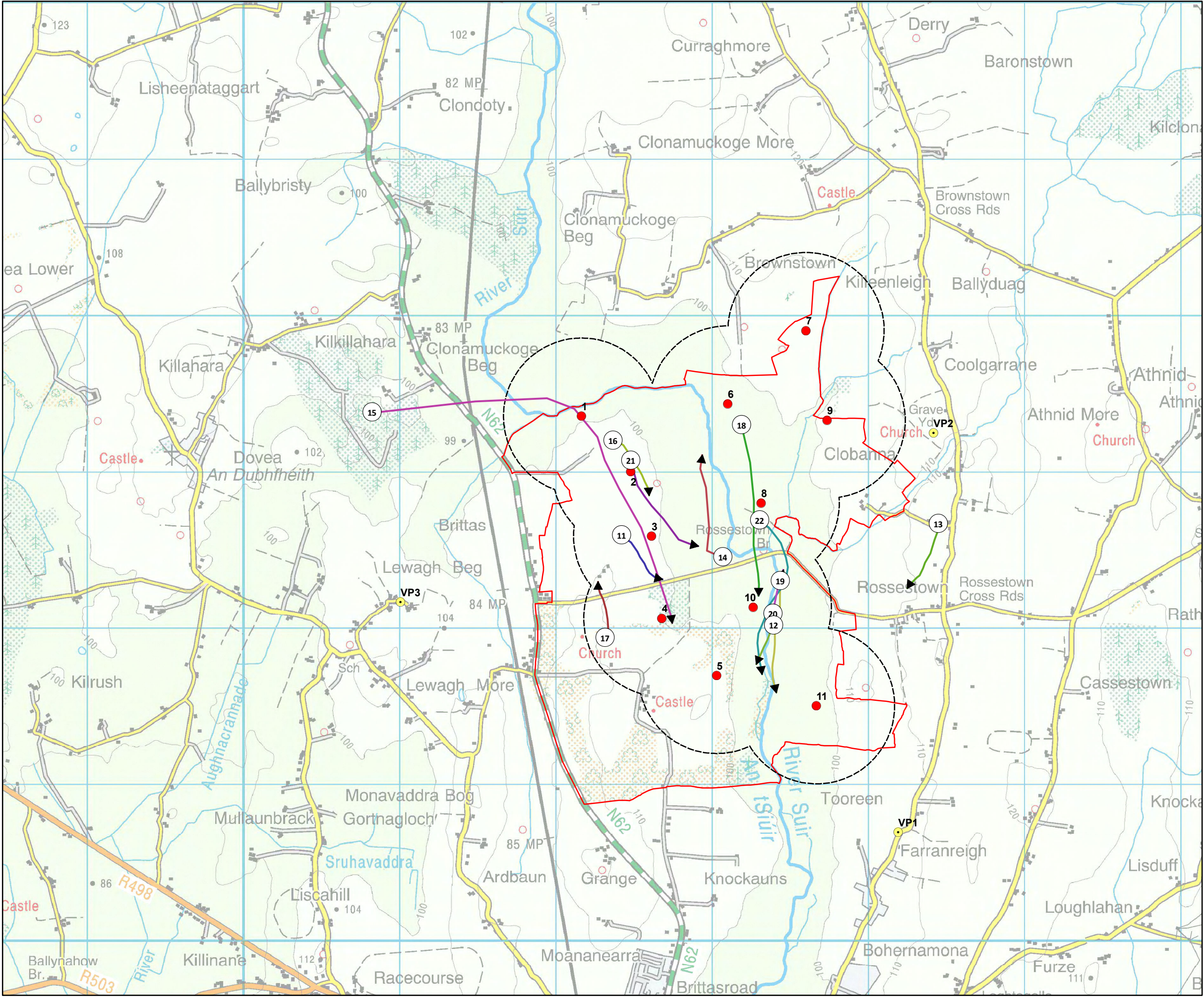
7, 21/04/2021, 11:43

8, 15/04/2021, 12:03

9, 24/04/2021, 12:26

TITLE:		Summer Flightlines 2021 Grey Heron 1	
PROJECT:		Brittas Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
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Vantage Point Locations

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Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

11, 02/09/2021, 13:22

12, 29/07/2021, 14:02

13, 17/06/2021, 14:04

14, 02/09/2021, 15:44

15, 28/04/2021, 16:22

16, 31/05/2021, 16:51

17, 15/06/2021, 17:11

18, 30/05/2021, 17:50

19, 25/05/2021, 17:57

20, 30/06/2021, 18:07

21, 24/08/2021, 18:18

22, 26/05/2021, 19:47

TITLE:

Summer Flightlines 2021
Grey Heron 2

PROJECT:

Brittis Wind Farm, Co. Tipperary

FIGURE NO:

-

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Enerco

SCALE:

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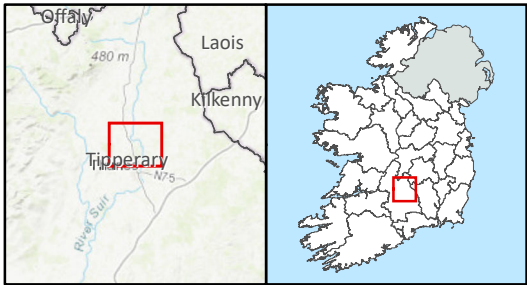
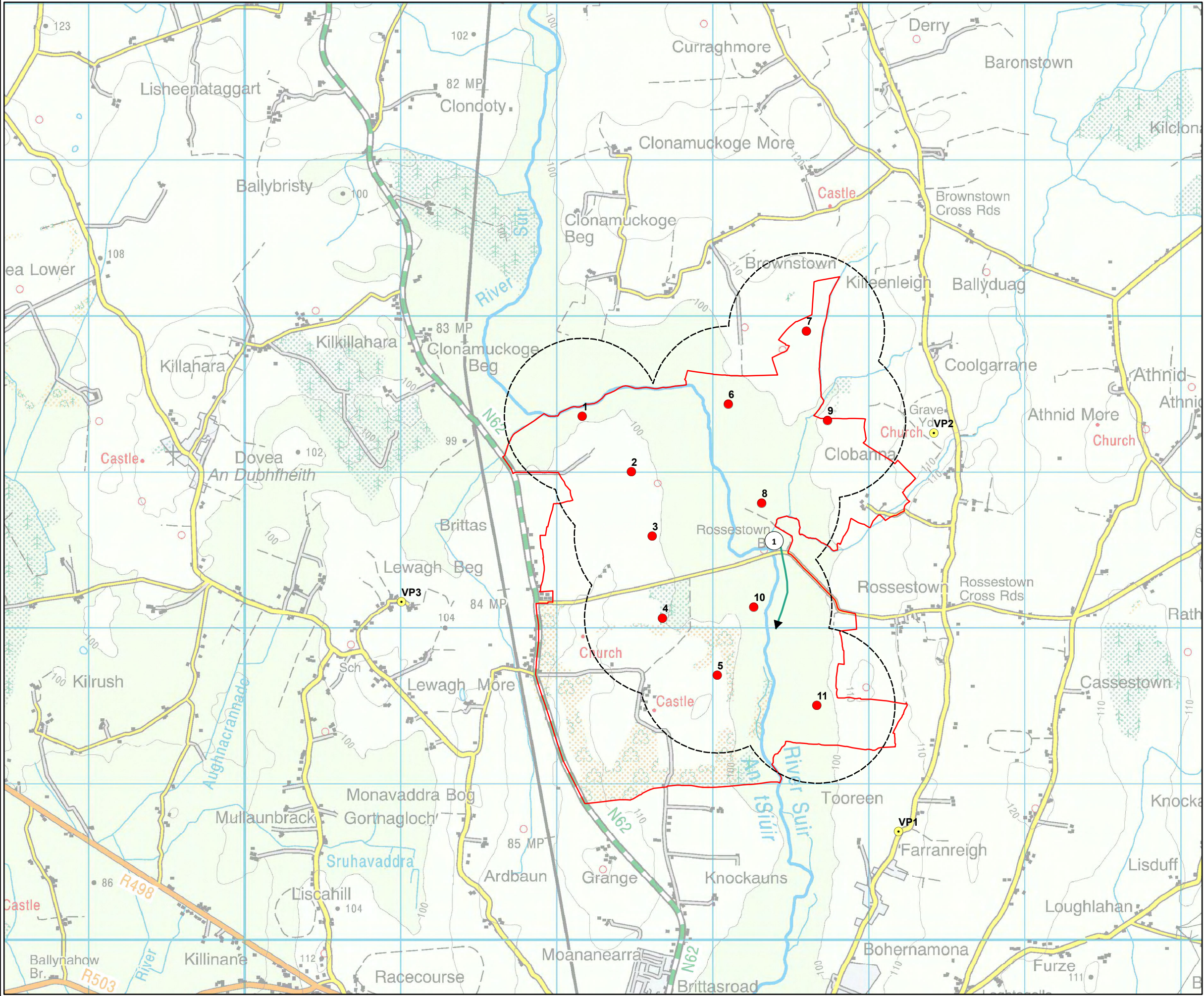
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Vantage Point Locations

Turbine Locations

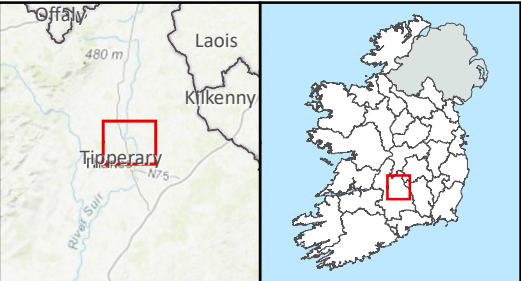
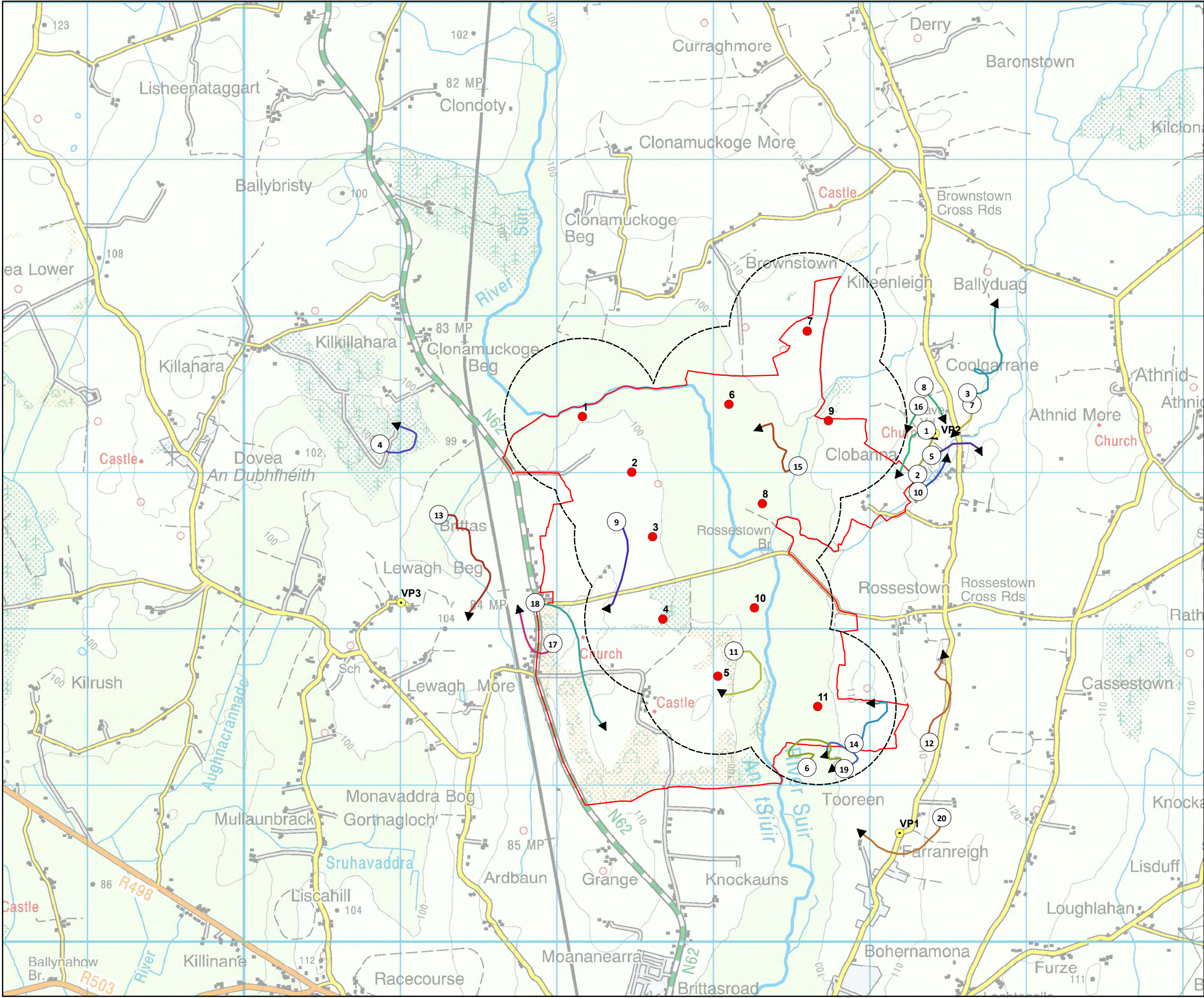
Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time
1, 15/04/2021, 13:40

TITLE: Summer Flightlines 2021 Herring Gull	
PROJECT: Brittis Wind Farm, Co. Tipperary	
FIGURE NO: -	
CLIENT: Enerco	
SCALE: 1:24000	REVISION: 0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 30/06/2021, 08:19

2, 30/06/2021, 08:58

3, 24/08/2021, 09:48

4, 25/06/2021, 09:51

5, 30/06/2021, 09:54

6, 24/07/2021, 09:57

7, 30/06/2021, 09:59

8, 30/06/2021, 10:01

9, 25/06/2021, 10:04

10, 30/06/2021, 10:04

11, 26/07/2021, 10:07

12, 02/09/2021, 10:16

13, 11/05/2021, 10:21

14, 24/07/2021, 10:28

15, 24/08/2021, 10:28

16, 30/06/2021, 10:38

17, 25/06/2021, 10:43

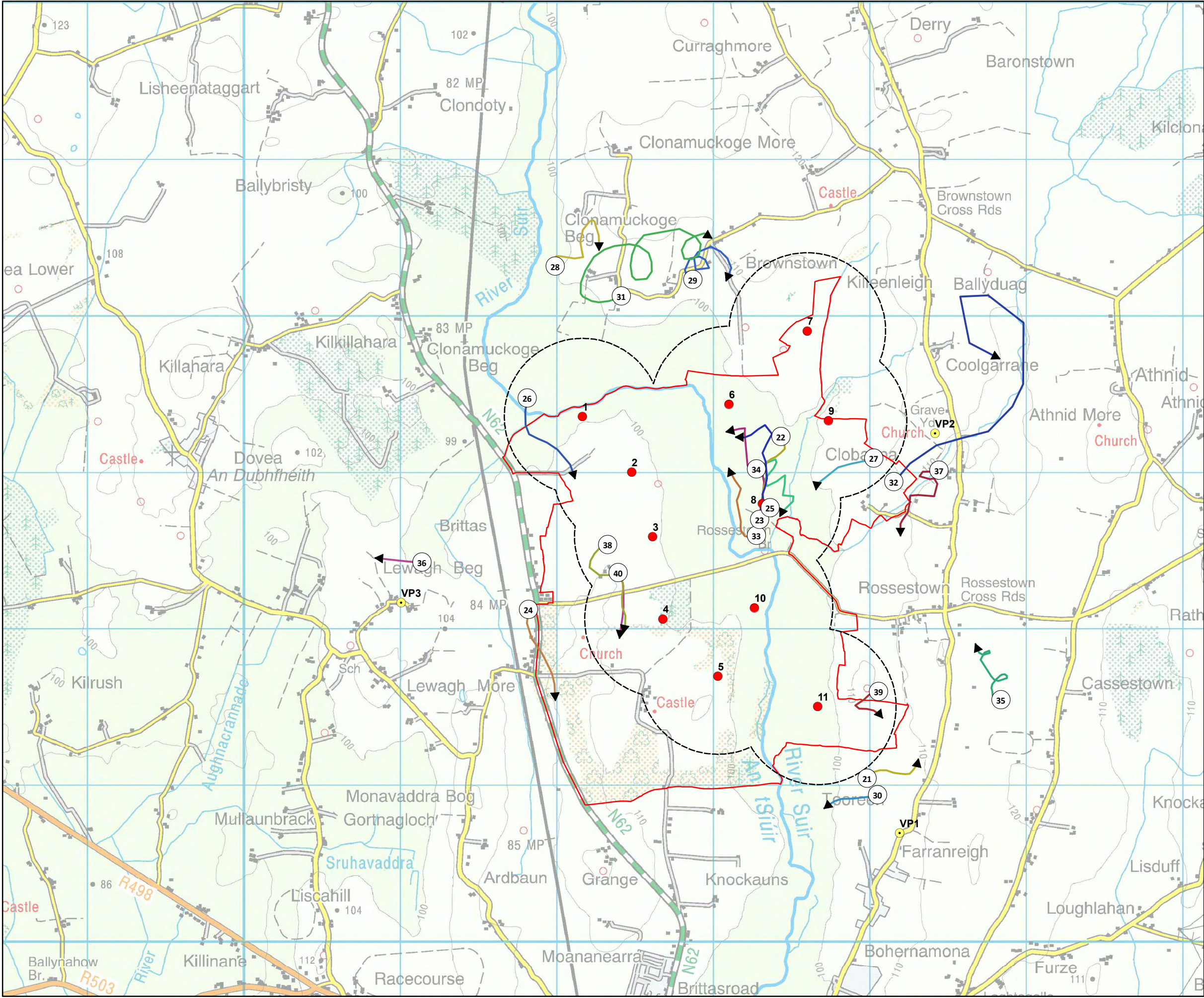
18, 25/06/2021, 10:44

19, 19/06/2021, 10:51

20, 19/06/2021, 10:57

TITLE:		Summer Flightlines 2021 Kestrel 1	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

21, 19/06/2021, 11:00

22, 26/07/2021, 11:07

23, 15/07/2021, 11:11

24, 11/05/2021, 11:14

25, 10/08/2021, 11:16

26, 25/06/2021, 11:23

27, 21/07/2021, 11:26

28, 21/04/2021, 11:31

29, 21/04/2021, 11:37

30, 08/04/2021, 11:39

31, 15/07/2021, 11:39

32, 21/04/2021, 11:41

33, 10/08/2021, 11:48

34, 15/04/2021, 12:04

35, 02/09/2021, 12:07

36, 14/04/2021, 12:09

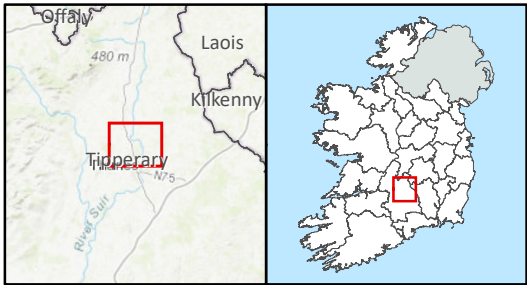
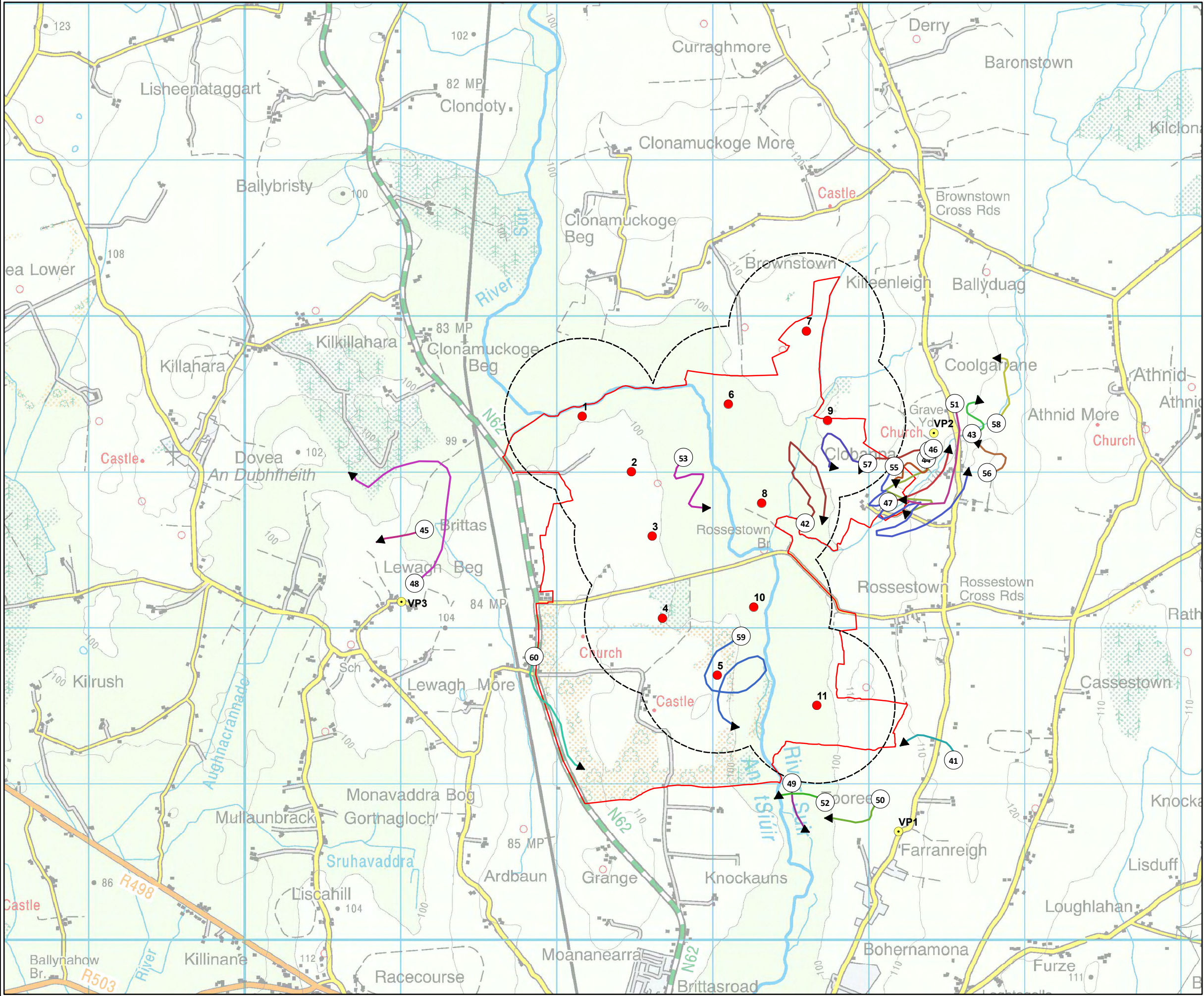
37, 15/04/2021, 12:21

38, 24/07/2021, 12:28

39, 08/04/2021, 12:36

40, 19/07/2021, 12:48

TITLE:		Summer Flightlines 2021 Kestrel 2	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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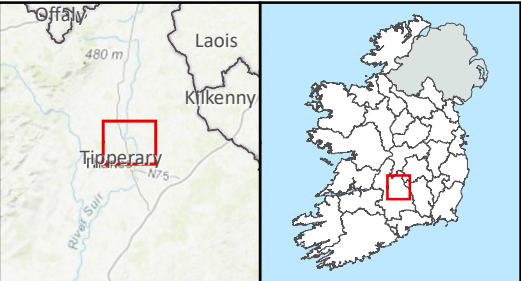
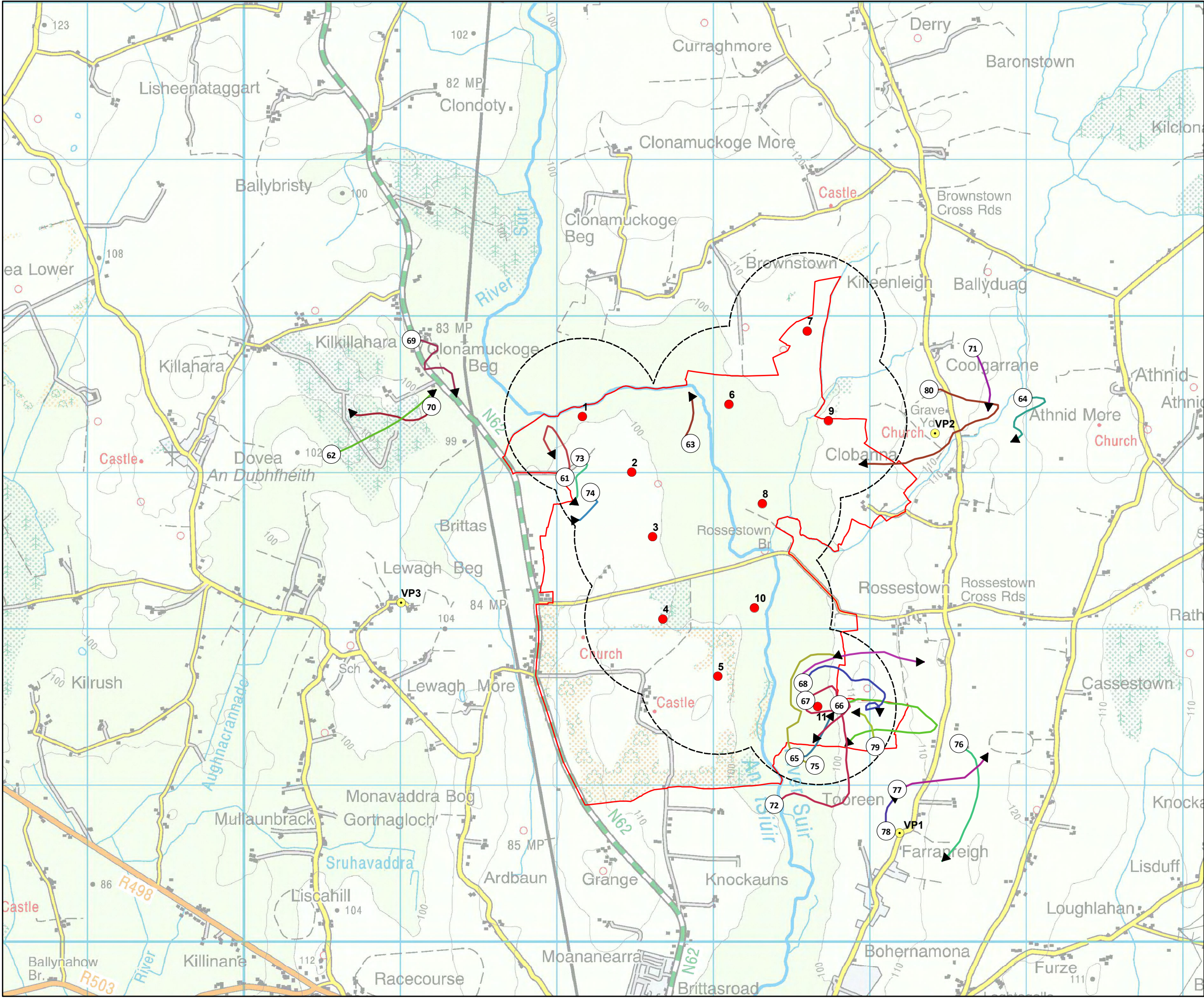
Legend

- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 41, 24/04/2021, 12:51
- 42, 15/04/2021, 12:58
- 43, 17/06/2021, 13:03
- 44, 17/06/2021, 13:15
- 45, 14/04/2021, 13:26
- 46, 21/04/2021, 13:27
- 47, 17/06/2021, 13:29
- 48, 14/04/2021, 13:34
- 49, 29/07/2021, 13:36
- 50, 24/08/2021, 13:36
- 51, 26/08/2021, 13:37
- 52, 24/08/2021, 13:39
- 53, 26/08/2021, 13:41
- 54, 17/06/2021, 13:42
- 55, 17/06/2021, 13:54
- 56, 17/06/2021, 14:08
- 57, 21/04/2021, 14:09
- 58, 17/06/2021, 14:17
- 59, 15/07/2021, 15:15
- 60, 10/08/2021, 15:17

TITLE: Summer Flightlines 2021 Kestrel 3	
PROJECT: Brittis Wind Farm, Co. Tipperary	
FIGURE NO: -	
CLIENT: Enerco	
SCALE: 1:24000	REVISION: 0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

61, 28/04/2021, 15:25

62, 02/09/2021, 15:26

63, 26/08/2021, 15:27

64, 17/06/2021, 15:34

65, 25/05/2021, 15:39

66, 25/05/2021, 15:40

67, 25/05/2021, 15:44

68, 30/05/2021, 15:59

69, 31/05/2021, 16:02

70, 31/05/2021, 16:07

71, 17/06/2021, 16:11

72, 30/05/2021, 16:17

73, 28/04/2021, 16:21

74, 28/04/2021, 16:26

75, 30/05/2021, 16:39

76, 25/05/2021, 16:50

77, 30/05/2021, 16:54

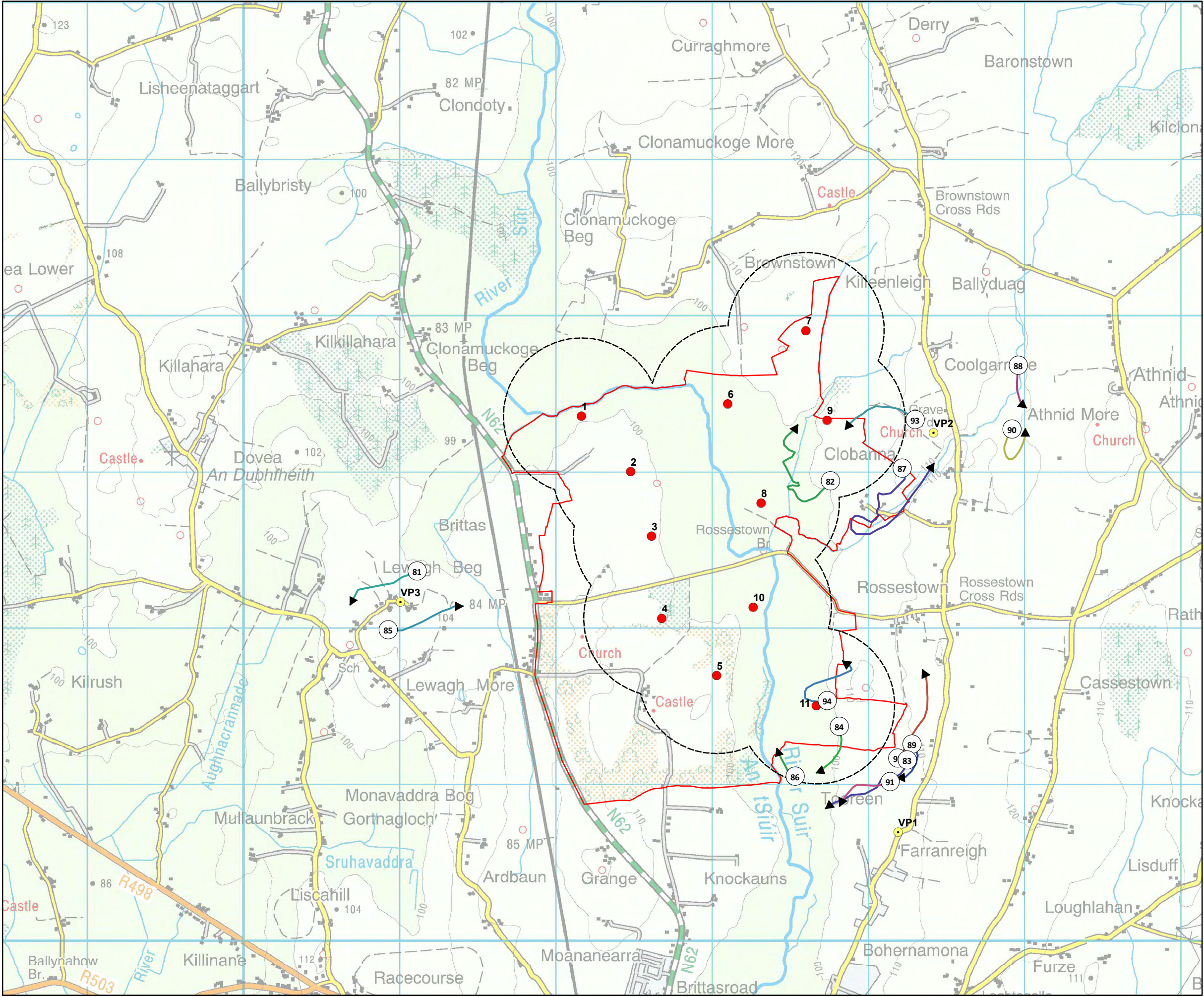
78, 30/06/2021, 17:13

79, 30/06/2021, 17:14

80, 30/05/2021, 17:15

TITLE:		Summer Flightlines 2021 Kestrel 4	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

81, 28/04/2021, 17:17

82, 30/05/2021, 17:17

83, 25/05/2021, 17:22

84, 30/06/2021, 17:23

85, 28/04/2021, 17:28

86, 30/06/2021, 18:00

87, 30/05/2021, 18:06

88, 30/05/2021, 18:33

89, 30/06/2021, 18:43

90, 30/05/2021, 18:46

91, 30/06/2021, 18:46

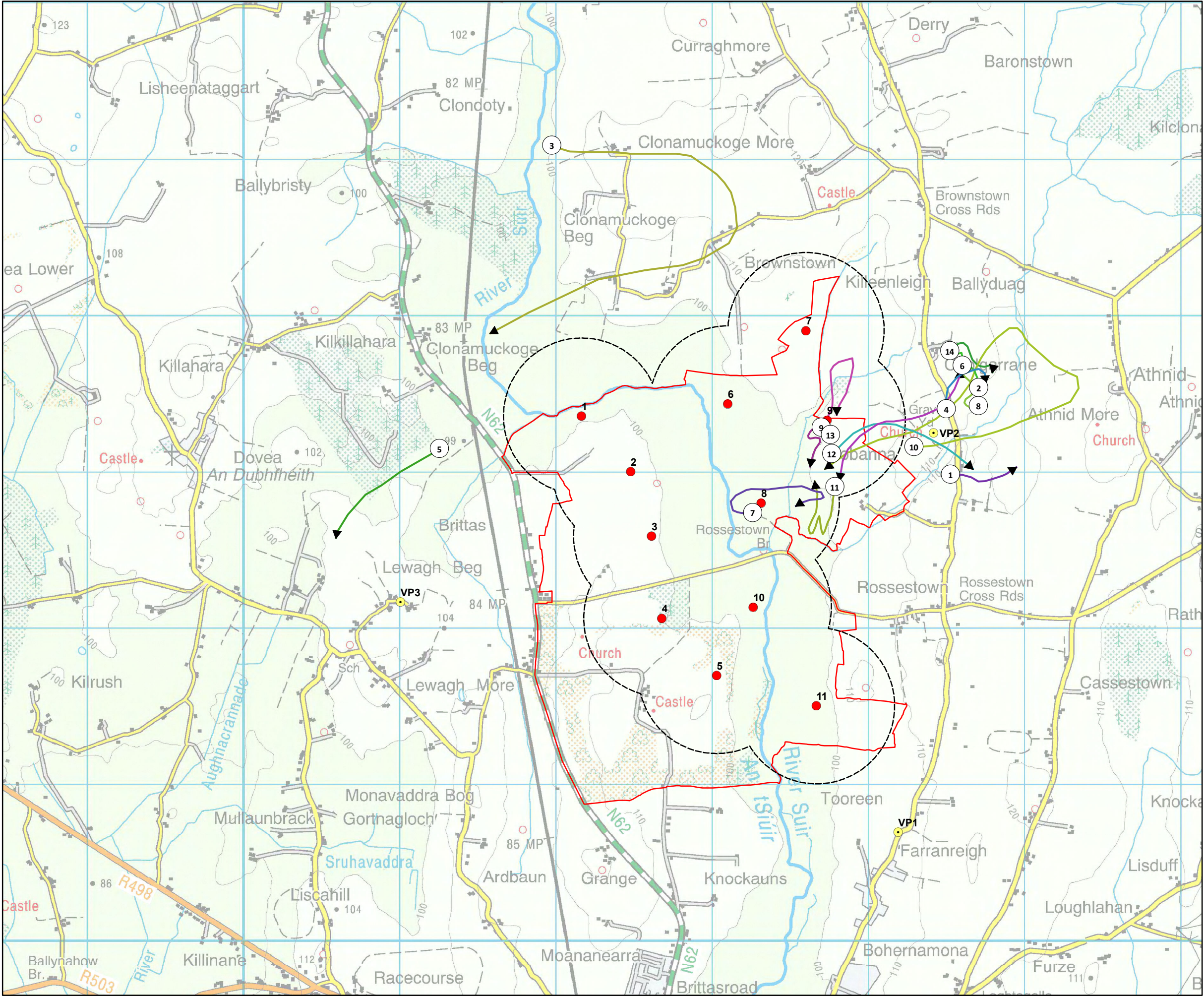
92, 30/06/2021, 19:19

93, 31/05/2021, 19:22

94, 30/06/2021, 19:52

TITLE:		Summer Flightlines 2021 Kestrel 5	
PROJECT:		Brittias Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 01/06/2021, 19:31

2, 31/05/2021, 20:05

3, 30/06/2021, 08:55

4, 30/06/2021, 09:01

5, 25/06/2021, 10:13

6, 17/06/2021, 14:04

7, 17/06/2021, 15:49

8, 26/05/2021, 17:15

9, 30/05/2021, 17:21

10, 30/05/2021, 17:44

11, 30/05/2021, 18:26

12, 30/05/2021, 18:36

13, 30/05/2021, 19:06

14, 26/05/2021, 19:25

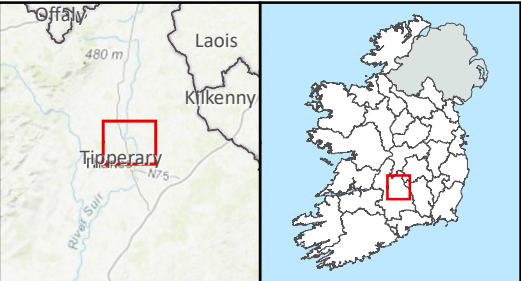
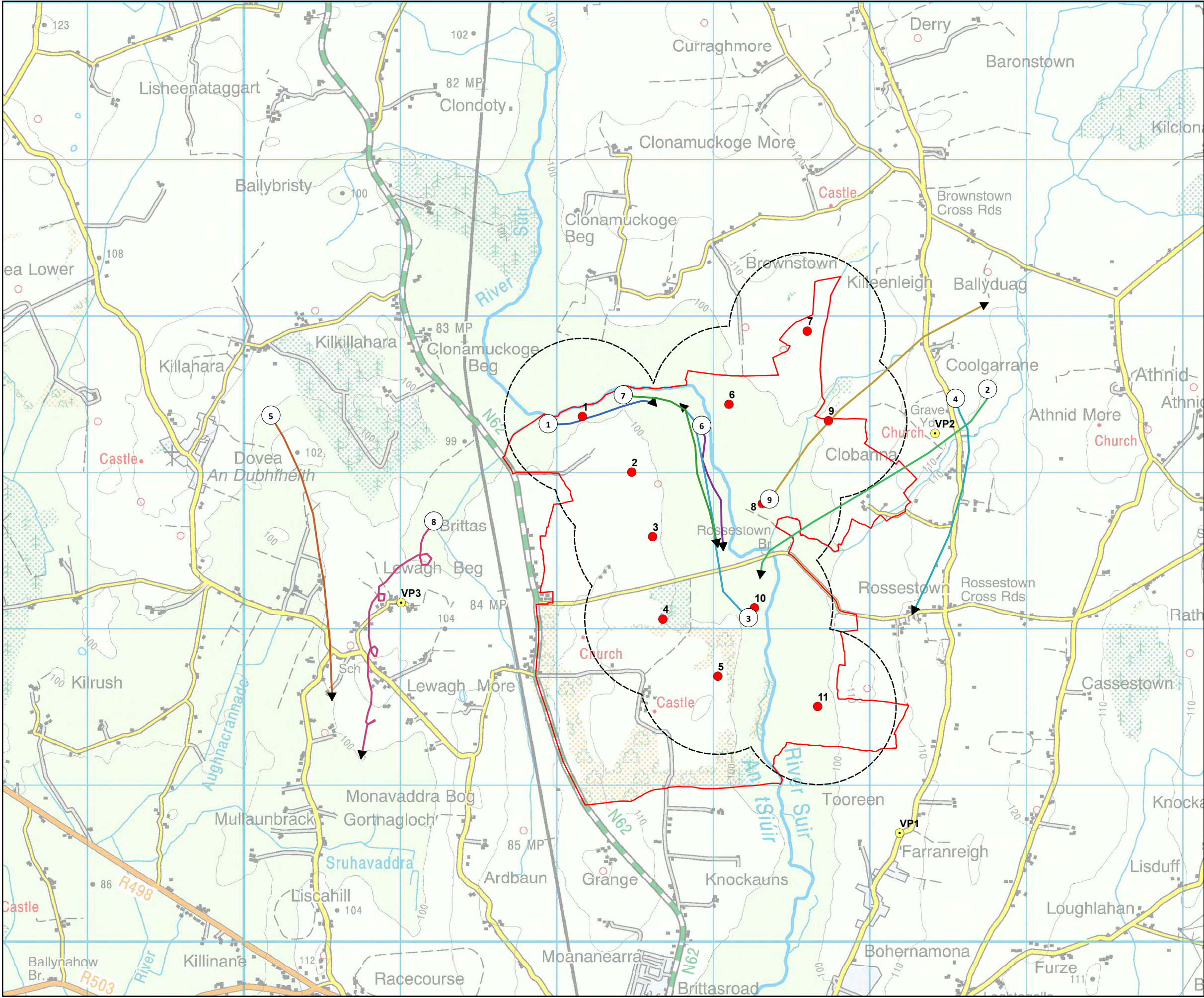
TITLE:		Summer Flightlines 2021 Lapwing	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 30/06/2021, 08:33

2, 26/07/2021, 09:55

3, 26/07/2021, 10:02

4, 24/08/2021, 11:41

5, 24/07/2021, 13:05

6, 15/07/2021, 13:12

7, 26/07/2021, 14:19

8, 02/09/2021, 14:34

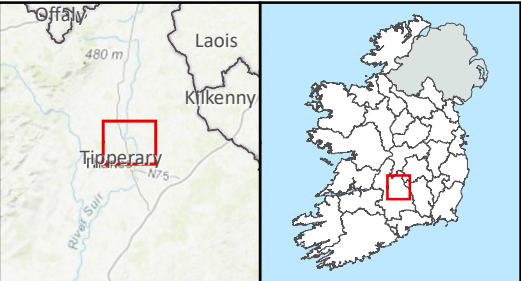
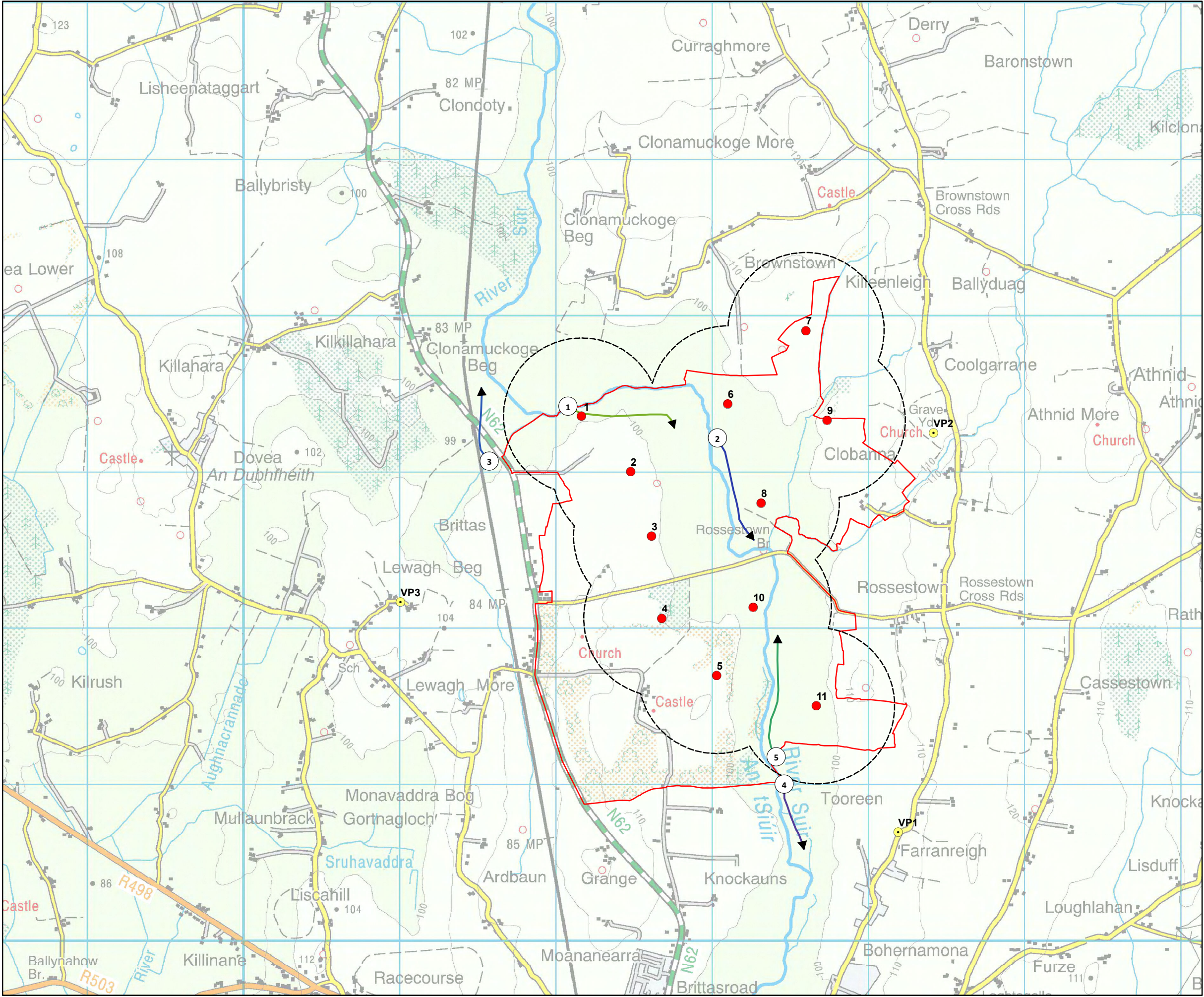
9, 26/05/2021, 17:38

TITLE:		Summer Flightlines 2021 Lesser Black-backed Gull	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 25/06/2021, 11:31

2, 26/08/2021, 13:43

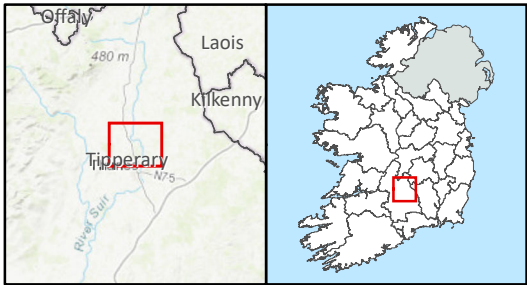
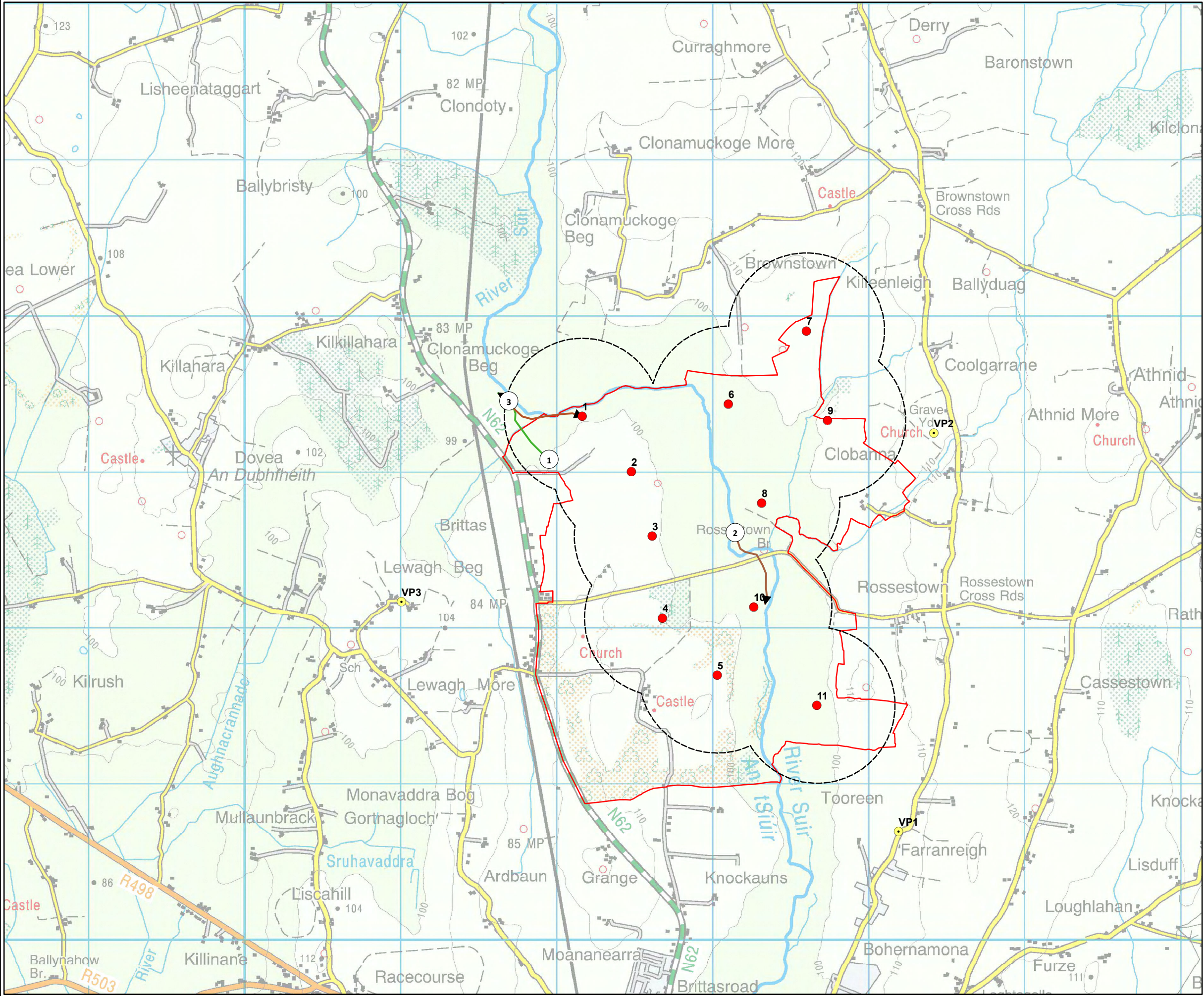
3, 31/05/2021, 14:12

4, 25/05/2021, 15:51

5, 30/05/2021, 15:54

TITLE:		Summer Flightlines 2021 Mallard	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

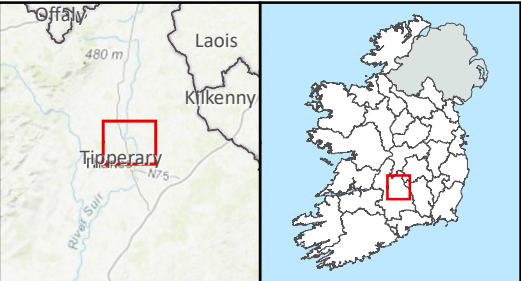
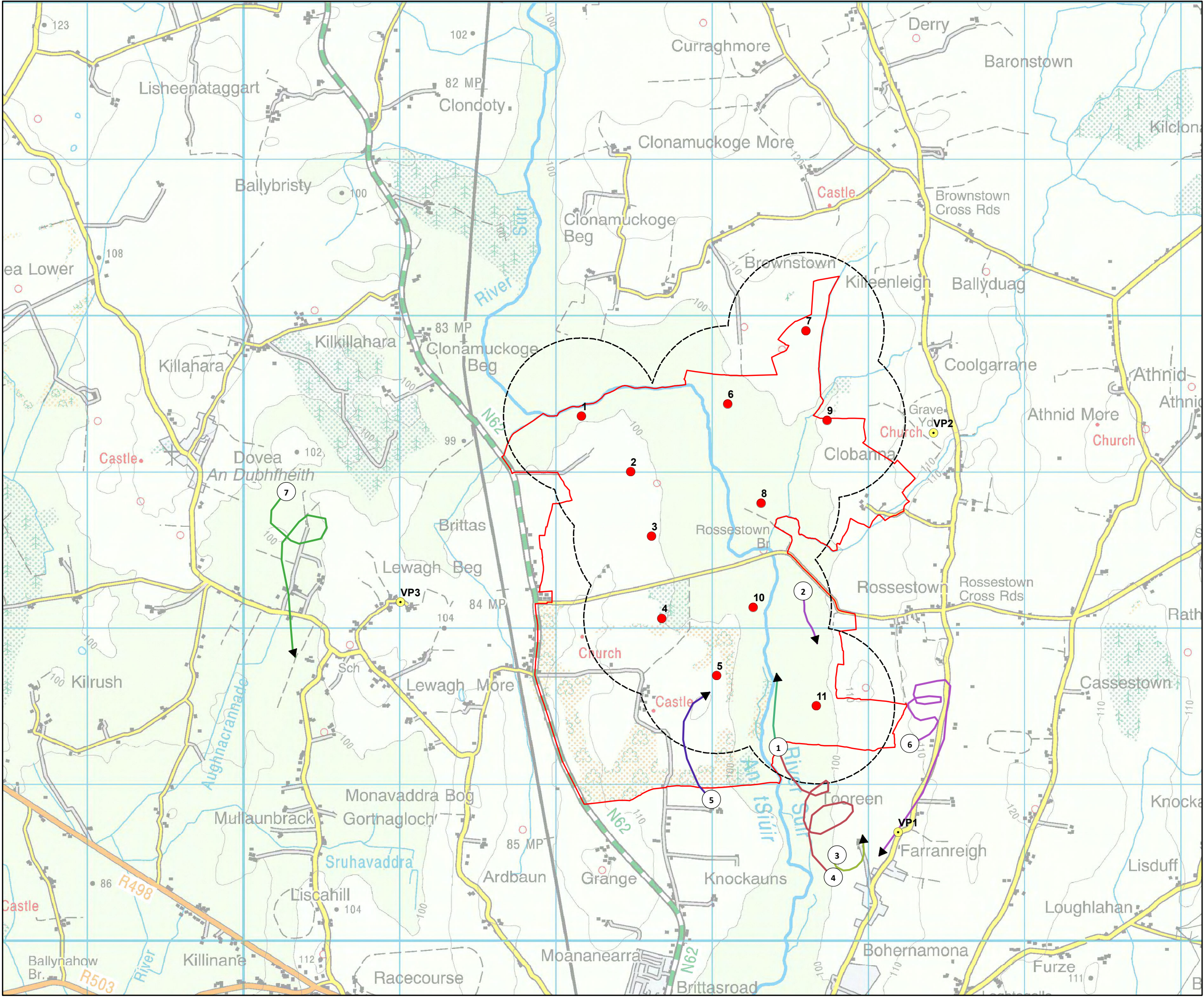
- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 1, 11/05/2021, 10:08
- 2, 30/05/2021, 14:37
- 3, 31/05/2021, 15:11

TITLE: Summer Flightlines 2021 Mute Swan	
PROJECT: Brittas Wind Farm, Co. Tipperary	
FIGURE NO: -	
CLIENT: Enerco	
SCALE: 1:24000	REVISION: 0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 02/09/2021, 10:36

2, 26/08/2021, 11:14

3, 26/08/2021, 11:18

4, 26/08/2021, 11:19

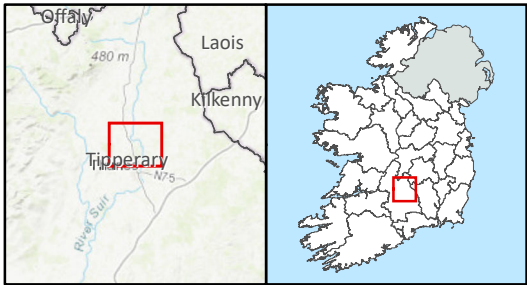
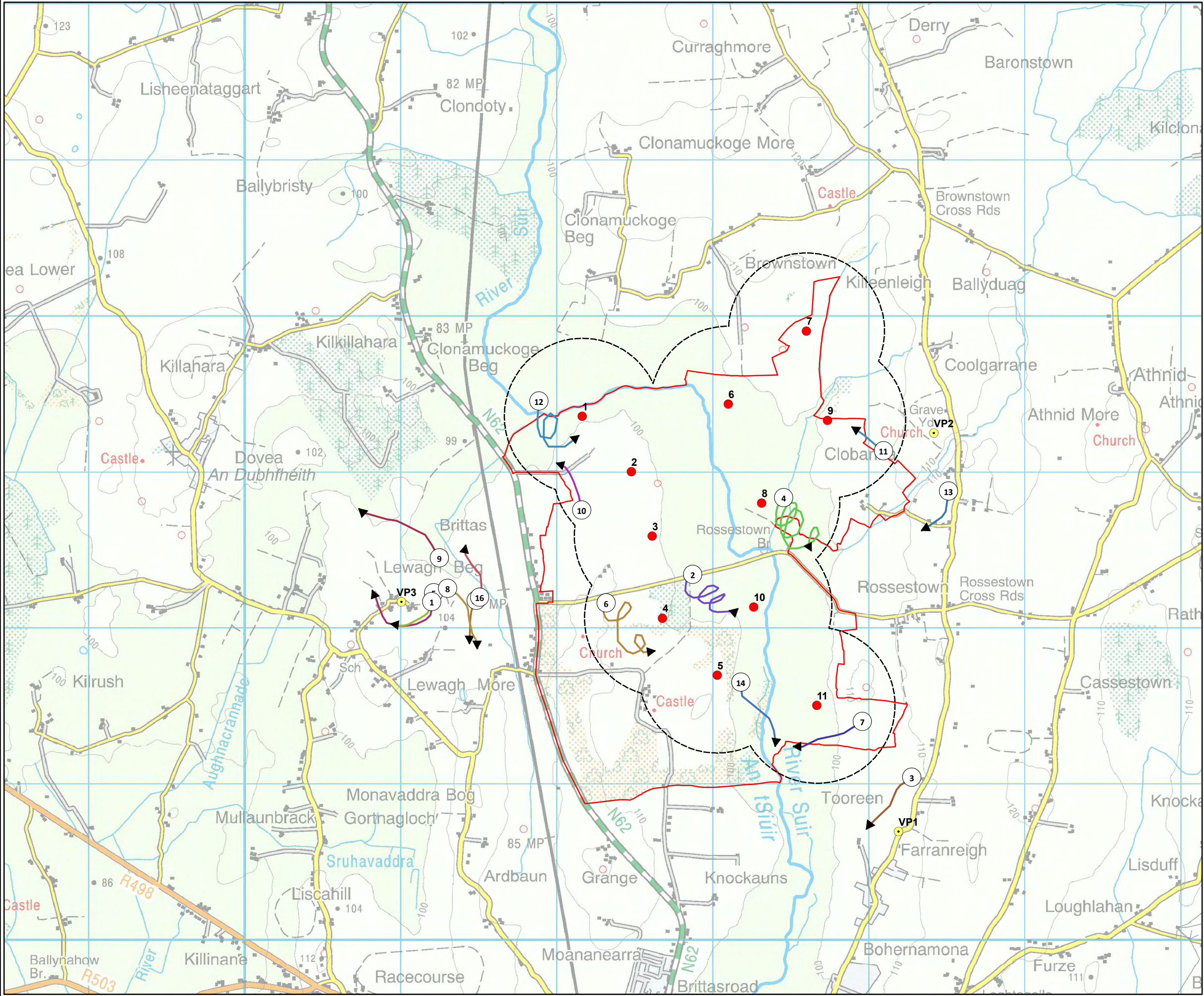
5, 24/04/2021, 11:41

6, 30/05/2021, 16:10

7, 24/08/2021, 17:04

TITLE:		Summer Flightlines 2021 Peregrine	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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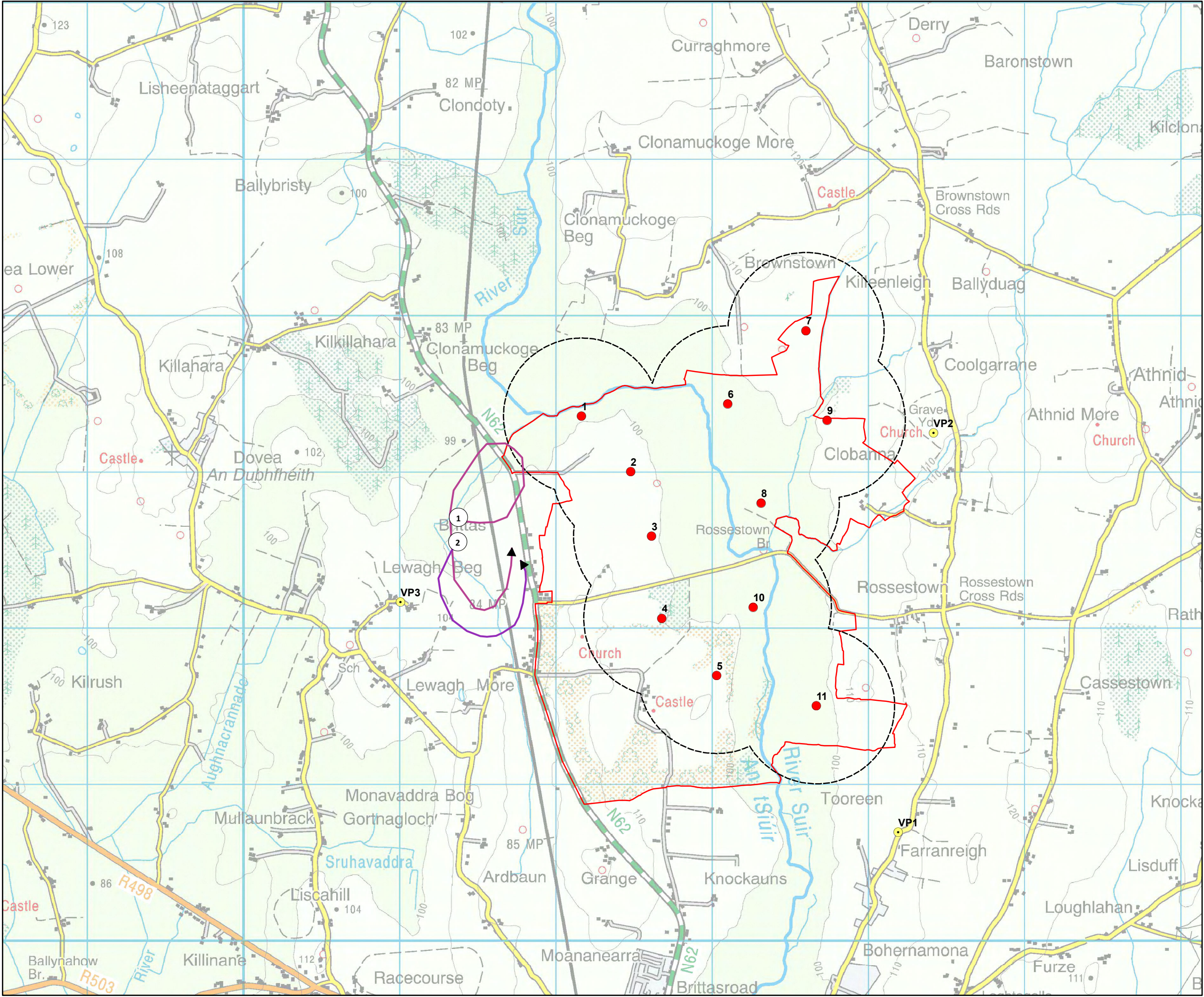
Legend

- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 1, 11/05/2021, 11:10
- 2, 21/04/2021, 11:33
- 3, 02/09/2021, 11:33
- 4, 21/04/2021, 12:00
- 5, 02/09/2021, 13:01
- 6, 15/04/2021, 13:04
- 7, 24/04/2021, 13:35
- 8, 26/07/2021, 13:36
- 9, 10/08/2021, 13:44
- 10, 02/09/2021, 13:47
- 11, 15/07/2021, 13:52
- 12, 14/04/2021, 14:02
- 13, 15/04/2021, 14:27
- 14, 25/05/2021, 16:11
- 15, 15/06/2021, 17:46
- 16, 24/08/2021, 19:23

TITLE: Summer Flightlines 2021 Sparrowhawk	
PROJECT: Brittis Wind Farm, Co. Tipperary	
FIGURE NO: -	
CLIENT: Enerco	
SCALE: 1:24000	REVISION: 0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

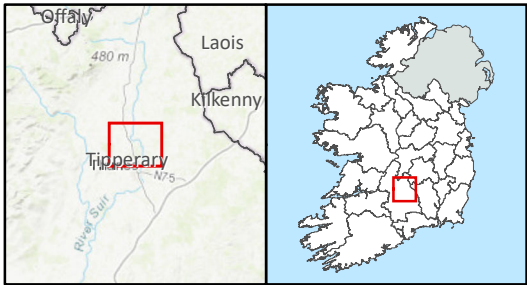
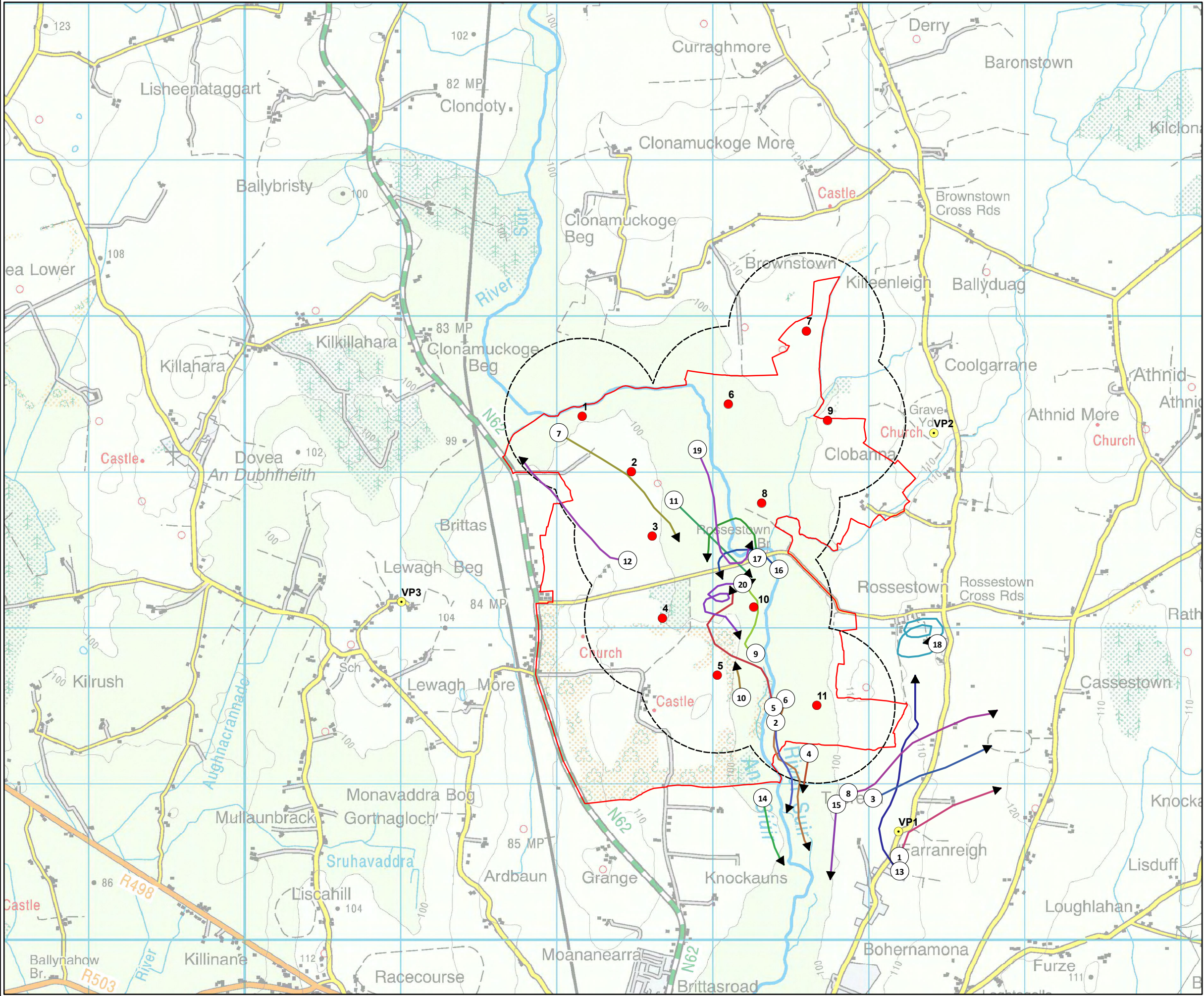
Flightline, Date, Time

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2, 02/09/2021, 14:51

TITLE:		Summer Flightlines 2021 Snipe	
PROJECT:		Brittas Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

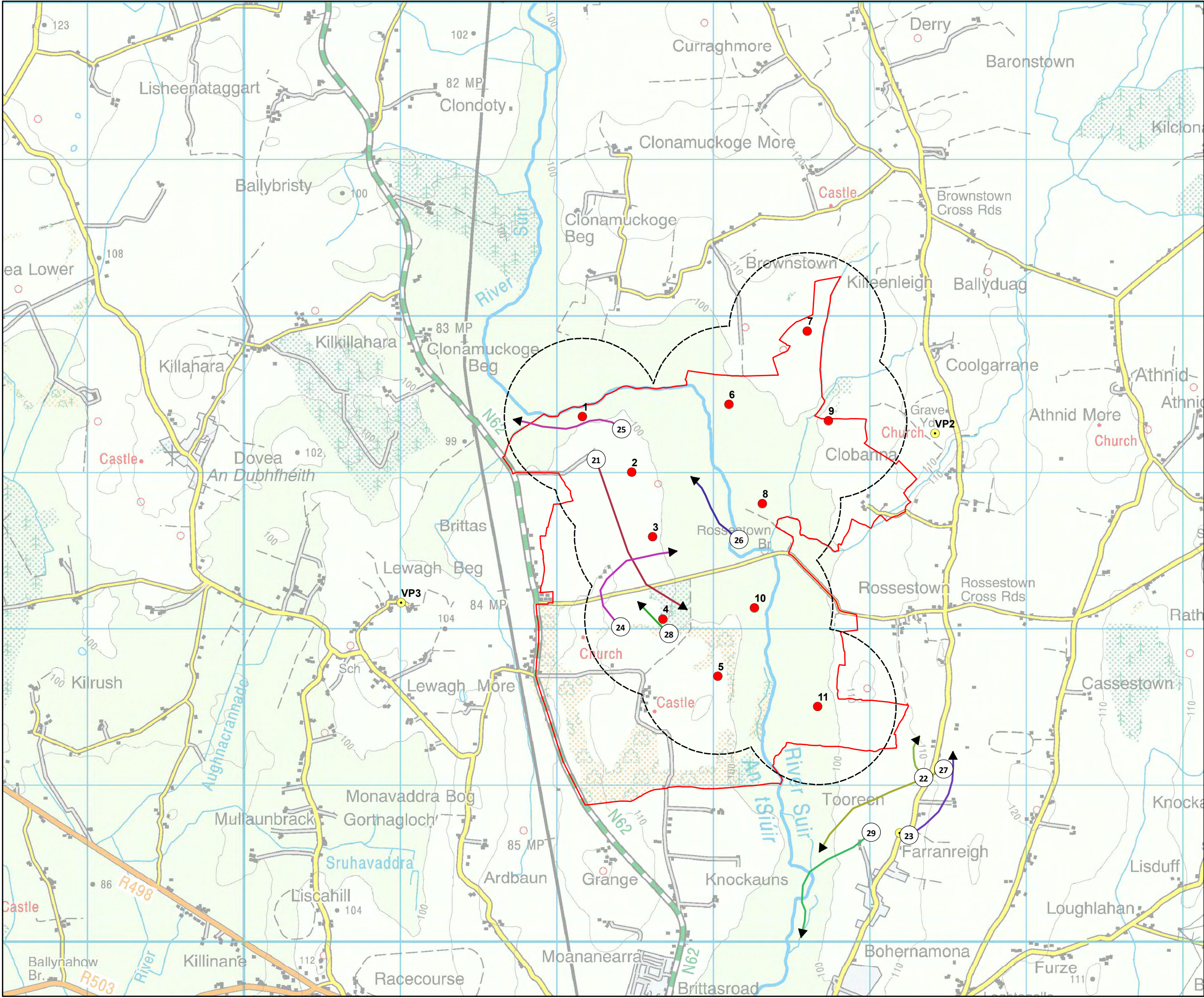
- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 1, 14/01/2021, 09:12
- 2, 29/12/2020, 09:19
- 3, 14/01/2021, 09:21
- 4, 05/02/2021, 09:21
- 5, 29/12/2020, 09:40
- 6, 20/12/2020, 09:56
- 7, 19/12/2020, 10:00
- 8, 14/01/2021, 10:07
- 9, 29/12/2020, 10:12
- 10, 29/12/2020, 10:22
- 11, 19/12/2020, 10:30
- 12, 30/12/2020, 11:16
- 13, 04/12/2020, 11:31
- 14, 20/12/2020, 11:41
- 15, 14/01/2021, 11:51
- 16, 29/12/2020, 11:54
- 17, 29/12/2020, 12:05
- 18, 04/12/2020, 12:27
- 19, 29/12/2020, 12:47
- 20, 29/12/2020, 12:52

TITLE:		Winter Flightlines 2020/2021 Black-headed Gull 1	
PROJECT:		Brittias Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

21, 29/12/2020, 13:06

22, 22/03/2021, 13:22

23, 22/03/2021, 13:25

24, 29/12/2020, 13:52

25, 29/12/2020, 13:55

26, 28/01/2021, 14:14

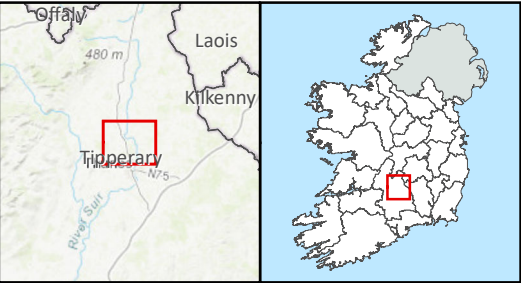
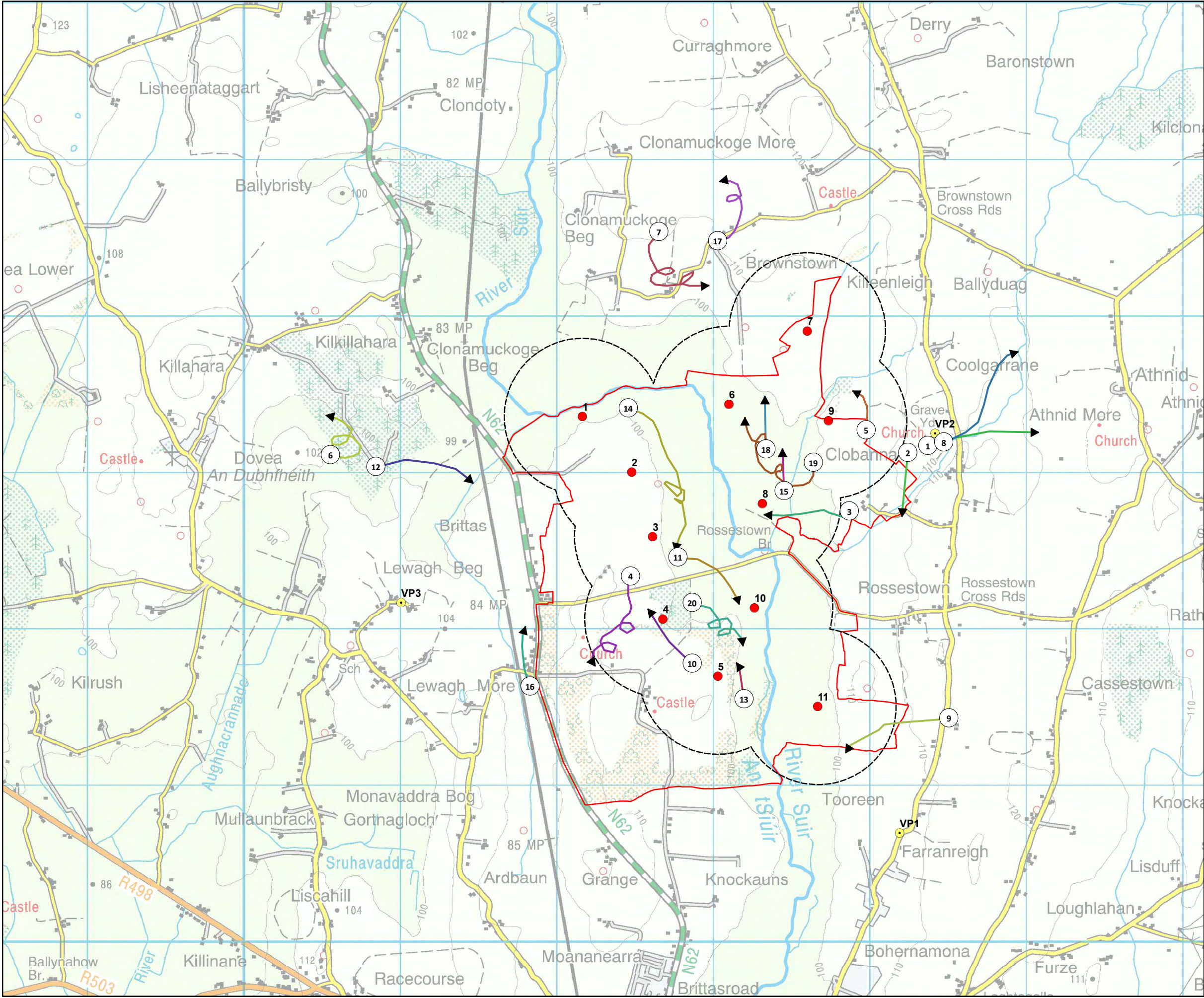
27, 26/01/2021, 14:24

28, 29/12/2020, 15:06

29, 26/01/2021, 15:15

TITLE:		Winter Flightlines 2020/2021 Black-headed Gull 2	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 05/11/2020, 08:48

2, 05/11/2020, 08:51

3, 05/11/2020, 08:57

4, 30/03/2021, 09:10

5, 11/12/2020, 09:14

6, 24/03/2021, 09:22

7, 30/03/2021, 09:30

8, 27/02/2021, 09:31

9, 05/02/2021, 09:35

10, 23/03/2021, 09:36

11, 23/03/2021, 09:39

12, 30/12/2020, 09:44

13, 29/12/2020, 09:45

14, 30/03/2021, 09:48

15, 19/11/2020, 09:51

16, 04/02/2021, 09:51

17, 30/03/2021, 09:54

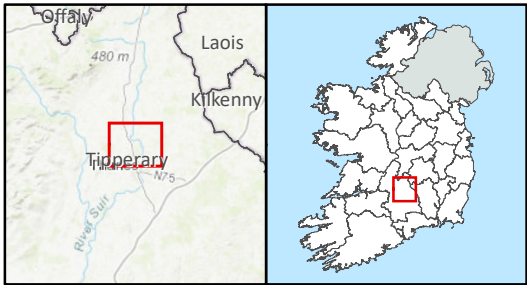
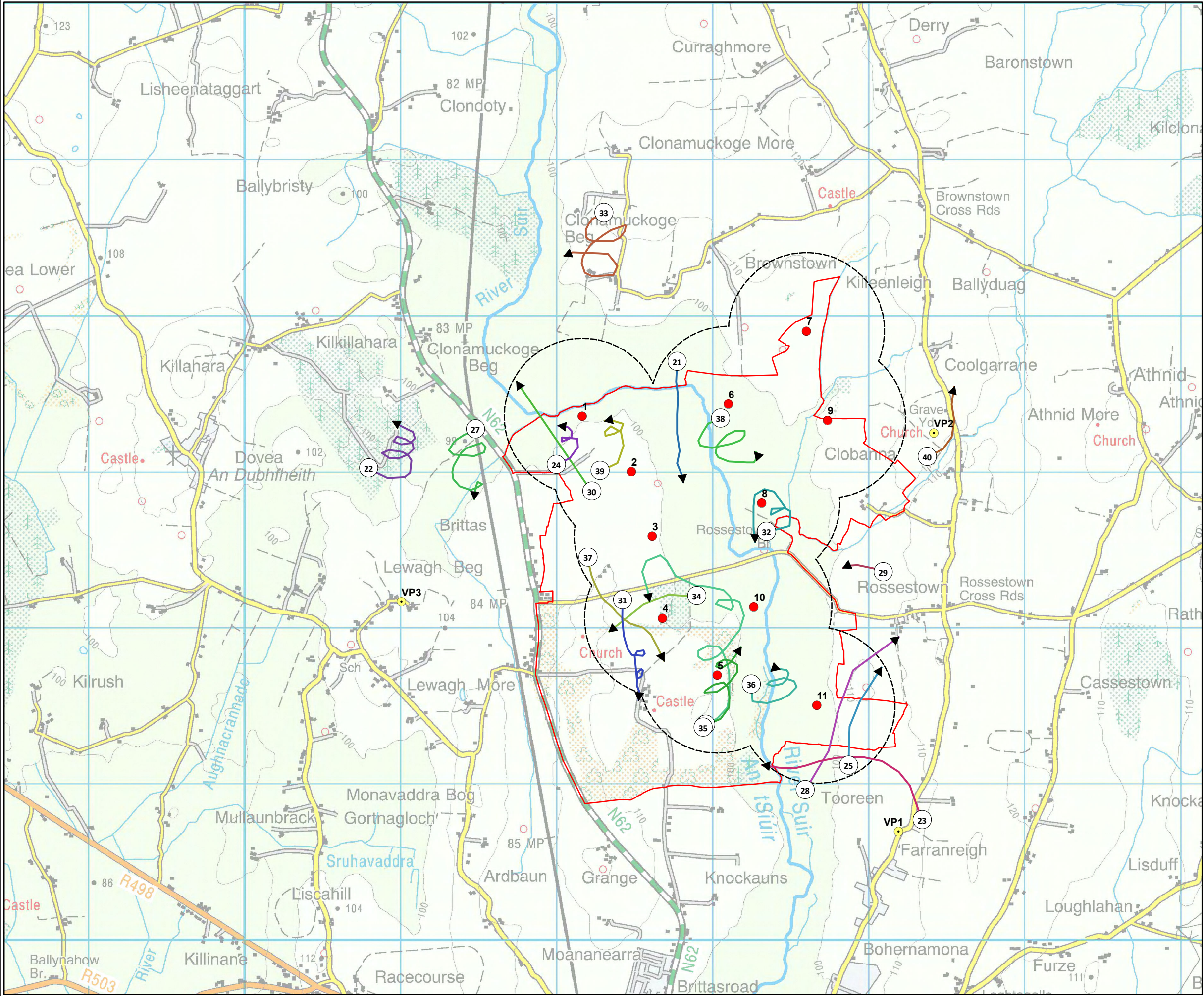
18, 19/11/2020, 09:56

19, 30/03/2021, 09:56

20, 23/03/2021, 10:10

TITLE:		Winter Flightlines 2020/2021 Buzzard 1	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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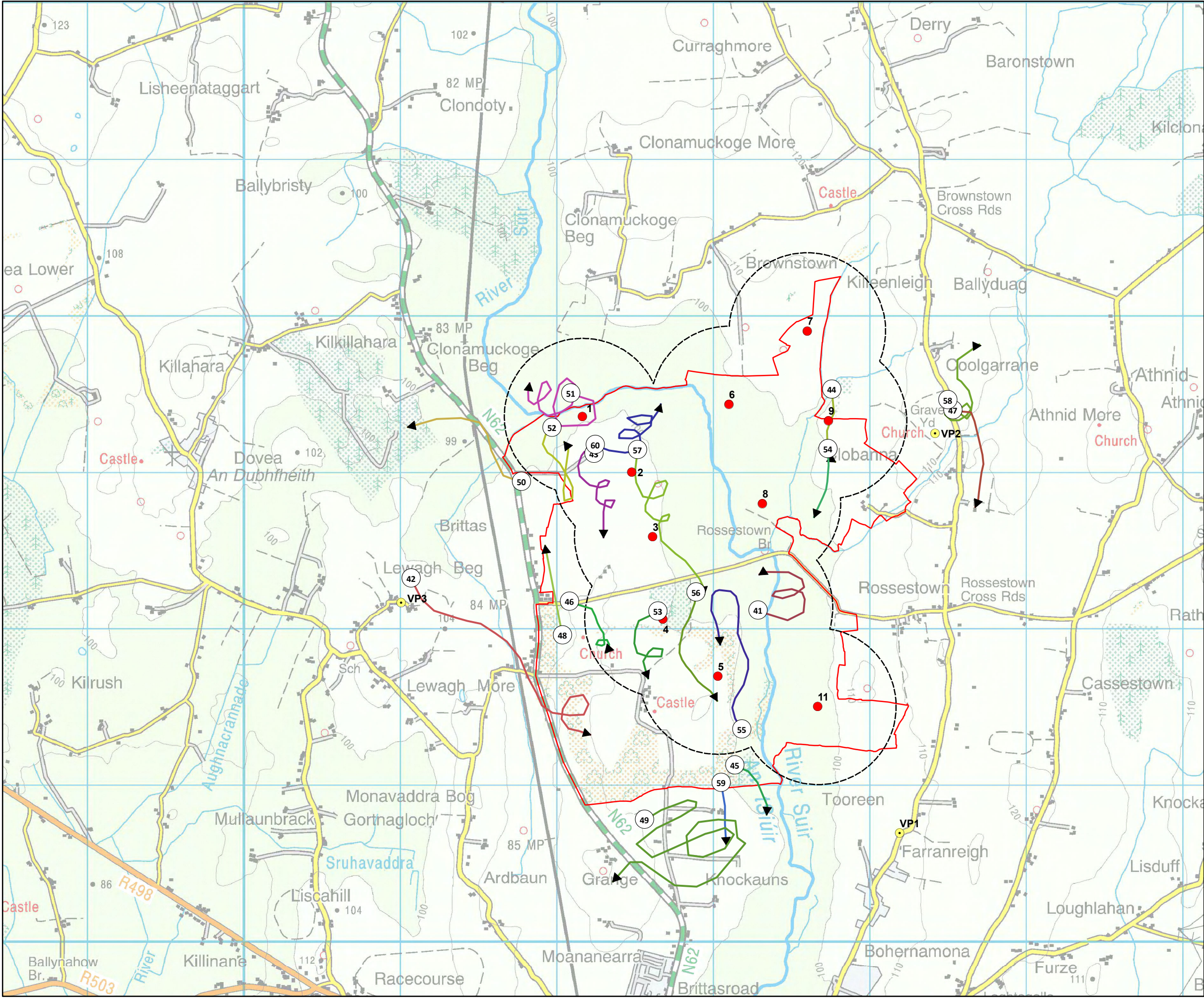
Legend

- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 21, 17/01/2021, 10:13
- 22, 24/03/2021, 10:15
- 23, 22/02/2021, 10:30
- 24, 24/03/2021, 10:34
- 25, 28/11/2020, 10:39
- 26, 05/02/2021, 10:42
- 27, 16/03/2021, 10:44
- 28, 14/01/2021, 10:47
- 29, 14/01/2021, 10:50
- 30, 19/12/2020, 10:58
- 31, 24/03/2021, 11:06
- 32, 23/03/2021, 11:11
- 33, 27/02/2021, 11:12
- 34, 05/11/2020, 11:14
- 35, 15/12/2020, 11:19
- 36, 08/03/2021, 11:20
- 37, 11/12/2020, 11:21
- 38, 16/03/2021, 11:21
- 39, 24/03/2021, 11:25
- 40, 23/03/2021, 11:31

TITLE:		Winter Flightlines 2020/2021 Buzzard 2	
PROJECT:		Brittas Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

41, 08/03/2021, 11:32

42, 16/03/2021, 11:32

43, 27/02/2021, 11:37

44, 11/12/2020, 11:38

45, 14/01/2021, 11:39

46, 24/03/2021, 11:40

47, 30/03/2021, 11:41

48, 16/03/2021, 11:43

49, 08/03/2021, 11:46

50, 16/03/2021, 11:46

51, 16/03/2021, 11:49

52, 27/02/2021, 11:56

53, 16/03/2021, 12:03

54, 30/03/2021, 12:04

55, 04/12/2020, 12:10

56, 04/12/2020, 12:12

57, 04/02/2021, 12:12

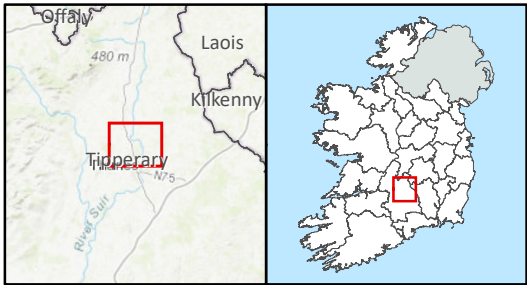
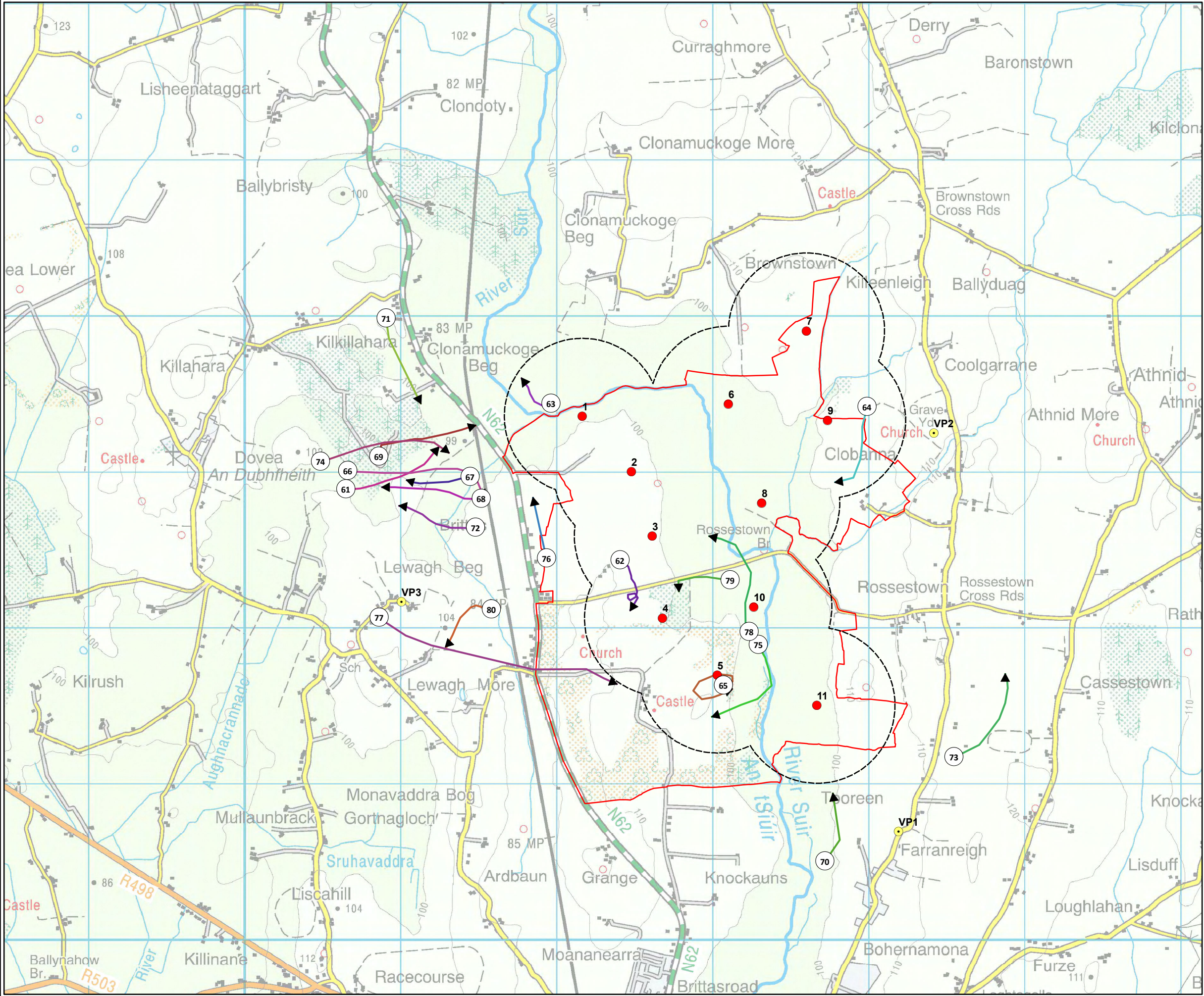
58, 27/02/2021, 12:14

59, 20/12/2020, 12:15

60, 16/03/2021, 12:28

TITLE:		Winter Flightlines 2020/2021 Buzzard 3	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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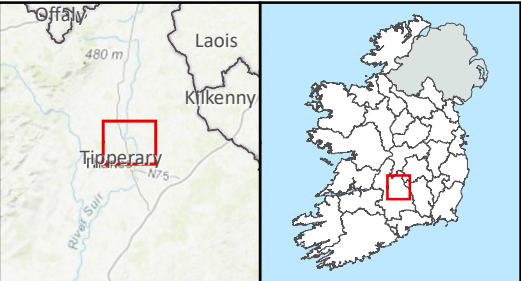
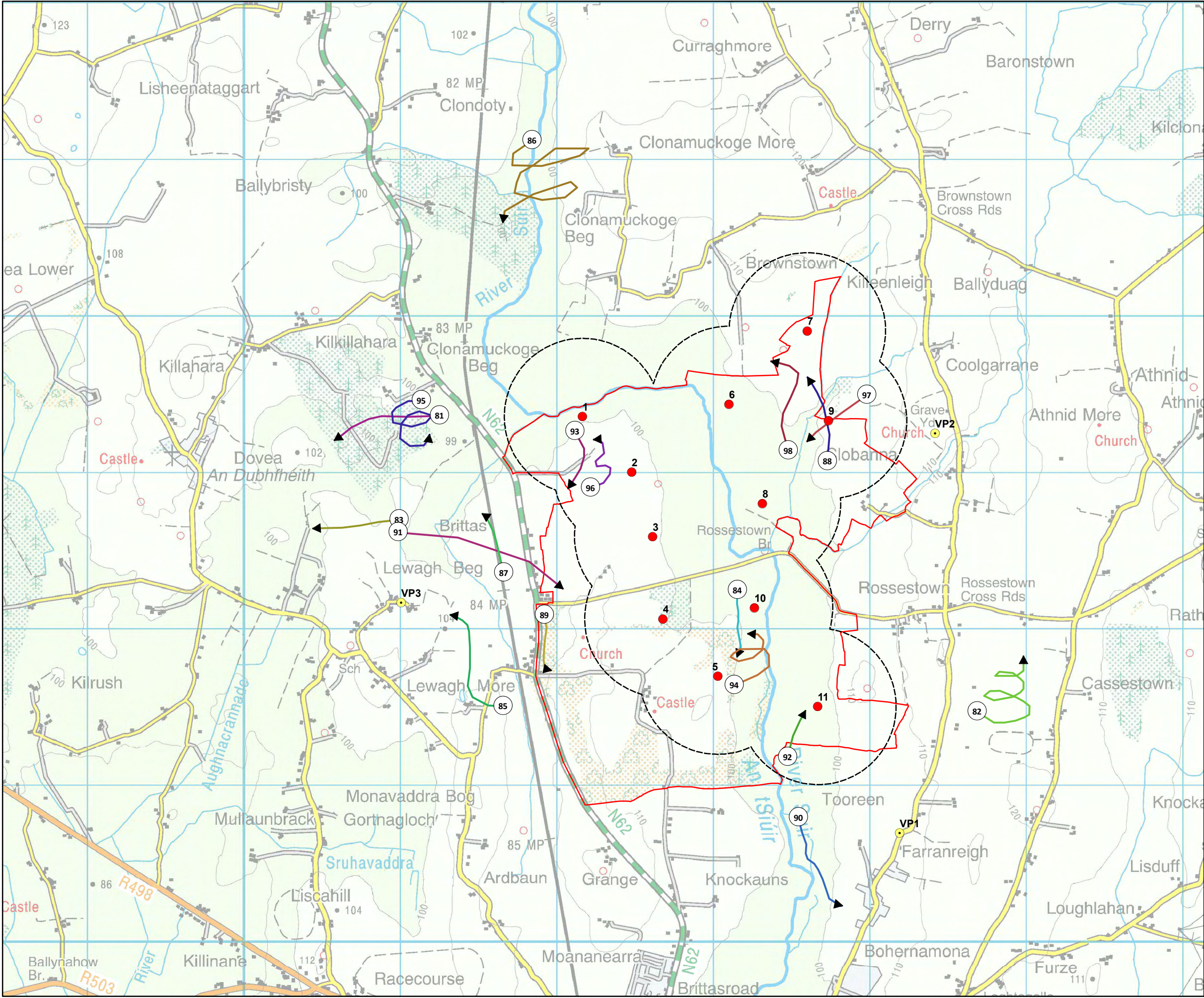
Legend

- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 61, 11/12/2020, 12:35
- 62, 16/03/2021, 12:42
- 63, 28/01/2021, 12:49
- 64, 17/01/2021, 12:55
- 65, 08/03/2021, 12:57
- 66, 14/01/2021, 12:58
- 67, 15/12/2020, 12:59
- 68, 14/01/2021, 12:59
- 69, 15/12/2020, 13:04
- 70, 05/11/2020, 13:08
- 71, 19/11/2020, 13:19
- 72, 14/01/2021, 13:23
- 73, 08/03/2021, 13:26
- 74, 14/01/2021, 13:29
- 75, 04/12/2020, 13:30
- 76, 19/11/2020, 13:31
- 77, 14/01/2021, 13:32
- 78, 04/12/2020, 13:35
- 79, 04/12/2020, 13:37
- 80, 29/12/2020, 13:39

TITLE:		Winter Flightlines 2020/2021 Buzzard 4	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

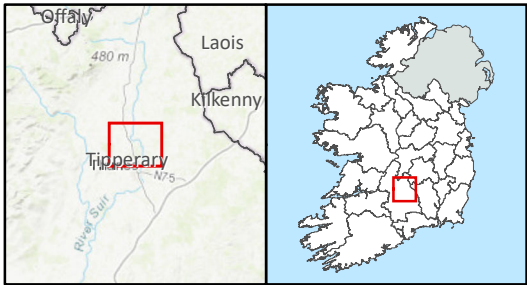
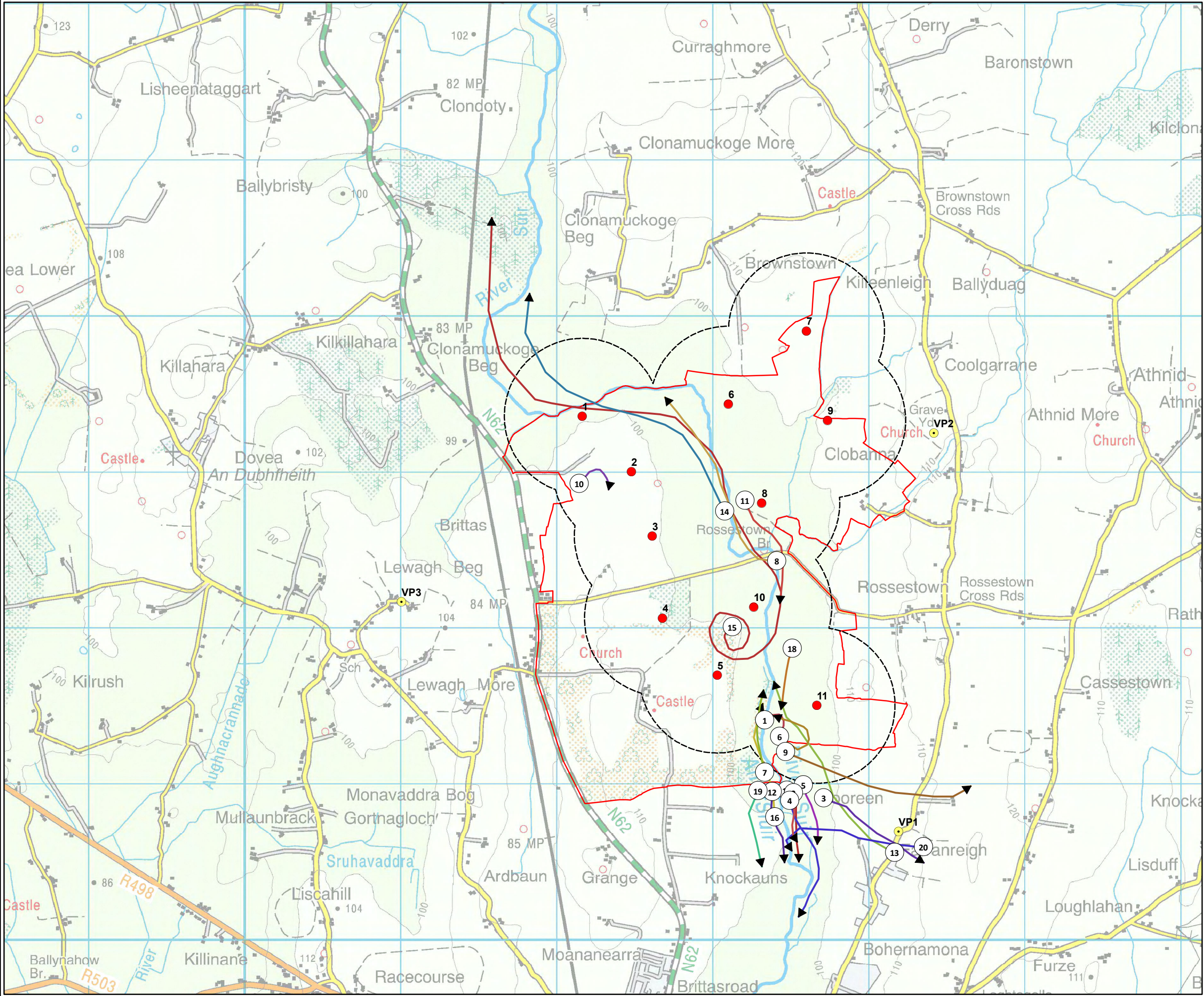
- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

81	14/01/2021	13:40
82	22/03/2021	13:45
83	15/12/2020	13:51
84	26/01/2021	13:52
85	14/01/2021	13:53
86	18/02/2021	13:53
87	14/01/2021	14:02
88	30/12/2020	14:08
89	11/12/2020	14:14
90	26/01/2021	15:06
91	29/12/2020	15:14
92	26/01/2021	15:18
93	16/02/2021	15:25
94	22/03/2021	15:35
95	16/02/2021	15:49
96	16/02/2021	16:06
97	18/02/2021	16:07
98	18/02/2021	16:19

TITLE: Winter Flightlines 2020/2021 Buzzard 5	
PROJECT: Brittias Wind Farm, Co. Tipperary	
FIGURE NO: -	
CLIENT: Enerco	
SCALE: 1:24000	REVISION: 0
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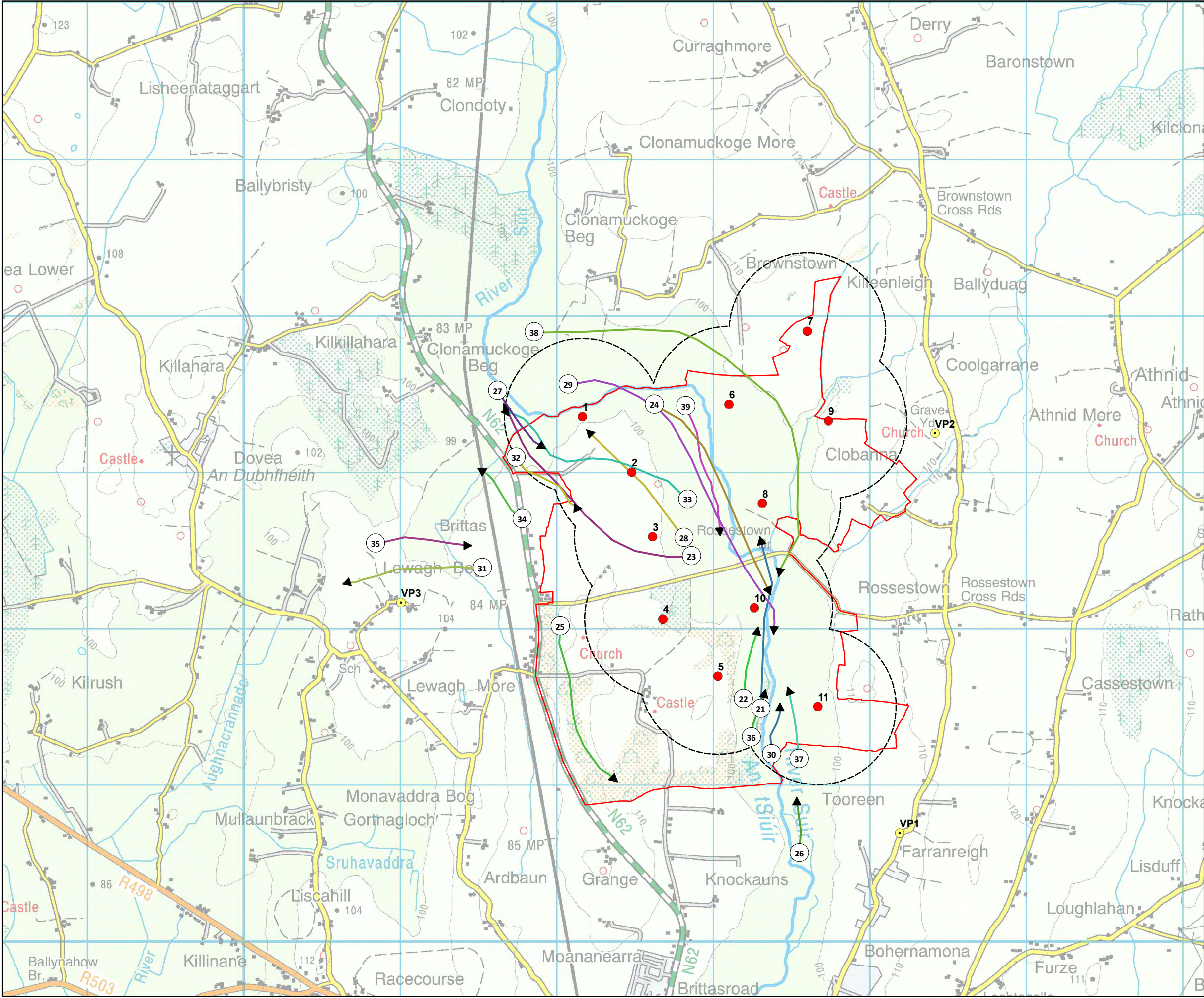
Legend

- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 1, 05/02/2021, 08:27
- 2, 28/11/2020, 08:45
- 3, 05/02/2021, 08:55
- 4, 14/01/2021, 09:07
- 5, 28/11/2020, 09:10
- 6, 22/02/2021, 09:15
- 7, 29/12/2020, 09:20
- 8, 23/03/2021, 09:23
- 9, 22/02/2021, 09:34
- 10, 30/12/2020, 09:40
- 11, 27/02/2021, 09:45
- 12, 14/01/2021, 10:02
- 13, 28/11/2020, 10:08
- 14, 27/02/2021, 10:12
- 15, 17/01/2021, 10:14
- 16, 28/11/2020, 10:25
- 17, 08/03/2021, 11:10
- 18, 29/12/2020, 11:17
- 19, 14/01/2021, 11:26
- 20, 20/12/2020, 11:27

TITLE:		Winter Flightlines 2020/2021 Cormorant 1	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

21, 14/01/2021, 11:31

22, 14/01/2021, 11:44

23, 19/12/2020, 11:51

24, 27/02/2021, 12:04

25, 28/11/2020, 12:06

26, 05/11/2020, 12:40

27, 28/01/2021, 12:48

28, 29/12/2020, 13:20

29, 18/02/2021, 13:51

30, 22/03/2021, 14:12

31, 14/01/2021, 14:44

32, 14/01/2021, 14:50

33, 30/12/2020, 15:03

34, 14/01/2021, 15:03

35, 14/01/2021, 15:10

36, 26/01/2021, 15:35

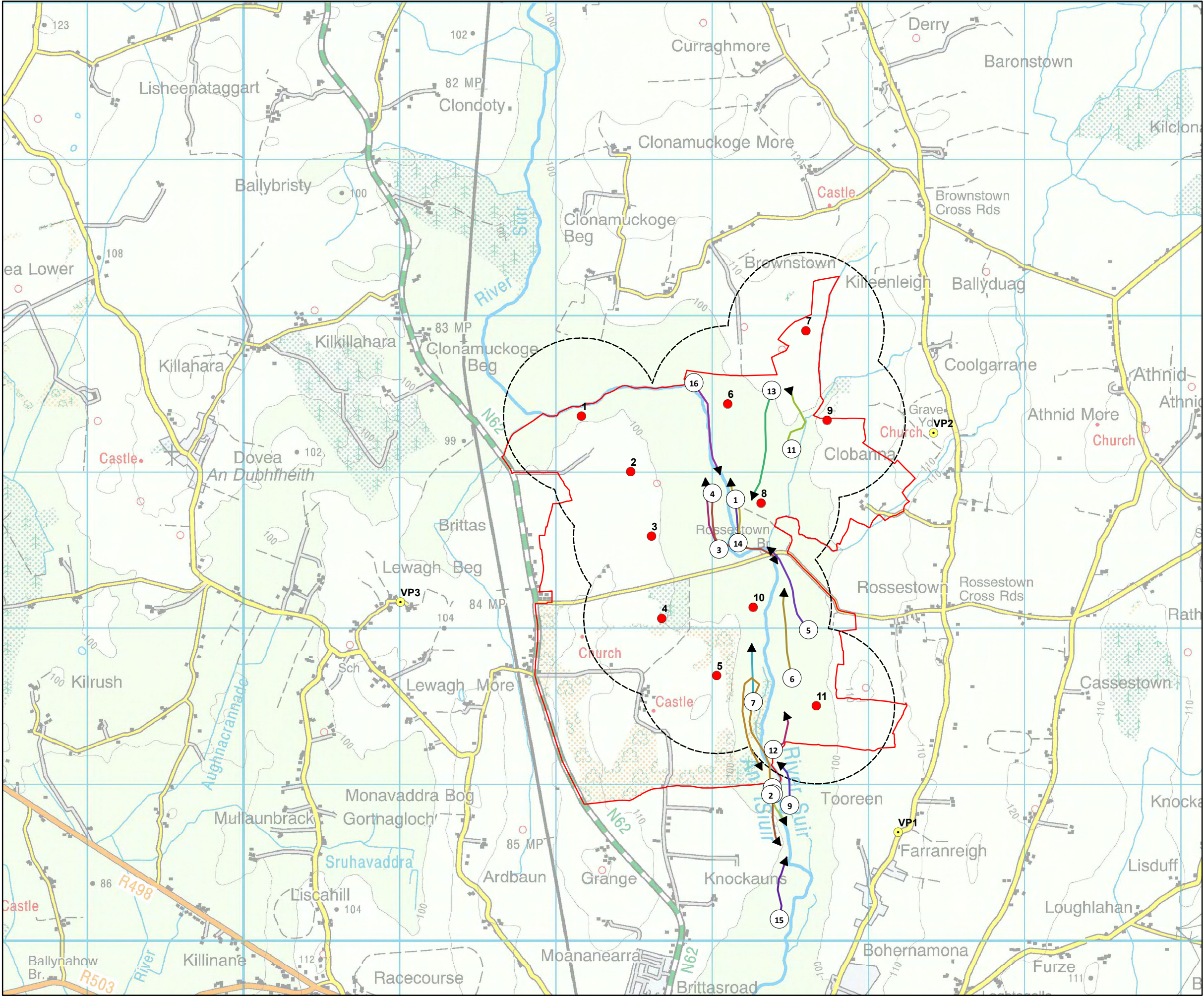
37, 22/03/2021, 15:50

38, 18/02/2021, 15:51

39, 16/02/2021, 17:24

TITLE:		Winter Flightlines 2020/2021 Cormorant 2	
PROJECT:		Brittias Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 19/11/2020, 09:28

2, 05/02/2021, 10:28

3, 05/11/2020, 10:33

4, 11/12/2020, 10:38

5, 22/02/2021, 11:14

6, 14/01/2021, 12:43

7, 05/11/2020, 13:17

8, 26/01/2021, 13:17

9, 22/03/2021, 13:27

10, 22/03/2021, 13:53

11, 30/12/2020, 13:57

12, 22/03/2021, 14:16

13, 30/12/2020, 14:18

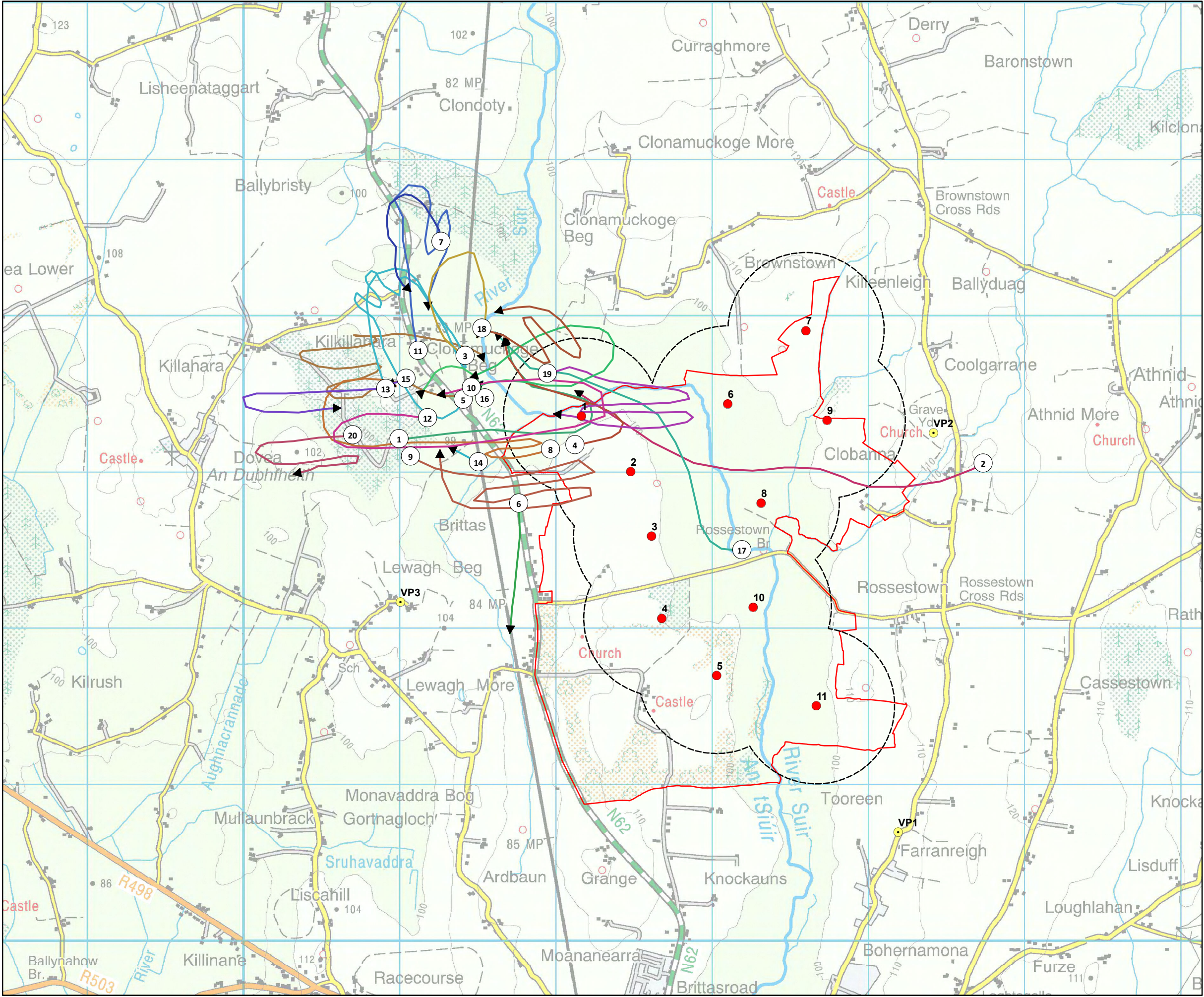
14, 18/02/2021, 14:52

15, 26/01/2021, 15:21

16, 18/02/2021, 16:00

TITLE:		Winter Flightlines 2020/2021 Little Egret	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Tipperary

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Vantage Point Locations

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Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 30/12/2020, 09:18

2, 11/12/2020, 09:19

3, 24/12/2020, 09:21

4, 30/12/2020, 09:24

5, 28/01/2021, 09:26

6, 05/02/2021, 09:31

7, 24/12/2020, 09:35

8, 30/12/2020, 09:53

9, 28/01/2021, 09:57

10, 11/12/2020, 10:00

11, 19/12/2020, 10:02

12, 28/01/2021, 10:04

13, 11/12/2020, 10:08

14, 30/12/2020, 10:10

15, 28/01/2021, 10:17

16, 30/12/2020, 10:19

17, 24/12/2020, 10:24

18, 28/01/2021, 10:27

19, 04/02/2021, 10:27

20, 28/01/2021, 10:38

TITLE:

Winter Flightlines 2020/2021
Golden Plover 1

PROJECT:

Brittias Wind Farm, Co. Tipperary

FIGURE NO:

-

CLIENT:

Enerco

SCALE:

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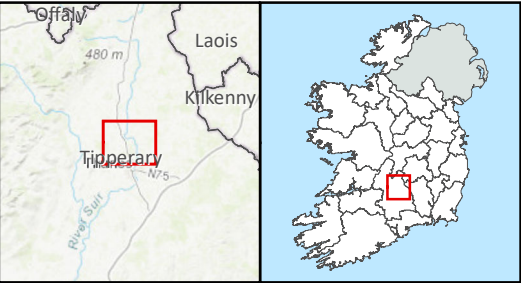
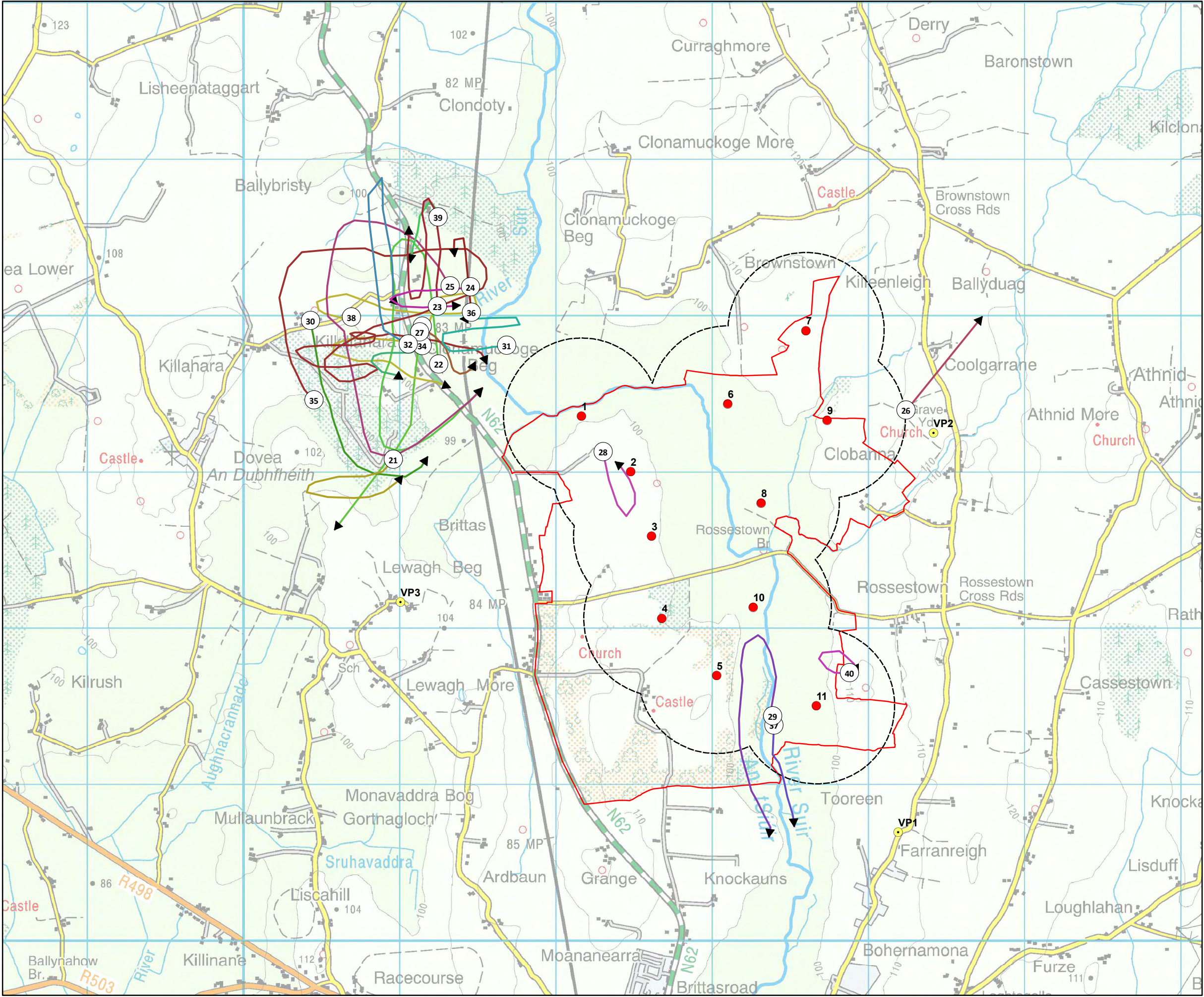
0

0.5

1

2

Kilometers



Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

21, 28/01/2021, 10:40

22, 11/12/2020, 10:42

23, 17/01/2021, 10:42

24, 28/01/2021, 10:43

25, 11/12/2020, 10:57

26, 30/03/2021, 10:59

27, 05/11/2020, 11:03

28, 28/01/2021, 11:04

29, 15/12/2020, 11:06

30, 11/12/2020, 11:07

31, 04/02/2021, 11:09

32, 17/01/2021, 11:11

33, 11/12/2020, 11:14

34, 30/12/2020, 11:23

35, 11/12/2020, 11:24

36, 17/01/2021, 11:24

37, 22/02/2021, 11:32

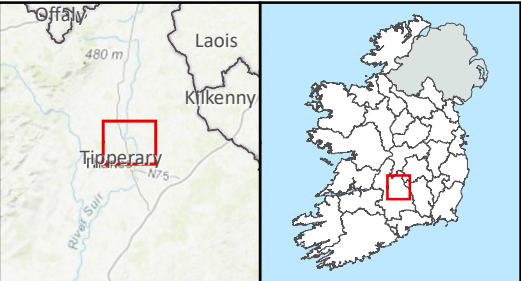
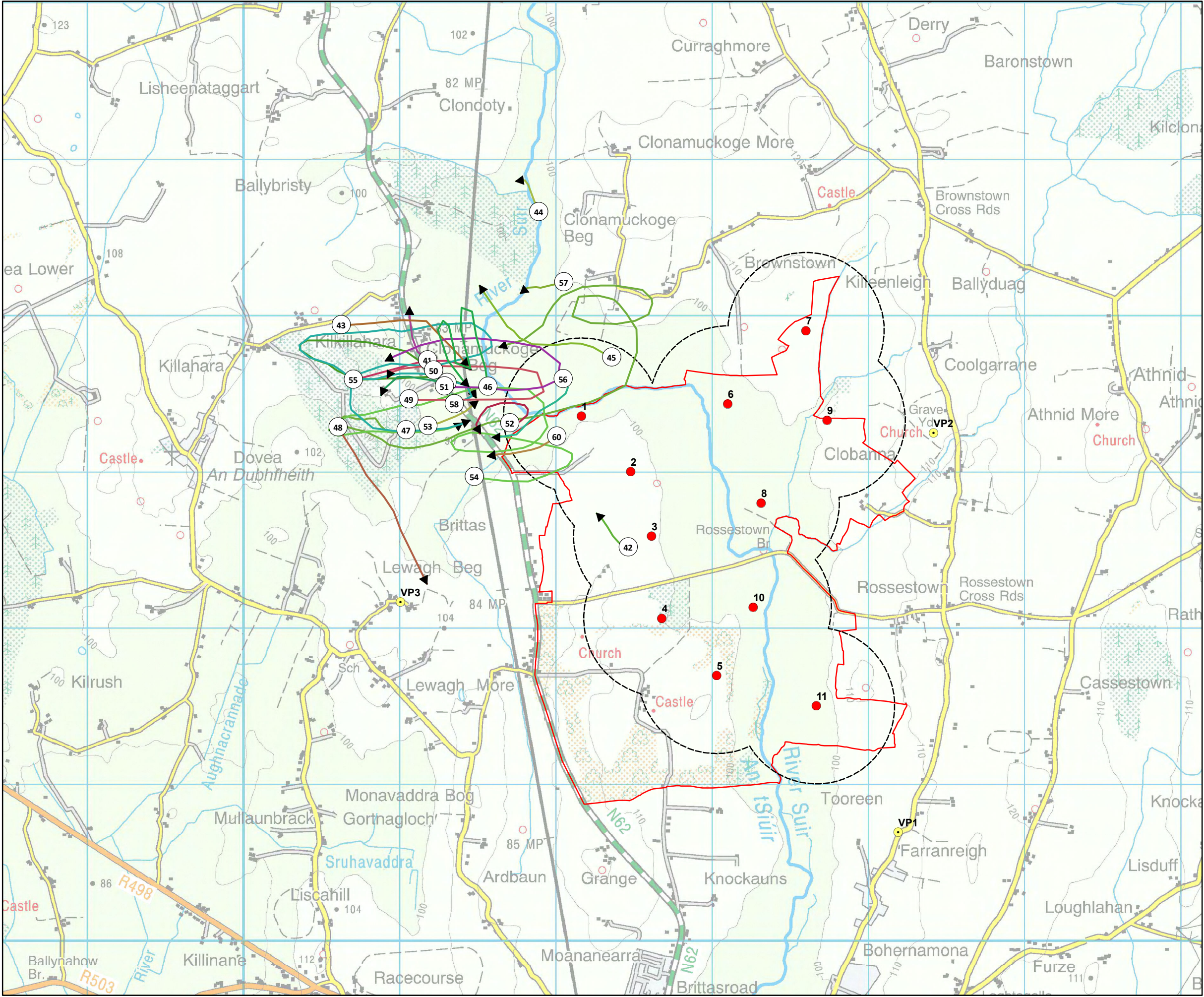
38, 28/11/2020, 11:43

39, 11/12/2020, 11:46

40, 22/02/2021, 11:51

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PROJECT:		Brittias Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

41, 24/12/2020, 11:52

42, 30/12/2020, 11:54

43, 30/12/2020, 11:58

44, 24/12/2020, 12:05

45, 29/12/2020, 12:20

46, 28/01/2021, 12:31

47, 28/11/2020, 12:34

48, 28/01/2021, 12:35

49, 14/01/2021, 12:36

50, 11/12/2020, 12:37

51, 14/01/2021, 12:40

52, 14/01/2021, 12:44

53, 11/12/2020, 12:47

54, 11/12/2020, 12:49

55, 28/11/2020, 12:55

56, 14/01/2021, 13:00

57, 28/11/2020, 13:01

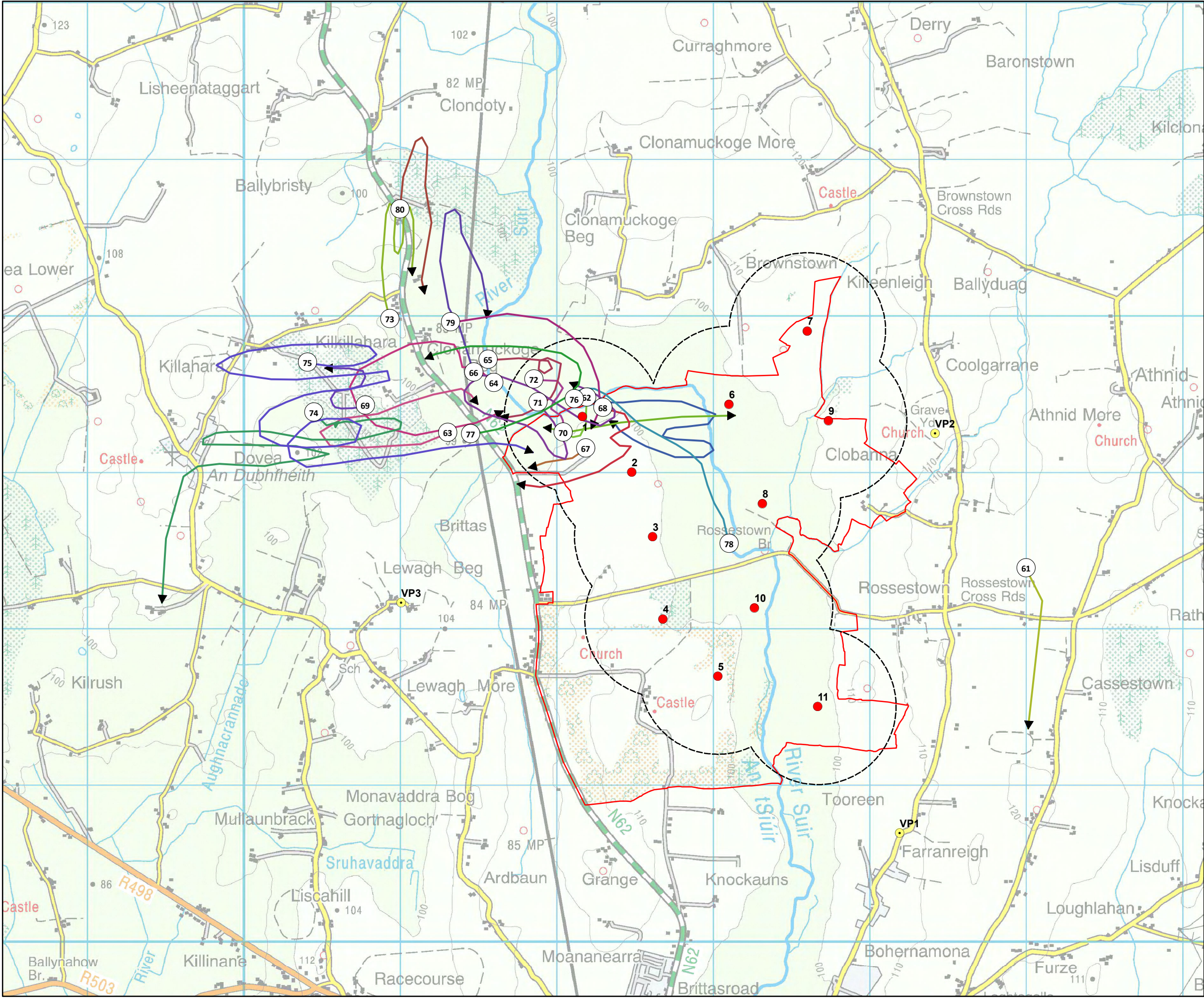
58, 11/12/2020, 13:02

59, 15/12/2020, 13:15

60, 14/01/2021, 13:15

TITLE:		Winter Flightlines 2020/2021 Golden Plover 3	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
DATE:	17/02/2022	PAGE SIZE:	A3





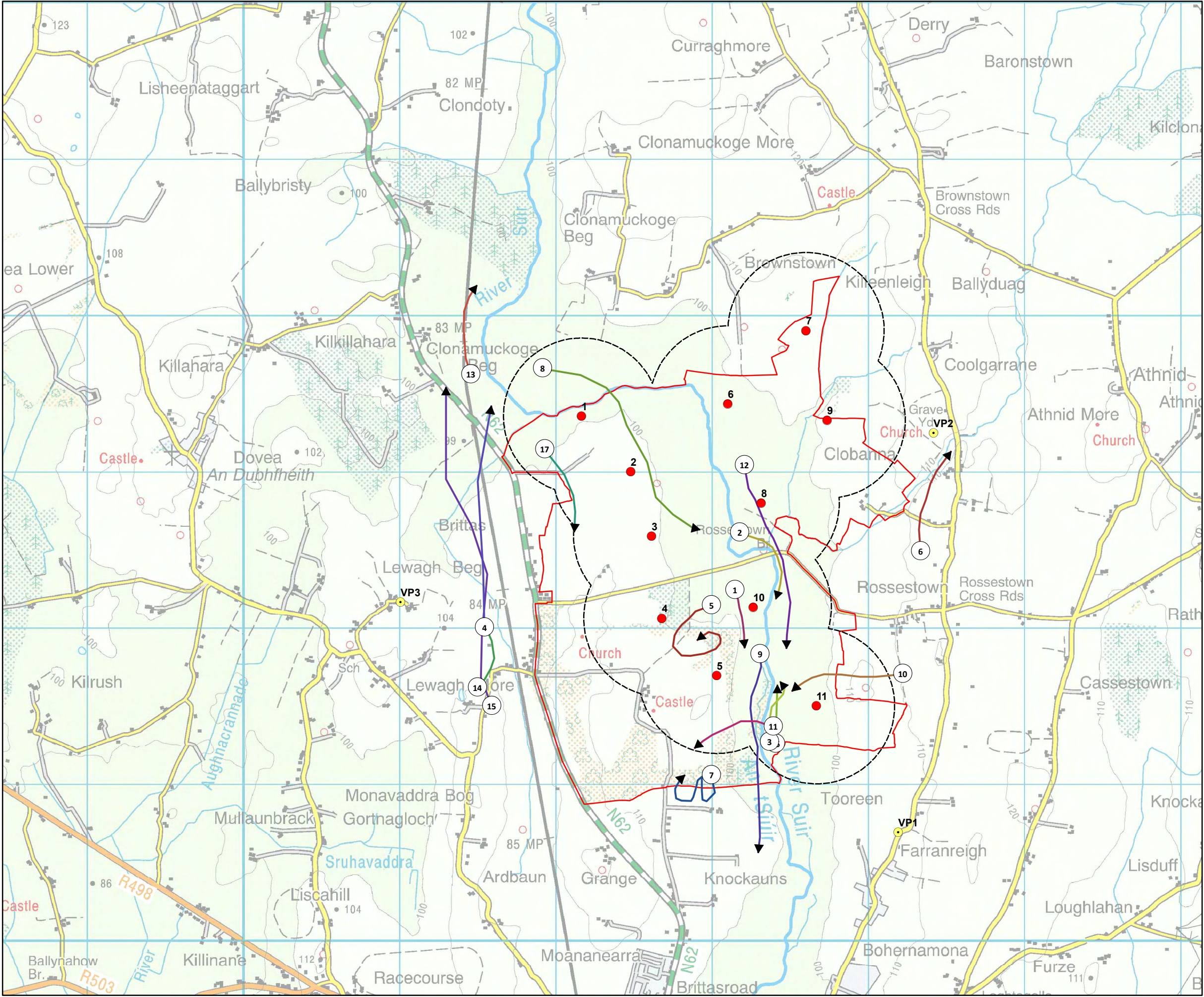
Legend

- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 61, 19/11/2020, 13:16
- 62, 14/01/2021, 13:20
- 63, 11/12/2020, 13:27
- 64, 11/12/2020, 13:29
- 65, 11/12/2020, 13:34
- 66, 30/12/2020, 13:50
- 67, 14/01/2021, 13:55
- 68, 14/01/2021, 13:56
- 69, 15/12/2020, 14:16
- 70, 11/12/2020, 14:24
- 71, 16/02/2021, 14:48
- 72, 19/11/2020, 14:49
- 73, 30/12/2020, 14:50
- 74, 15/12/2020, 14:56
- 75, 16/02/2021, 15:06
- 76, 19/11/2020, 15:08
- 77, 16/02/2021, 15:15
- 78, 14/01/2021, 15:16
- 79, 14/01/2021, 15:24
- 80, 30/12/2020, 15:32

TITLE:		Winter Flightlines 2020/2021 Golden Plover 4	
PROJECT:		Brittias Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 30/03/2021, 09:05

2, 19/12/2020, 09:25

3, 14/01/2021, 09:31

4, 24/03/2021, 09:42

5, 27/02/2021, 09:54

6, 17/01/2021, 10:12

7, 22/02/2021, 10:26

8, 17/01/2021, 10:27

9, 15/12/2020, 10:47

10, 20/12/2020, 11:14

11, 08/03/2021, 11:17

12, 17/01/2021, 11:39

13, 19/12/2020, 11:43

14, 14/01/2021, 12:34

15, 19/11/2020, 12:53

16, 05/11/2020, 13:02

17, 19/11/2020, 14:16

TITLE: Winter Flightlines 2020/2021
Grey Heron

PROJECT: Brittas Wind Farm, Co. Tipperary

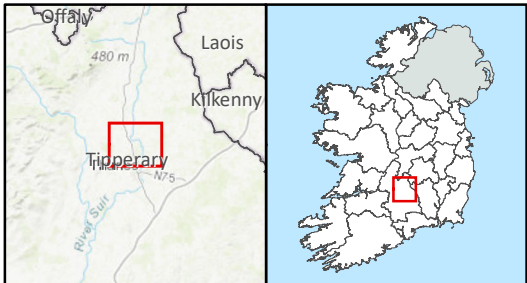
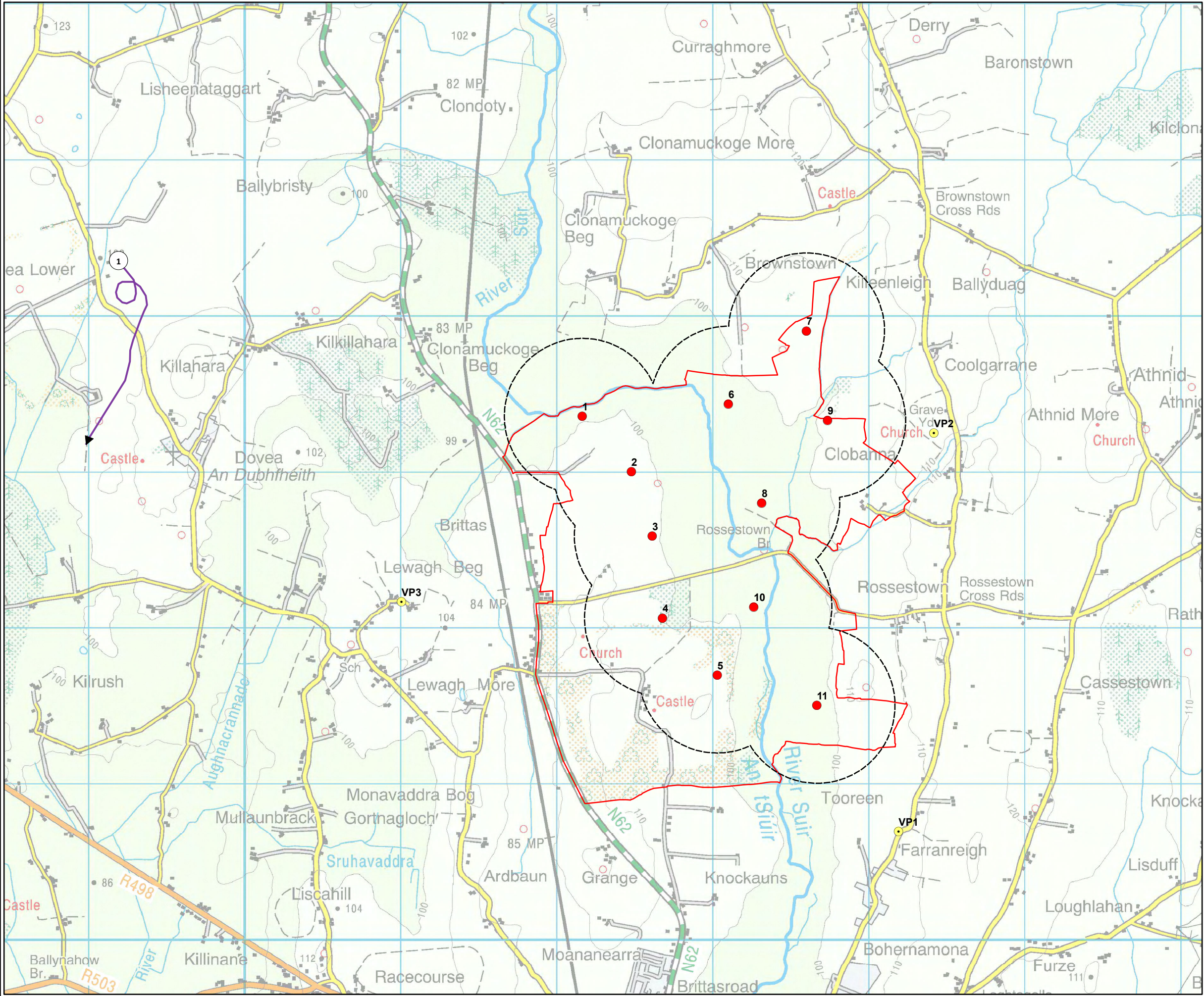
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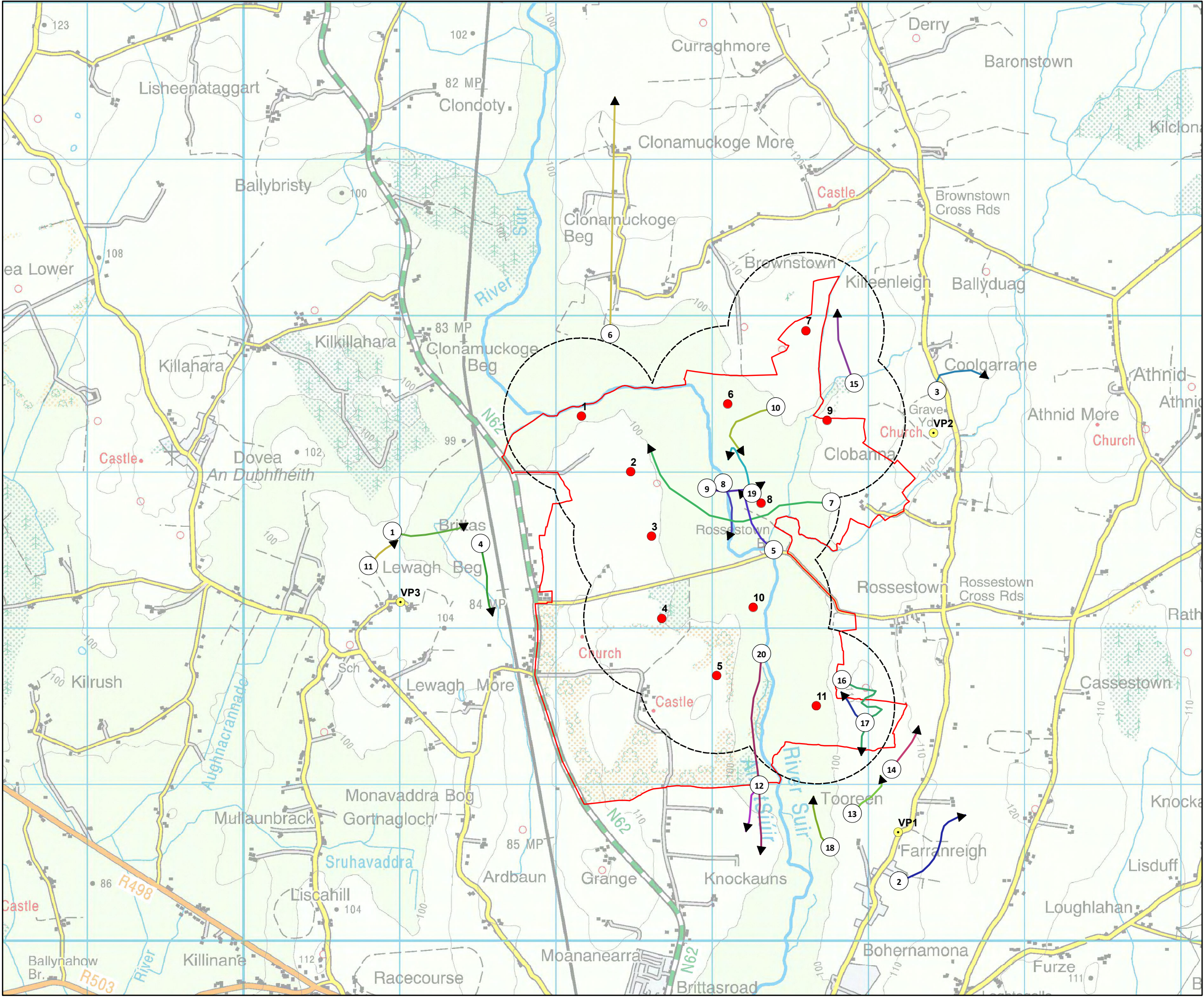
- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 24/12/2020, 11:18

TITLE:		Winter Flightlines 2020/2021 Hen Harrier	
PROJECT:		Brittas Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

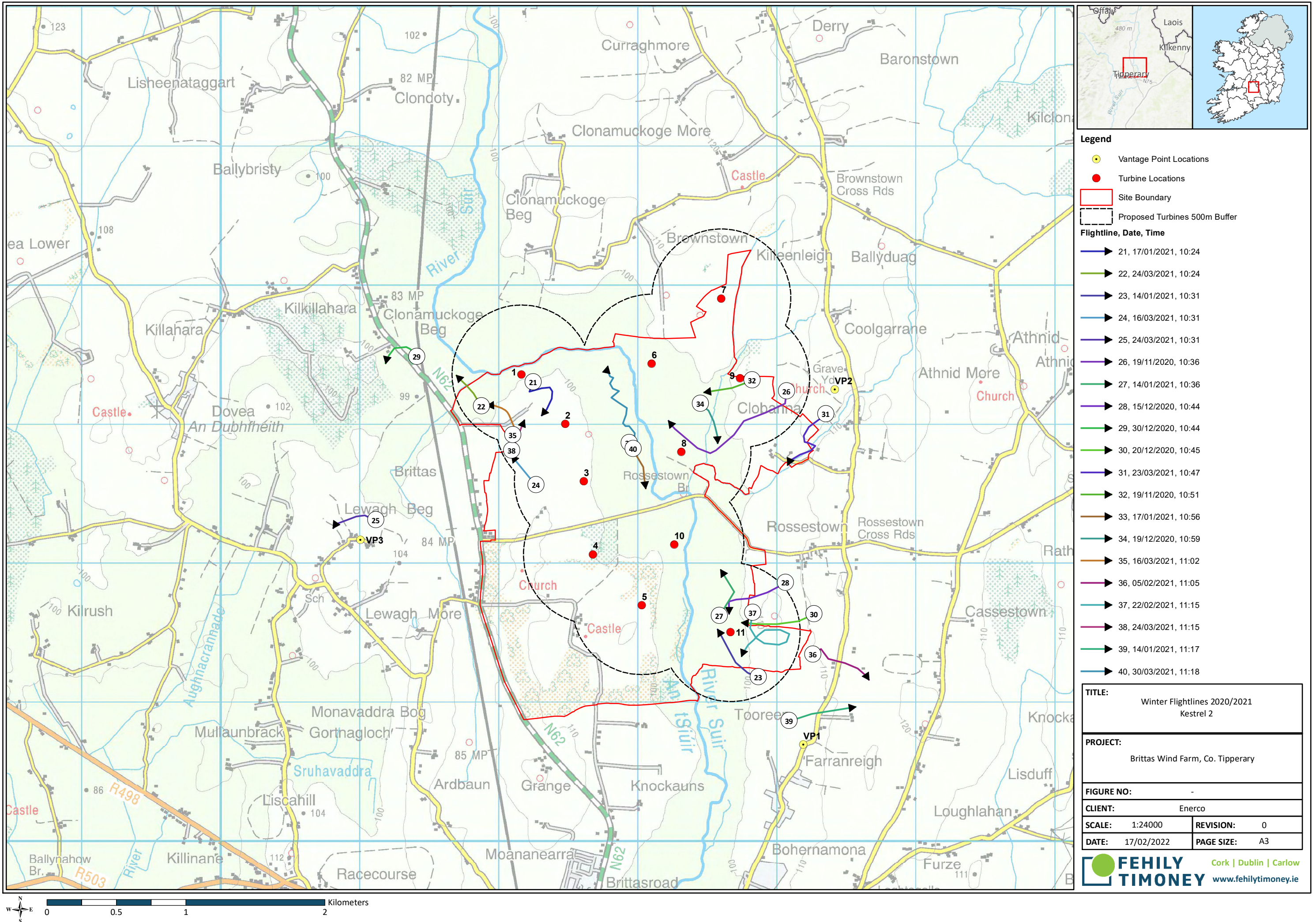
1	24/03/2021, 08:55
2	14/01/2021, 09:00
3	30/03/2021, 09:01
4	28/01/2021, 09:04
5	30/03/2021, 09:04
6	05/11/2020, 09:06
7	19/12/2020, 09:10
8	11/12/2020, 09:26
9	19/12/2020, 09:29
10	19/12/2020, 09:31
11	30/12/2020, 09:31
12	15/12/2020, 09:34
13	15/12/2020, 09:38
14	15/12/2020, 09:39
15	19/12/2020, 09:45
16	14/01/2021, 09:56
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19	30/03/2021, 10:16
20	15/12/2020, 10:19

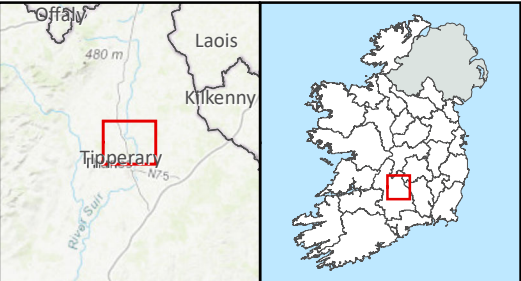
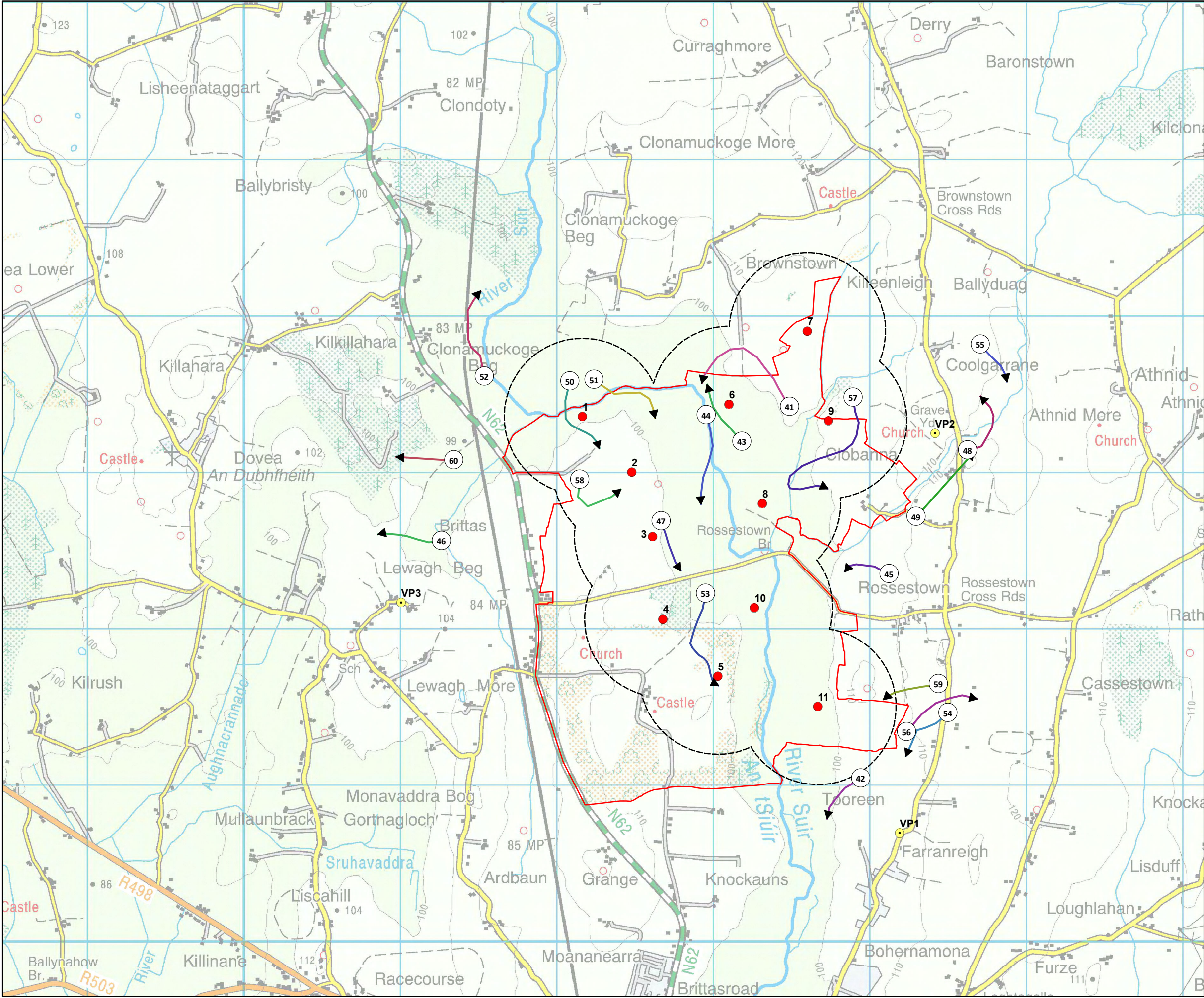
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PROJECT:	Brittis Wind Farm, Co. Tipperary		
FIGURE NO:	-		
CLIENT:	Enerco		
SCALE:	1:24000	REVISION:	0
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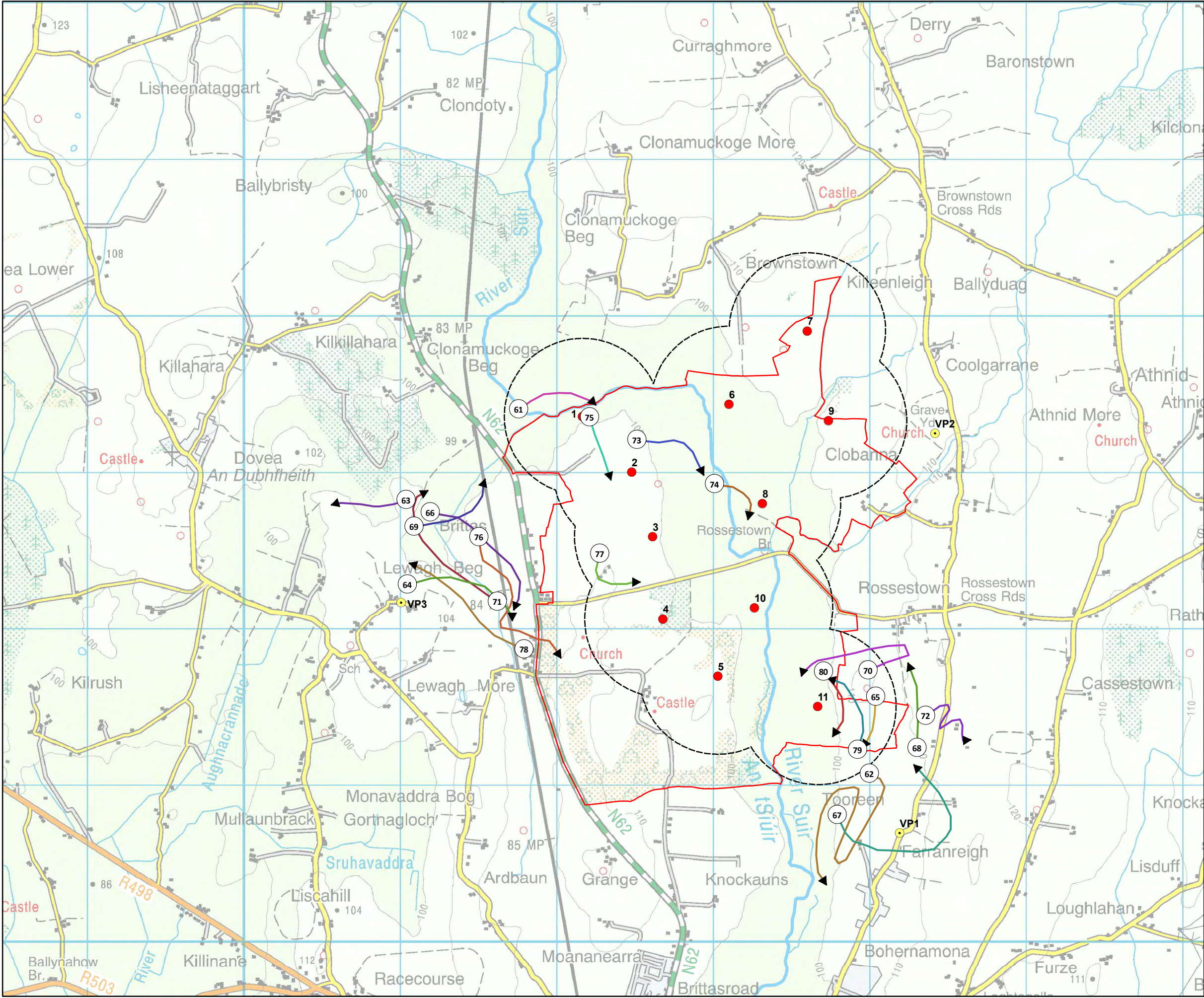
- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

41	17/01/2021	11:31
42	15/12/2020	11:33
43	24/12/2020	11:35
44	11/12/2020	11:40
45	14/01/2021	11:41
46	28/11/2020	11:42
47	30/12/2020	11:43
48	24/12/2020	11:45
49	23/03/2021	11:49
50	28/01/2021	11:54
51	28/01/2021	11:59
52	30/12/2020	12:10
53	04/12/2020	12:12
54	08/03/2021	12:20
55	30/03/2021	12:21
56	08/03/2021	12:22
57	17/01/2021	12:26
58	17/01/2021	12:29
59	08/03/2021	12:32
60	15/12/2020	12:58

TITLE:		Winter Flightlines 2020/2021 Kestrel 3	
PROJECT:		Brittias Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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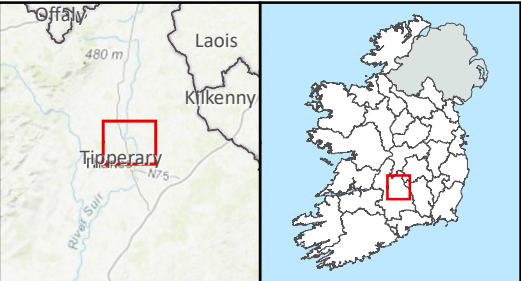
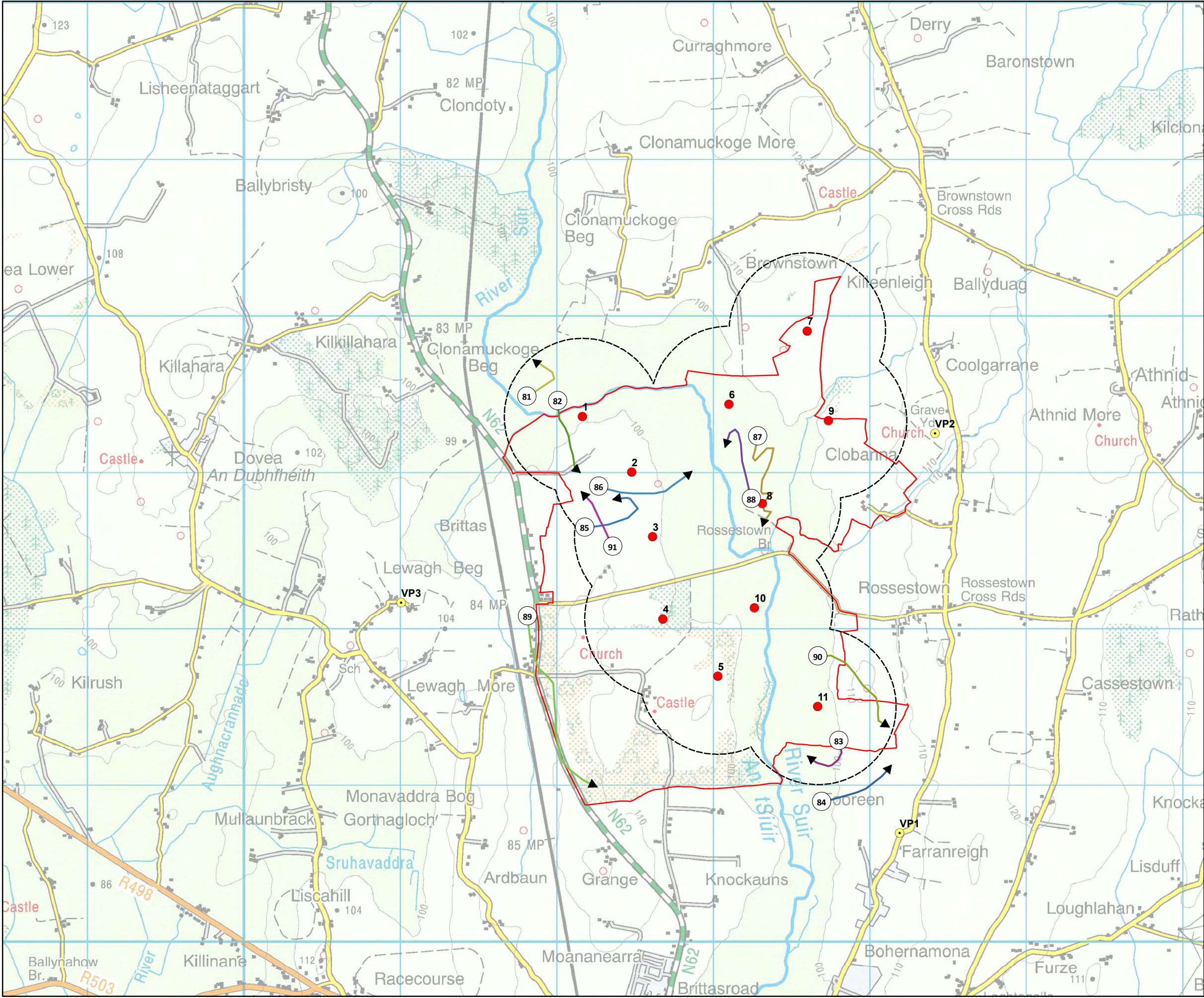
- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 61, 15/12/2020, 13:01
- 62, 04/12/2020, 13:06
- 63, 15/12/2020, 13:23
- 64, 14/01/2021, 13:28
- 65, 26/01/2021, 13:36
- 66, 11/12/2020, 13:39
- 67, 26/01/2021, 13:40
- 68, 26/01/2021, 13:42
- 69, 15/12/2020, 13:46
- 70, 26/01/2021, 13:46
- 71, 11/12/2020, 13:59
- 72, 22/03/2021, 14:03
- 73, 28/01/2021, 14:09
- 74, 28/01/2021, 14:10
- 75, 19/11/2020, 14:12
- 76, 15/12/2020, 14:15
- 77, 19/11/2020, 14:17
- 78, 15/12/2020, 14:21
- 79, 22/03/2021, 14:21
- 80, 26/01/2021, 14:30

TITLE:		Winter Flightlines 2020/2021 Kestrel 4	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

81, 30/12/2020, 14:53

82, 30/12/2020, 14:56

83, 26/01/2021, 15:01

84, 26/01/2021, 15:05

85, 14/01/2021, 15:19

86, 30/12/2020, 15:28

87, 18/02/2021, 15:38

88, 18/02/2021, 15:45

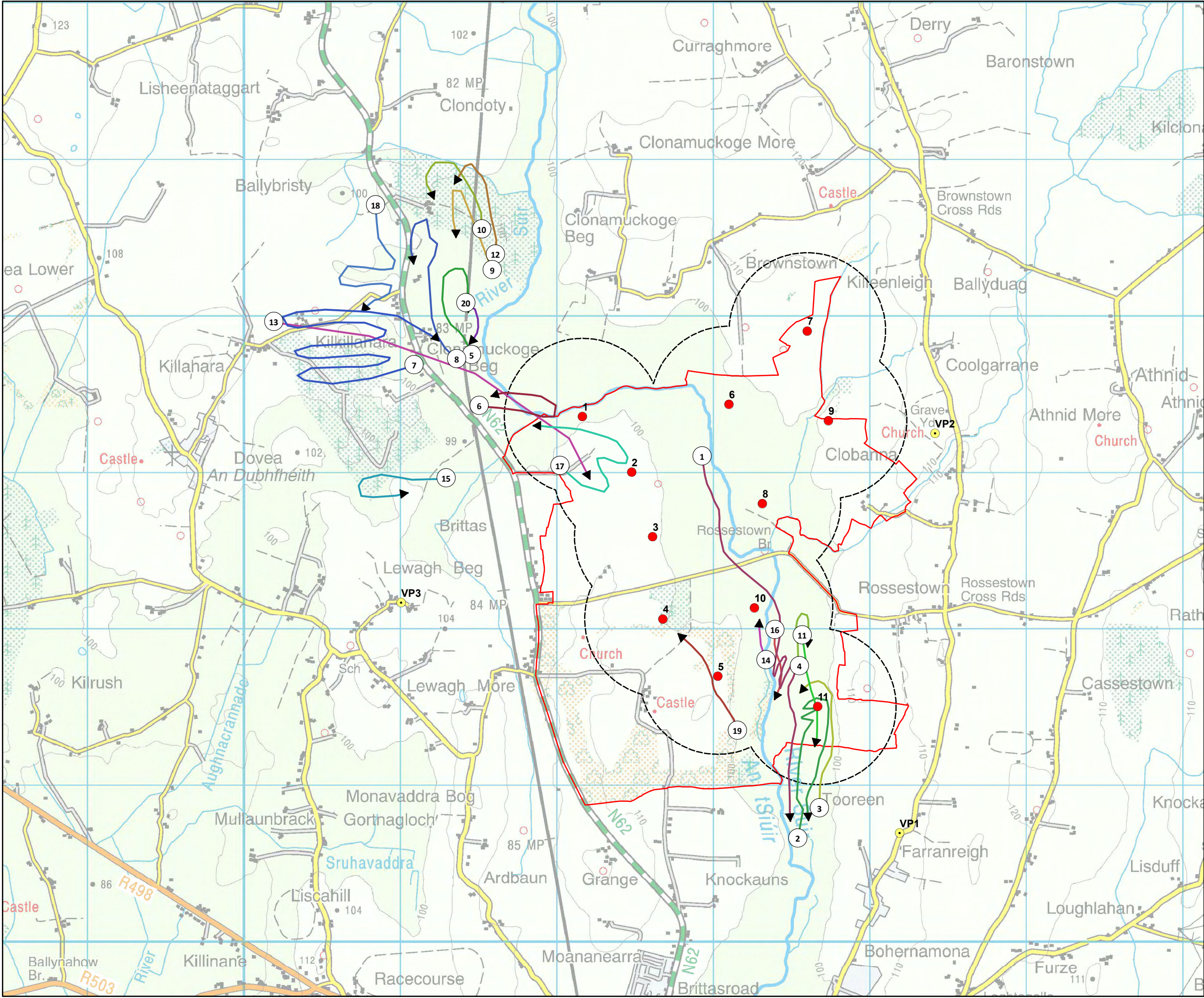
89, 16/02/2021, 15:57

90, 22/03/2021, 16:12

91, 16/02/2021, 17:11

TITLE:		Winter Flightlines 2020/2021 Kestrel 5	
PROJECT:		Brittas Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 05/02/2021, 08:51

2, 05/02/2021, 08:57

3, 05/02/2021, 09:00

4, 05/02/2021, 09:06

5, 24/12/2020, 09:21

6, 28/01/2021, 09:26

7, 28/01/2021, 09:31

8, 24/12/2020, 09:35

9, 24/12/2020, 09:40

10, 24/12/2020, 09:43

11, 22/02/2021, 09:48

12, 24/12/2020, 09:52

13, 04/02/2021, 09:57

14, 05/02/2021, 09:59

15, 30/12/2020, 10:04

16, 20/12/2020, 10:10

17, 04/02/2021, 10:10

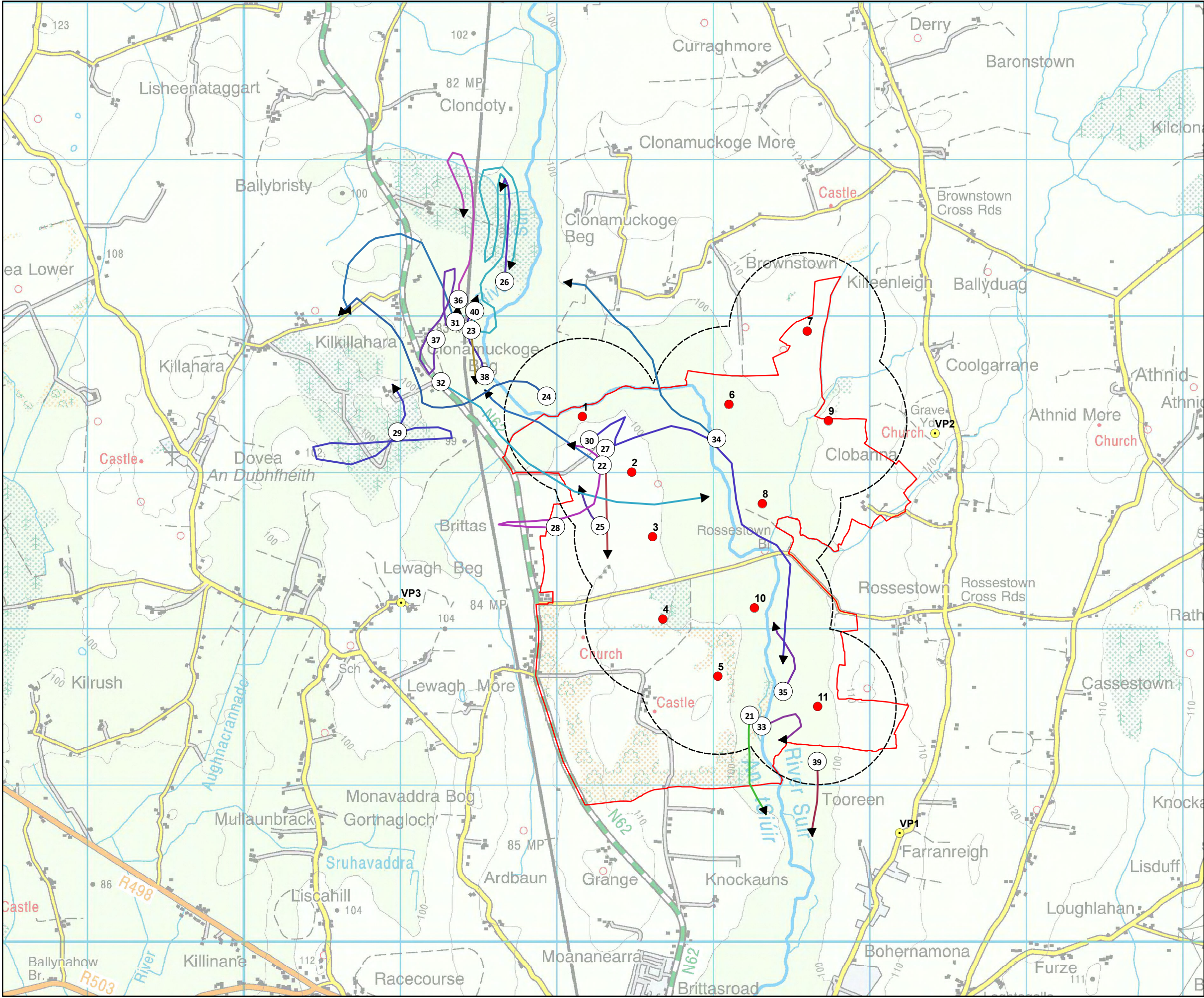
18, 19/12/2020, 10:15

19, 29/12/2020, 10:16

20, 11/12/2020, 10:20

TITLE:		Winter Flightlines 2020/2021 Lapwing 1	
PROJECT:		Brittias Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
DATE:	17/02/2022	PAGE SIZE:	A3





Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

21, 20/12/2020, 10:24

22, 24/12/2020, 10:34

23, 17/01/2021, 10:37

24, 04/02/2021, 10:37

25, 30/12/2020, 10:40

26, 24/12/2020, 10:42

27, 14/01/2021, 10:42

28, 28/01/2021, 10:43

29, 04/02/2021, 10:47

30, 28/01/2021, 10:48

31, 11/12/2020, 10:57

32, 04/02/2021, 11:07

33, 15/12/2020, 11:13

34, 28/01/2021, 11:16

35, 15/12/2020, 11:17

36, 19/12/2020, 11:19

37, 17/01/2021, 11:22

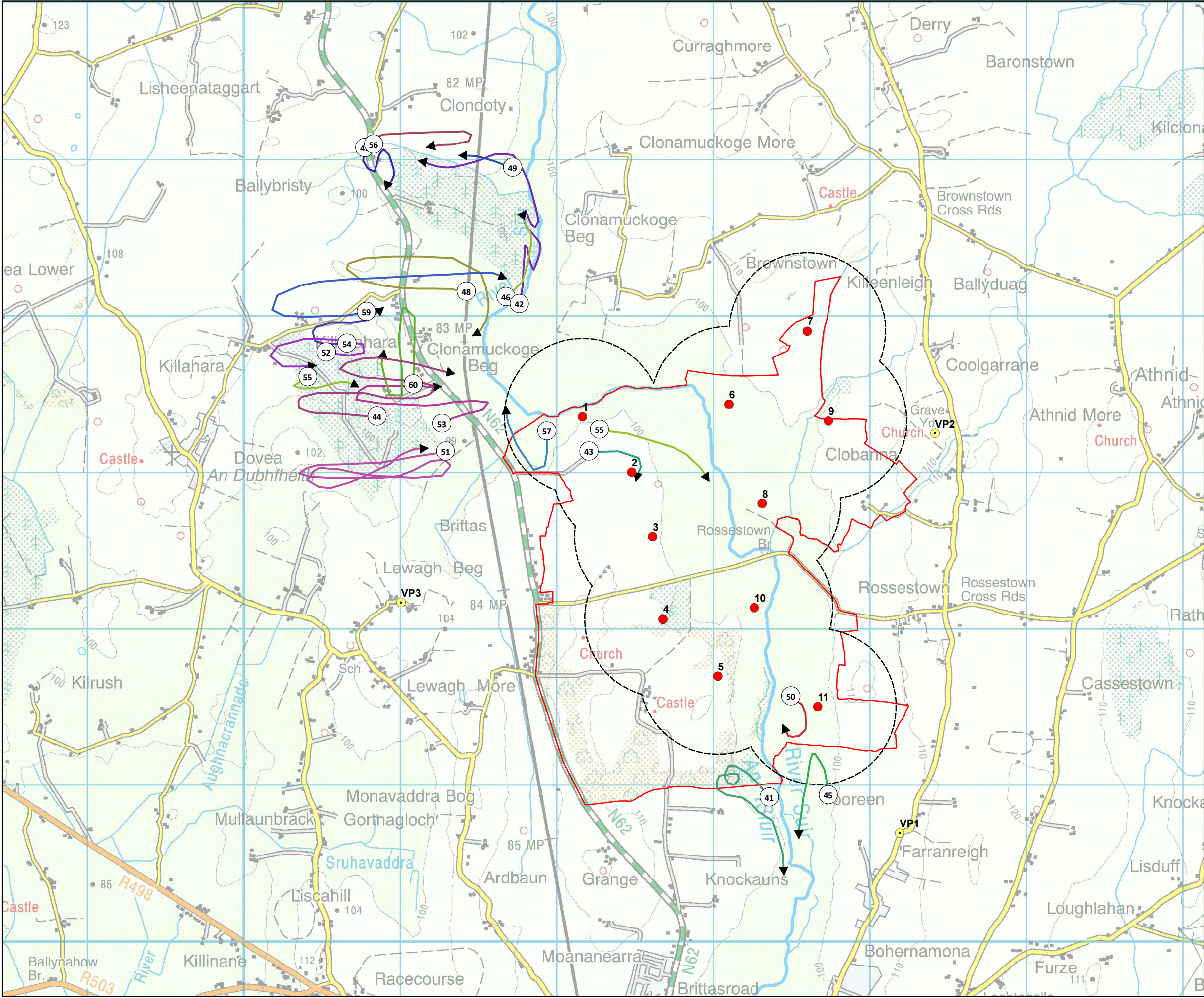
38, 30/12/2020, 11:26

39, 22/02/2021, 11:26

40, 19/12/2020, 11:27

TITLE:		Winter Flightlines 2020/2021 Lapwing 2	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

41	29/12/2020	11:33
42	19/12/2020	11:35
43	30/12/2020	11:35
44	04/02/2021	11:35
45	29/12/2020	11:39
46	24/12/2020	11:44
47	19/12/2020	11:46
48	28/11/2020	11:50
49	24/12/2020	11:50
50	29/12/2020	11:50
51	04/02/2021	11:50
52	04/02/2021	11:56
53	28/11/2020	11:58
54	30/12/2020	11:58
55	04/02/2021	12:02
56	19/12/2020	12:03
57	28/11/2020	12:04
59	11/12/2020	12:25
60	28/01/2021	12:43

TITLE:Winter Flightlines 2020/2021
Lapwing 3

PROJECT:Brittis Wind Farm, Co. Tipperary

FIGURE NO.:-

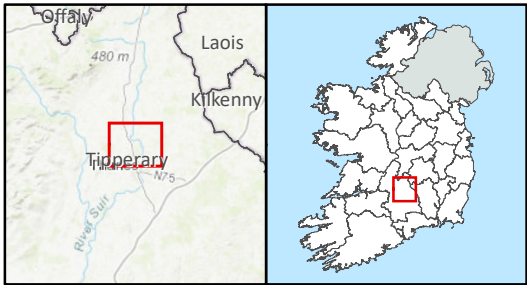
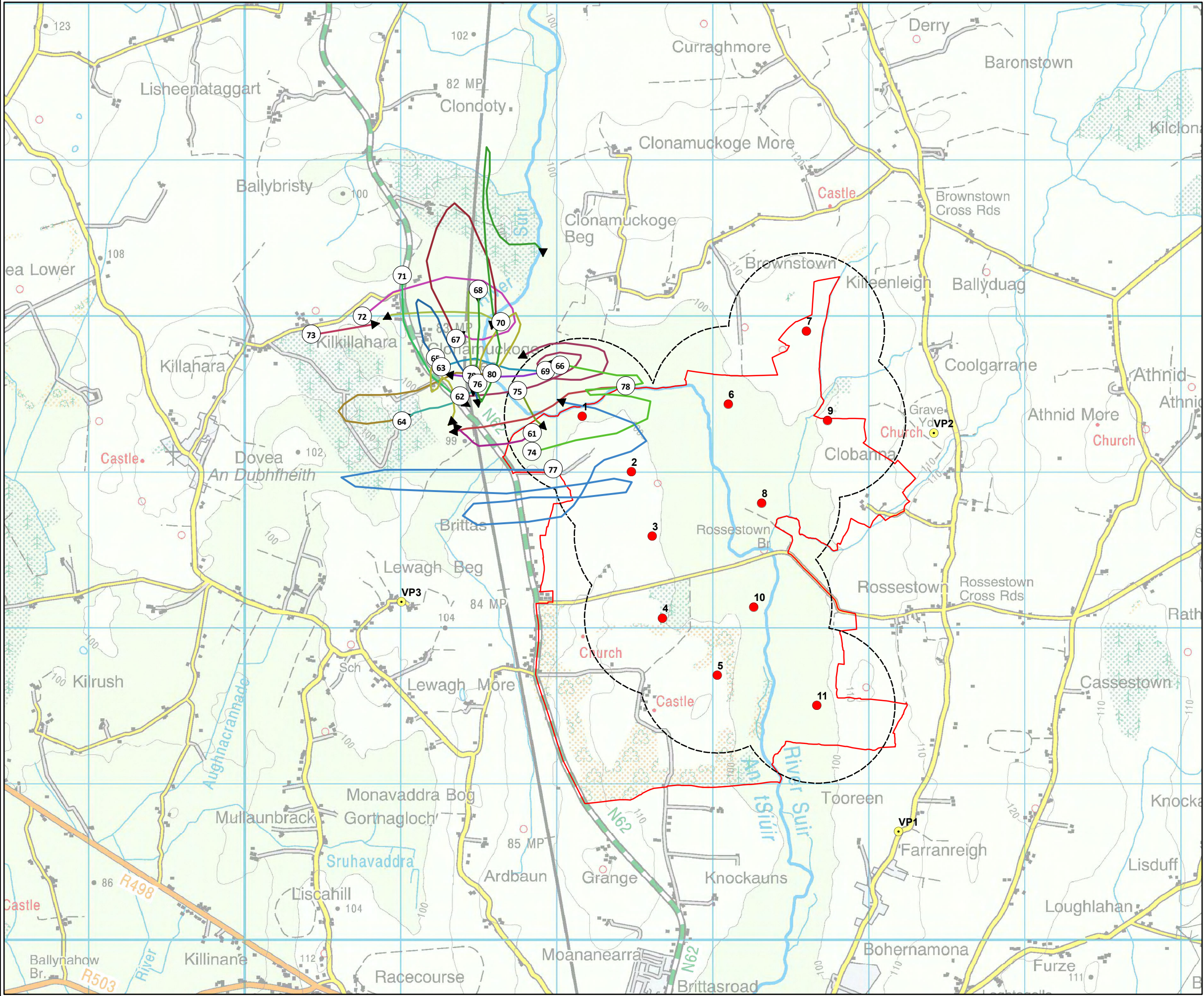
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SCALE: 1:24000	REVISION: 0
DATE: 17/02/2022	PAGE SIZE: A3

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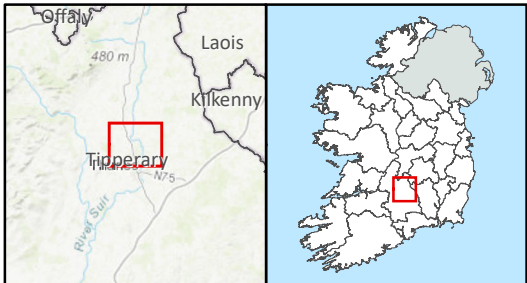
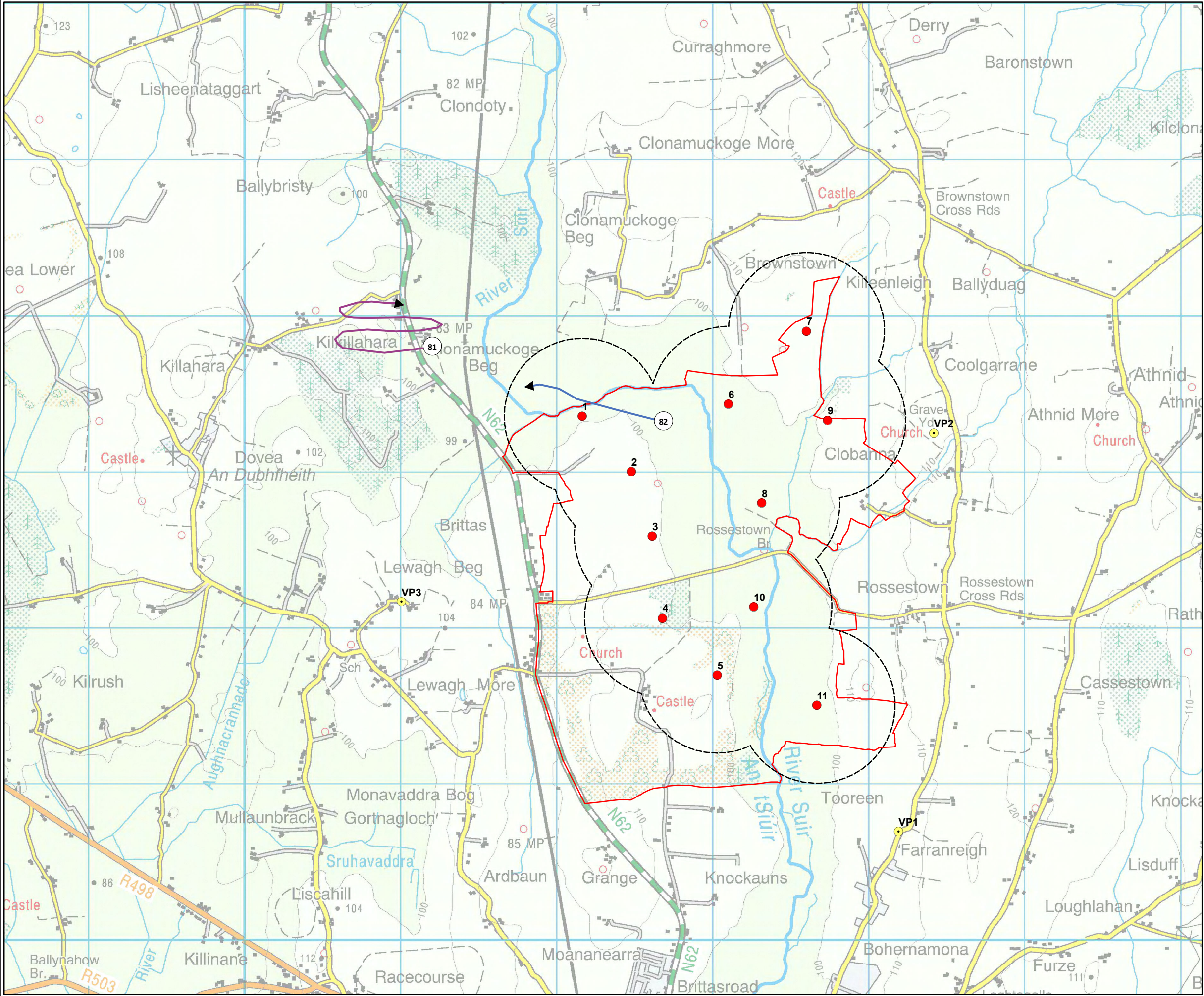
Legend

- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 61, 14/01/2021, 12:54
- 62, 28/11/2020, 12:56
- 63, 30/12/2020, 13:12
- 64, 15/12/2020, 13:17
- 65, 28/01/2021, 13:27
- 66, 29/12/2020, 13:29
- 67, 30/12/2020, 13:50
- 68, 18/02/2021, 14:00
- 69, 15/12/2020, 14:04
- 70, 11/12/2020, 14:07
- 71, 30/12/2020, 14:14
- 72, 11/12/2020, 14:17
- 73, 28/11/2020, 14:19
- 74, 29/12/2020, 14:20
- 75, 19/11/2020, 14:23
- 76, 30/12/2020, 14:31
- 77, 29/12/2020, 14:36
- 78, 11/12/2020, 14:43
- 79, 30/12/2020, 14:46
- 80, 19/11/2020, 15:08

TITLE:		Winter Flightlines 2020/2021 Lapwing 4	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
DATE:	17/02/2022	PAGE SIZE:	A3



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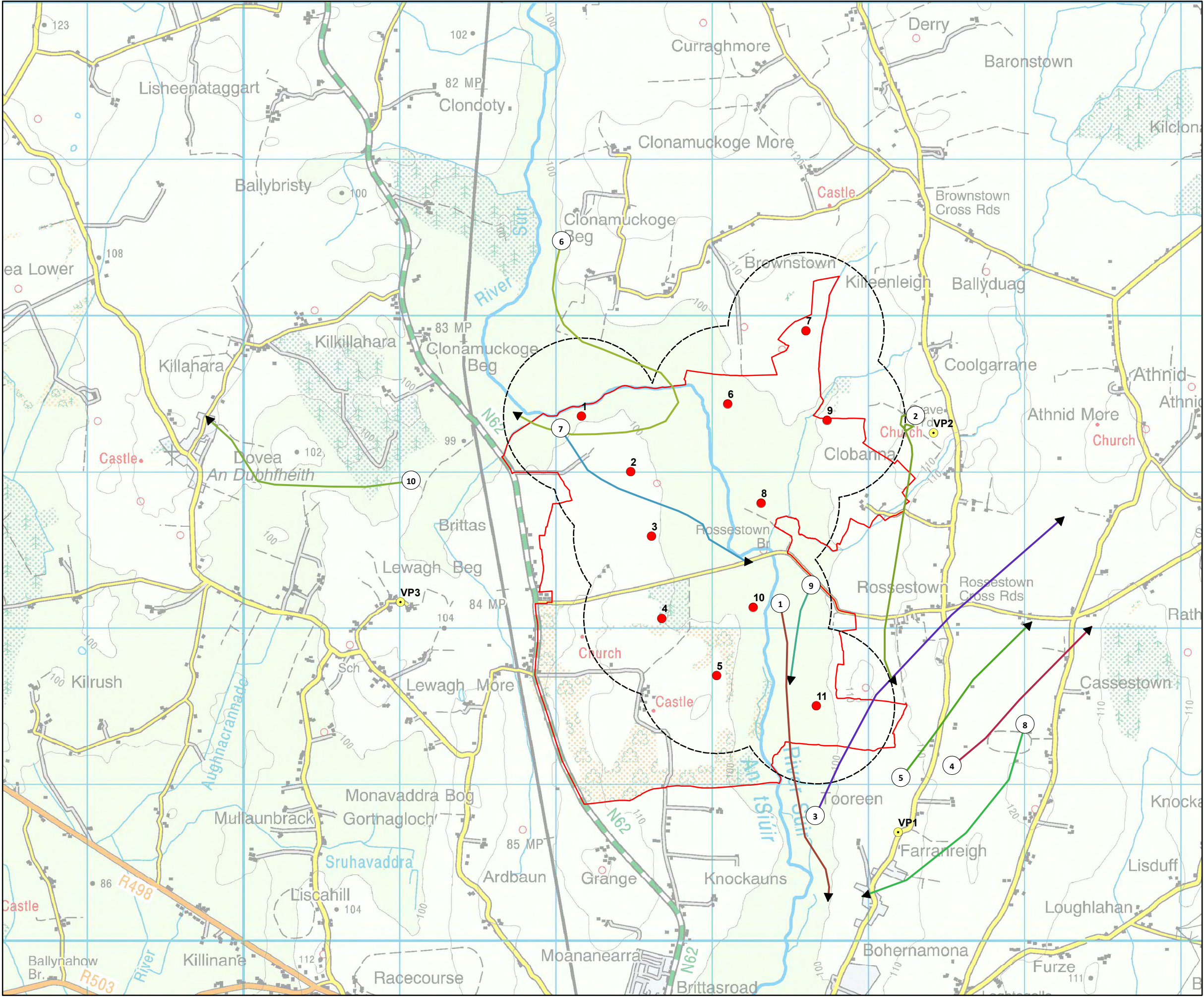
- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 81, 29/12/2020, 15:21
- 82, 29/12/2020, 15:35

TITLE:		Winter Flightlines 2020/2021 Lapwing 5	
PROJECT:		Brittas Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 22/02/2021, 09:08

2, 27/02/2021, 10:19

3, 05/11/2020, 12:42

4, 05/11/2020, 12:52

5, 05/11/2020, 13:12

6, 18/02/2021, 14:14

7, 15/12/2020, 14:53

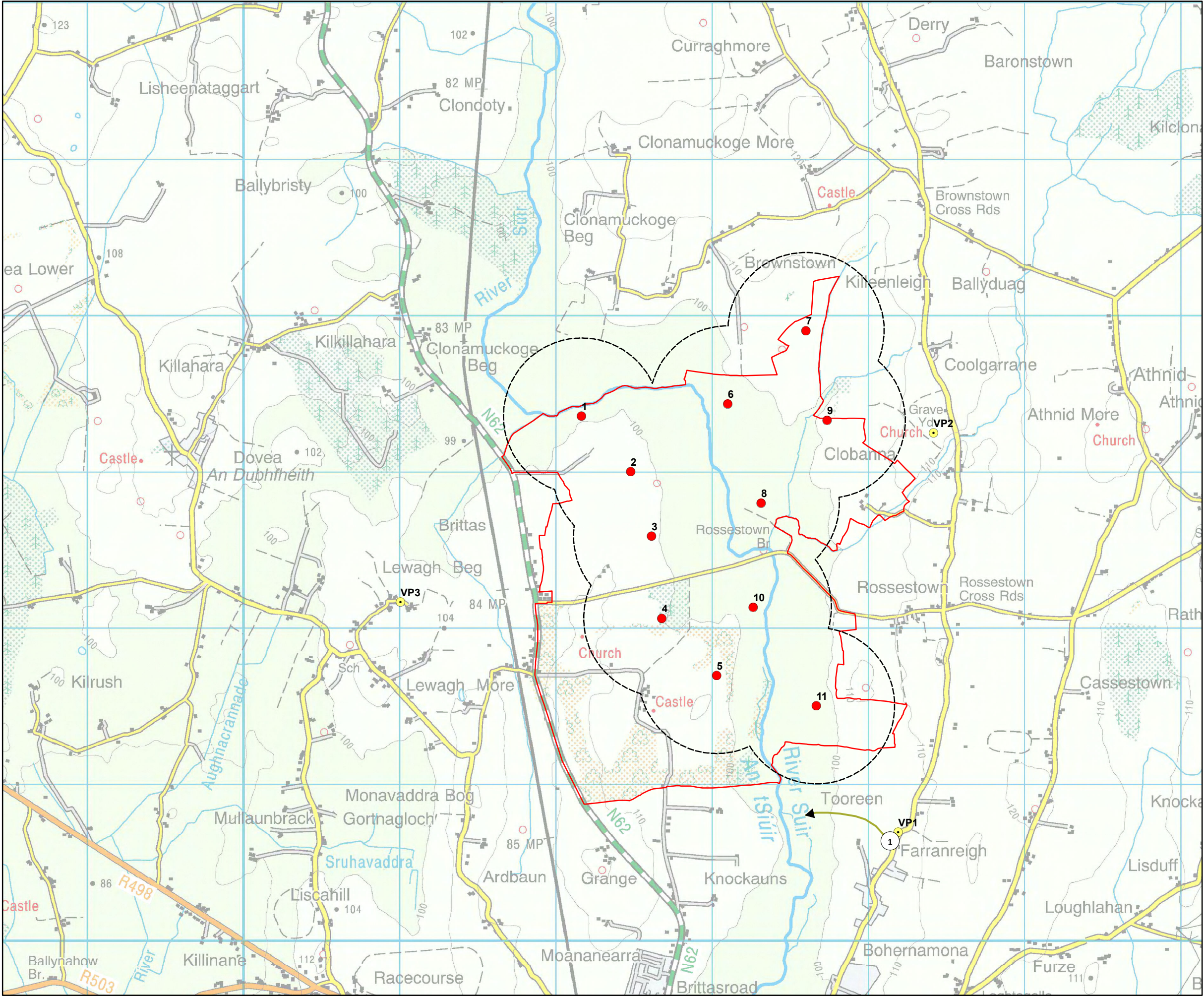
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9, 05/11/2020, 15:08

10, 16/02/2021, 16:51

TITLE:		Winter Flightlines 2020/2021 Lesser Black-backed Gull	
PROJECT:		Brittas Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
DATE:	17/02/2022	PAGE SIZE:	A3





Legend

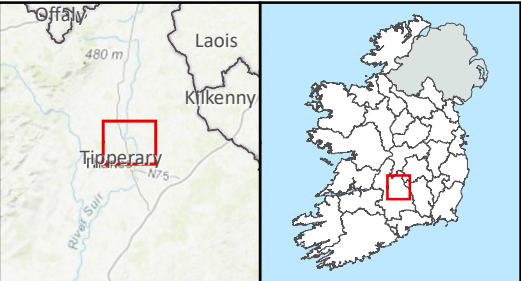
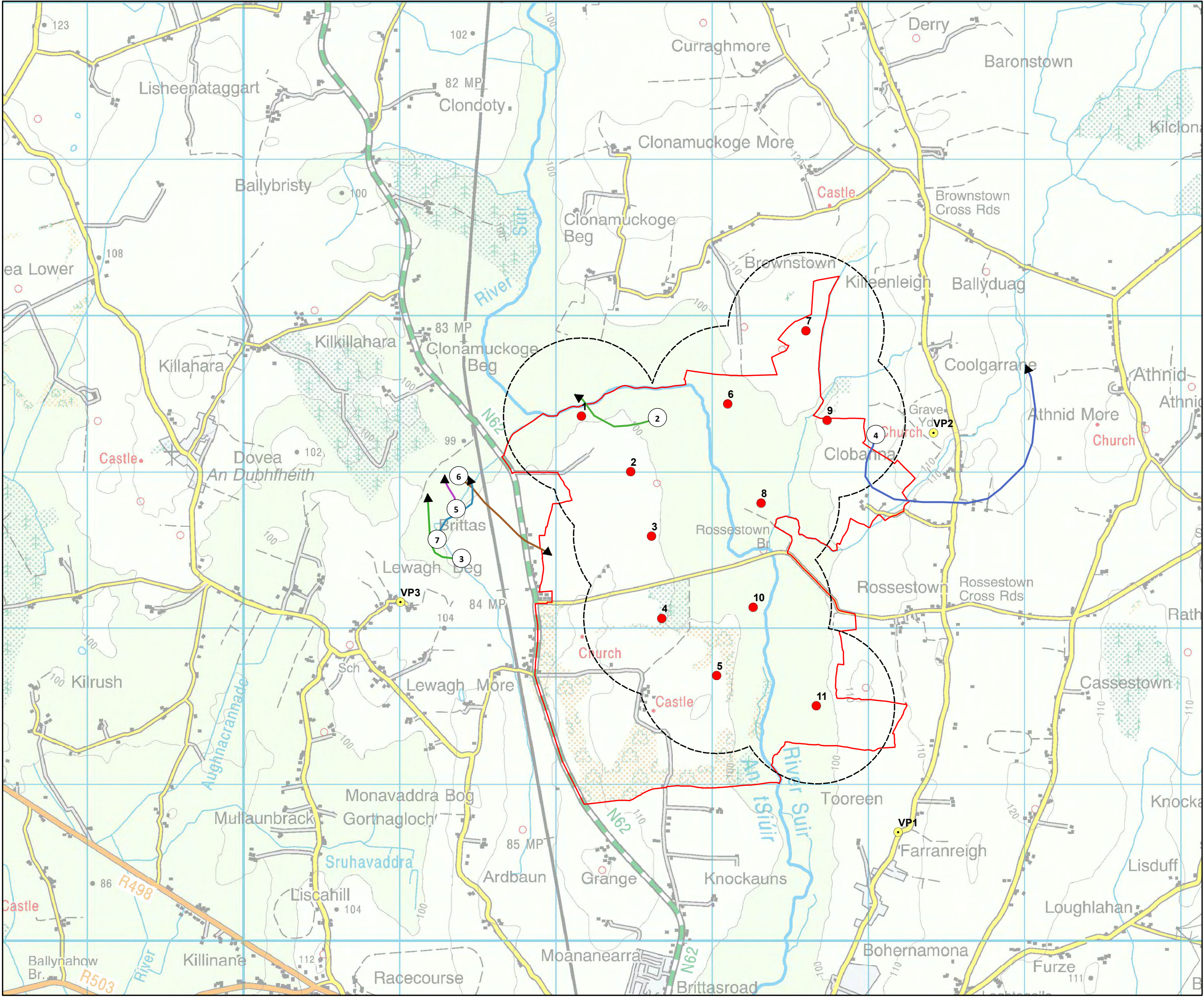
- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

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TITLE:		Winter Flightlines 2020/2021 Mallard	
PROJECT:		Brittas Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
DATE:	17/02/2022	PAGE SIZE:	A3





Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

2, 24/12/2020, 09:45

3, 28/01/2021, 10:01

4, 11/12/2020, 10:55

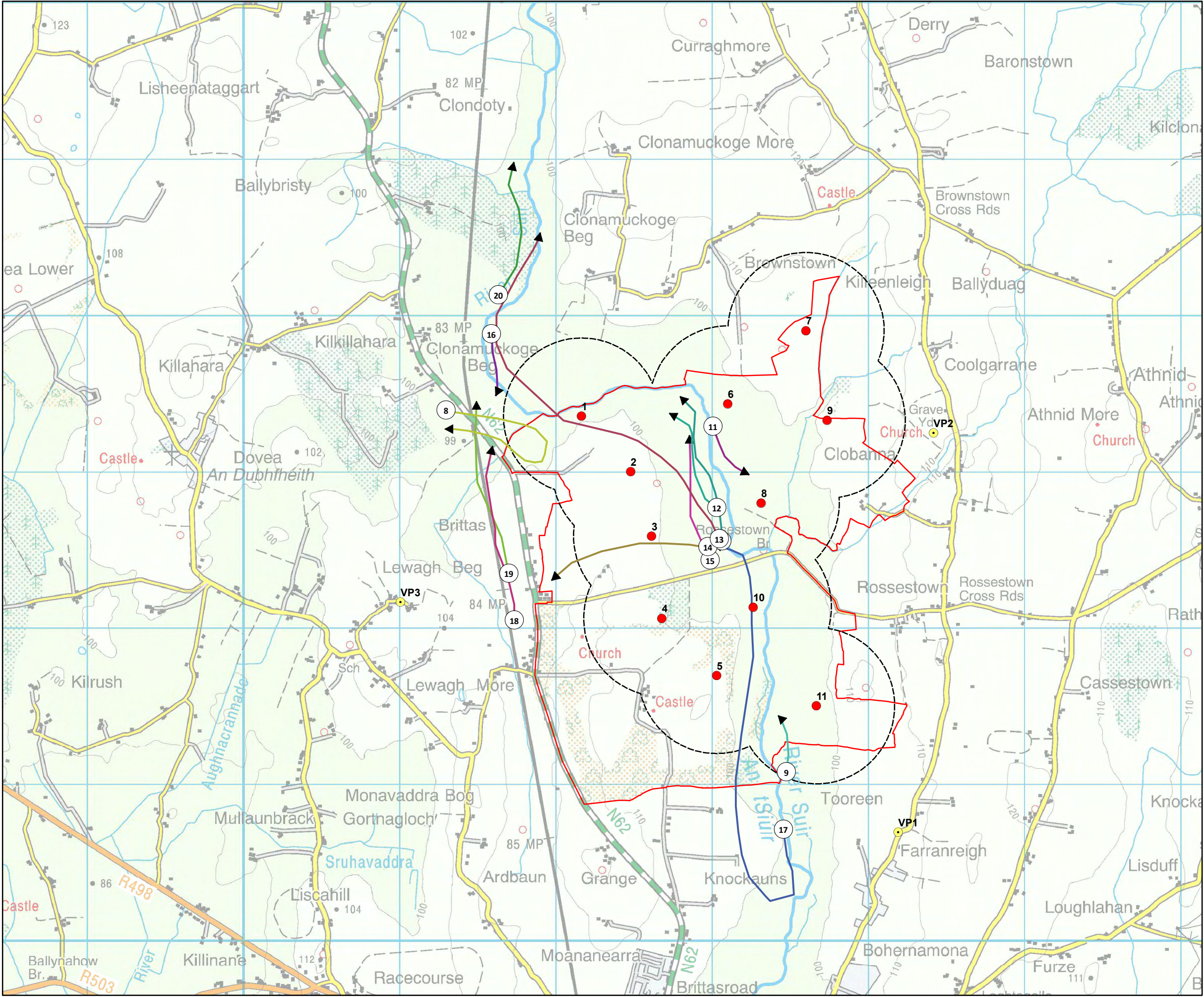
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TITLE:		Winter Flightlines 2020/2021 Merlin	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
DATE:	17/02/2022	PAGE SIZE:	A3





Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

8, 28/01/2021, 08:42

9, 28/11/2020, 08:56

10, 24/12/2020, 09:28

11, 19/12/2020, 09:30

12, 19/12/2020, 09:37

13, 27/02/2021, 09:56

14, 27/02/2021, 10:18

15, 05/11/2020, 11:22

16, 30/12/2020, 11:41

17, 20/12/2020, 12:14

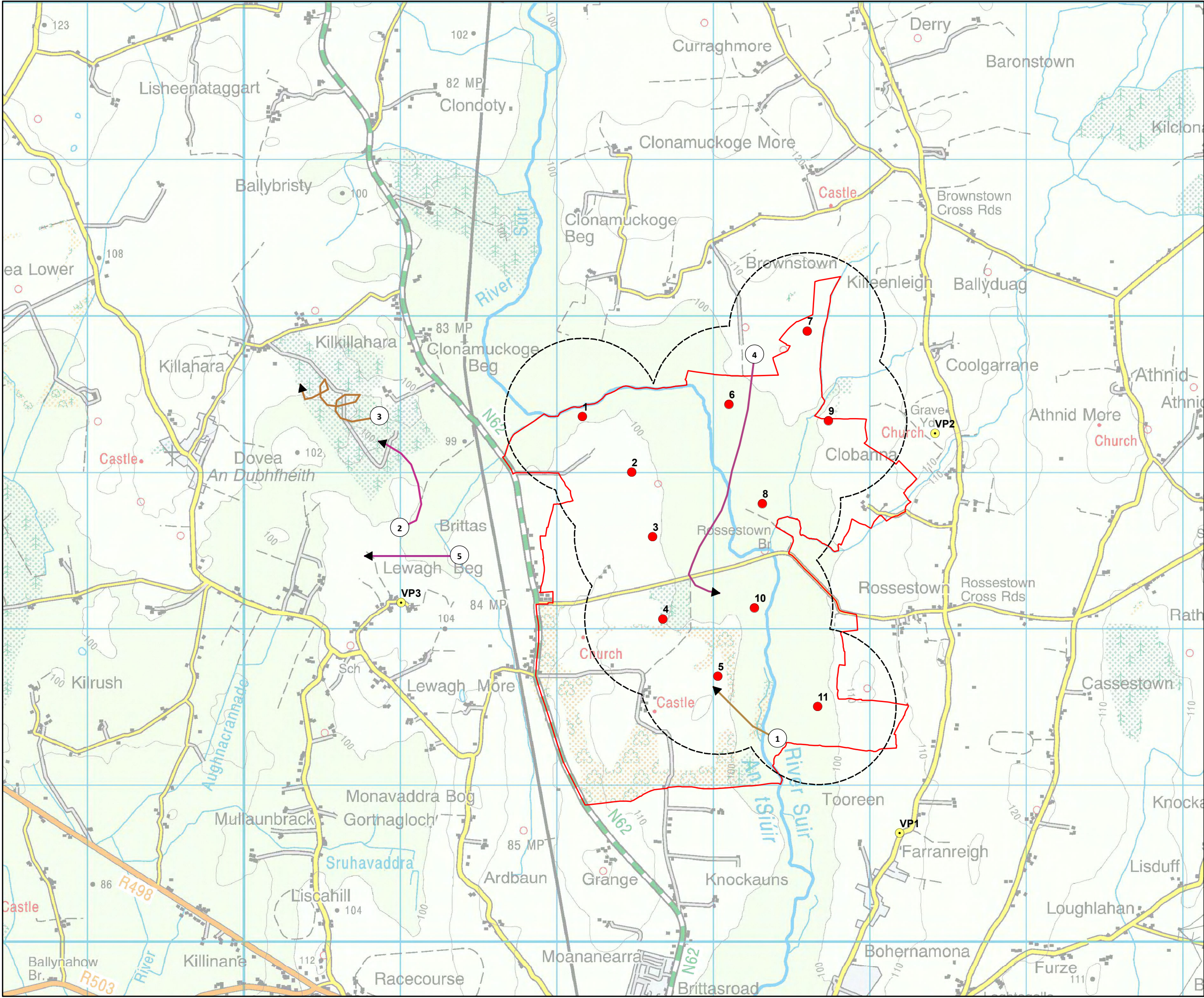
18, 28/11/2020, 13:11

19, 19/11/2020, 13:41

20, 30/12/2020, 15:25

TITLE:		Winter Flightlines 2020/2021 Mute Swan	
PROJECT:		Brittias Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
DATE:	17/02/2022	PAGE SIZE:	A3





Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 14/01/2021, 11:58

2, 16/03/2021, 12:19

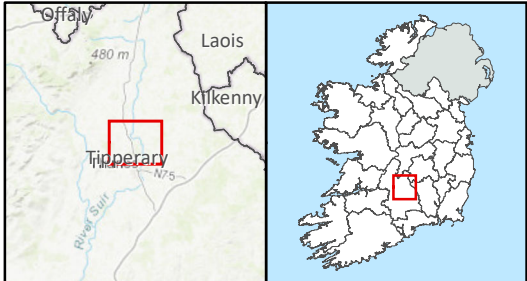
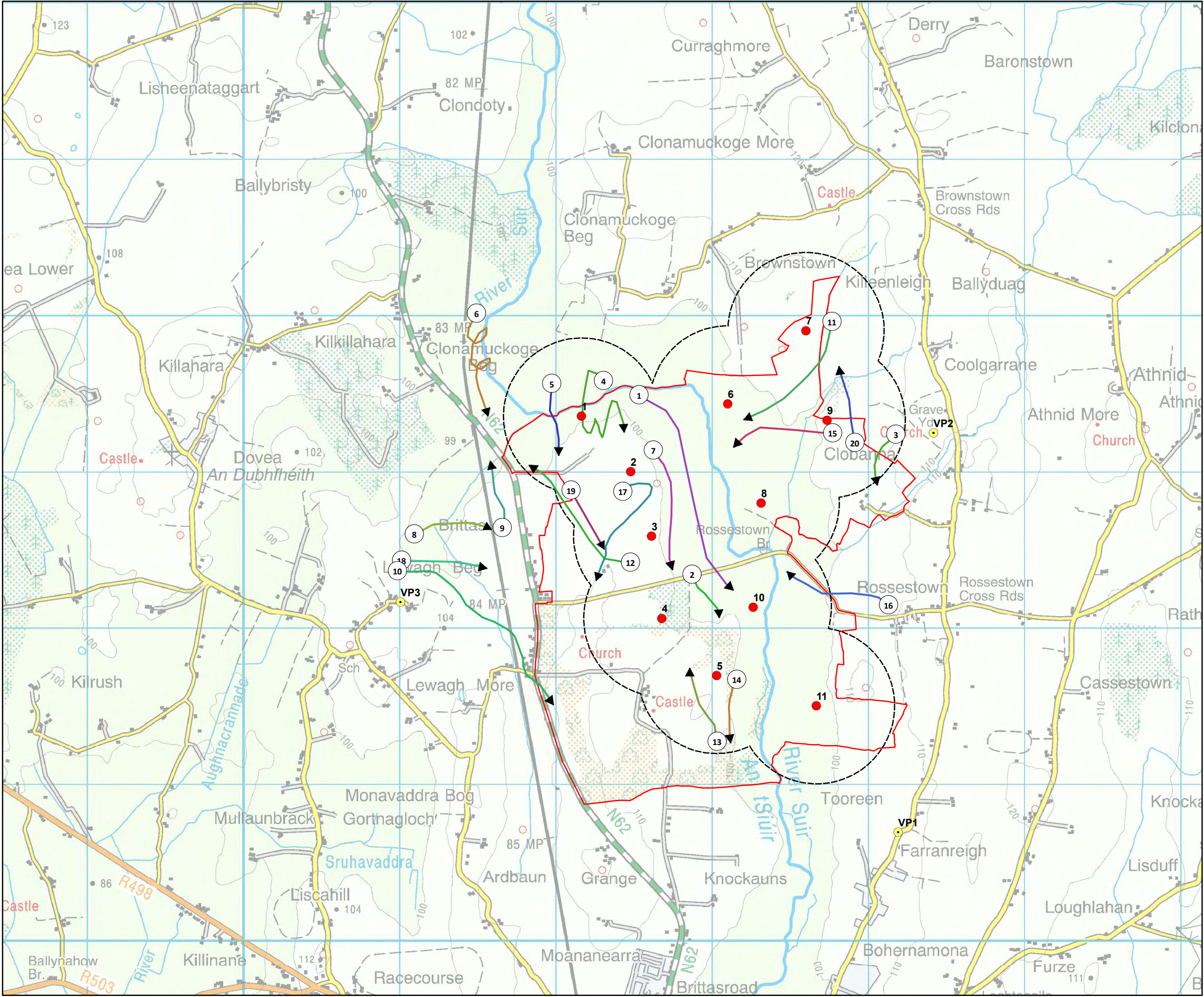
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4, 30/12/2020, 13:32

5, 19/11/2020, 14:08

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PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
DATE:	17/02/2022	PAGE SIZE:	A3





Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 30/12/2020, 09:37

2, 30/03/2021, 10:03

3, 23/03/2021, 10:19

4, 19/12/2020, 10:28

5, 17/01/2021, 10:53

6, 27/02/2021, 10:55

7, 24/12/2020, 10:59

8, 30/12/2020, 11:29

9, 30/12/2020, 11:31

10, 28/11/2020, 11:33

11, 24/12/2020, 11:33

12, 30/12/2020, 11:34

13, 15/12/2020, 11:37

14, 15/12/2020, 11:41

15, 17/01/2021, 11:44

16, 15/12/2020, 11:46

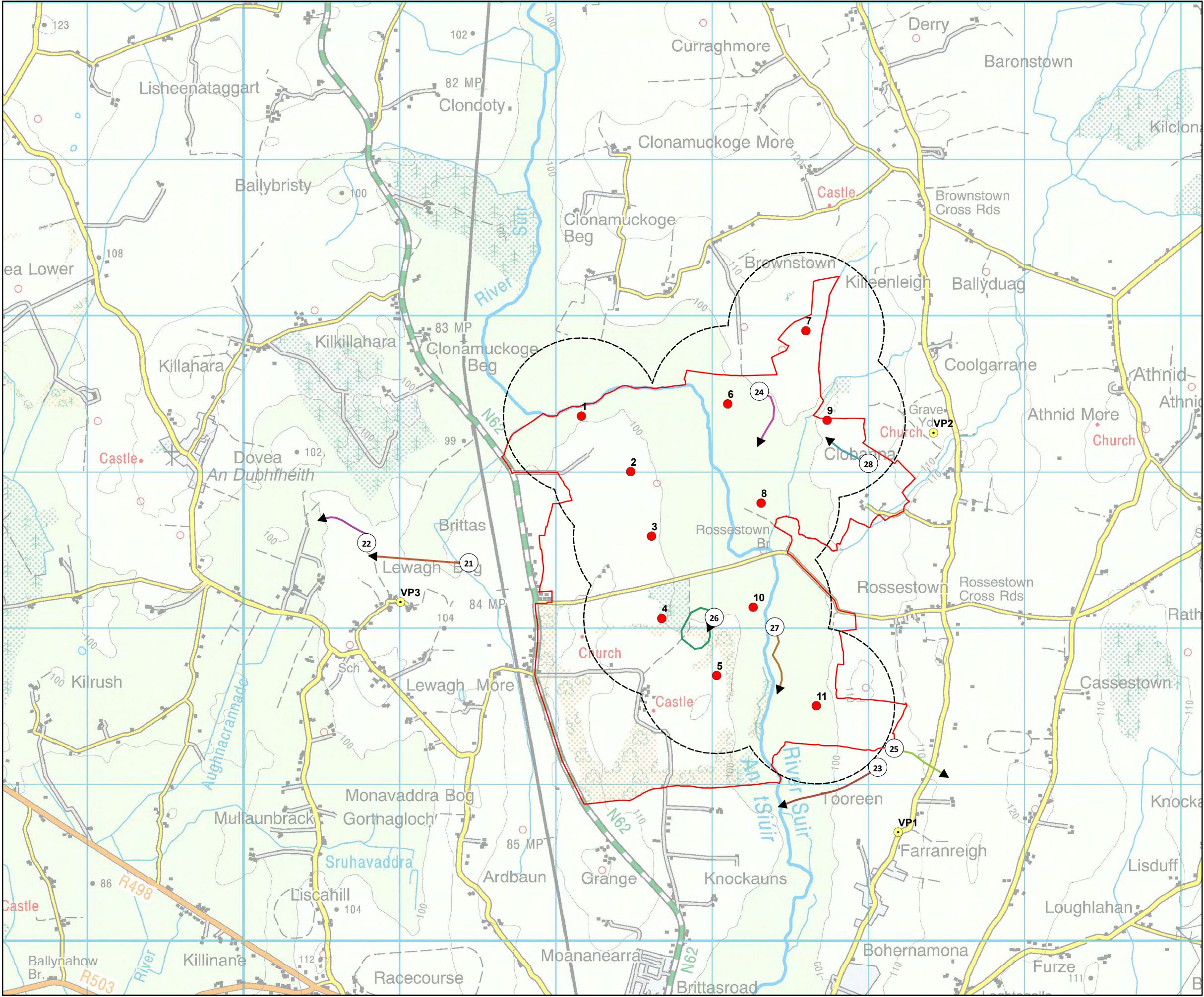
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18, 28/11/2020, 12:21

19, 04/02/2021, 12:29

20, 30/12/2020, 12:58

TITLE:		Winter Flightlines 2020/2021 Sparrowhawk 1	
PROJECT:		Brittis Wind Farm, Co. Tipperary	
FIGURE NO:		-	
CLIENT:		Enerco	
SCALE:	1:24000	REVISION:	0
DATE:	17/02/2022	PAGE SIZE:	A3



Legend

- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 21, 14/01/2021, 13:17
- 22, 14/01/2021, 13:18
- 23, 08/03/2021, 13:39
- 24, 28/01/2021, 13:48
- 25, 04/12/2020, 14:05
- 26, 26/01/2021, 14:41
- 27, 26/01/2021, 14:44
- 28, 18/02/2021, 15:10

TITLE:

Winter Flightlines 2020/2021
Sparrowhawk 2

PROJECT:

Brittas Wind Farm, Co. Tipperary

FIGURE NO:

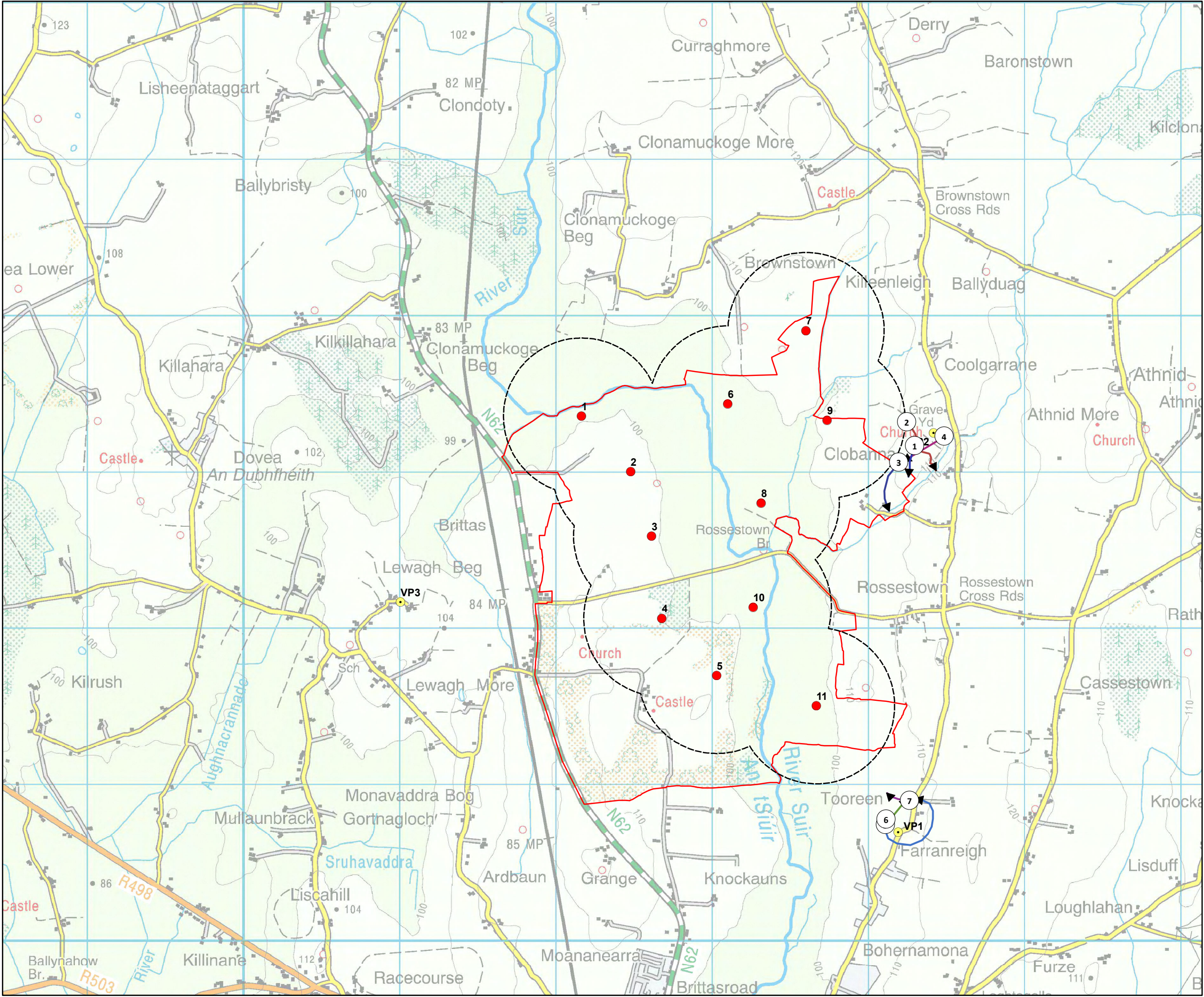
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CLIENT:

Enerco

SCALE:	1:24000	REVISION:	0
DATE:	17/02/2022	PAGE SIZE:	A3

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Legend

- Vantage Point Locations
- Turbine Locations
- Site Boundary
- Proposed Turbines 500m Buffer

Flightline, Date, Time

- 1, 30/03/2021, 08:44
- 2, 11/12/2020, 09:04
- 3, 30/03/2021, 09:18
- 4, 19/12/2020, 09:28
- 5, 28/11/2020, 10:51
- 6, 04/12/2020, 13:00
- 7, 22/03/2021, 14:45

TITLE:

Winter Flightlines 2020/2021 Snipe

PROJECT:

Brittis Wind Farm, Co. Tipperary

FIGURE NO:

-

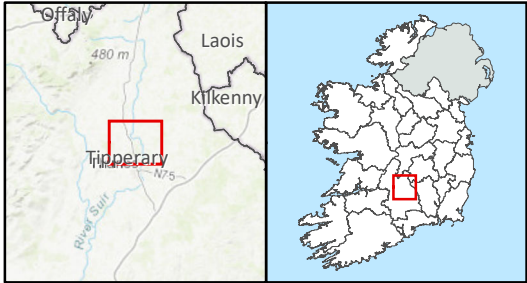
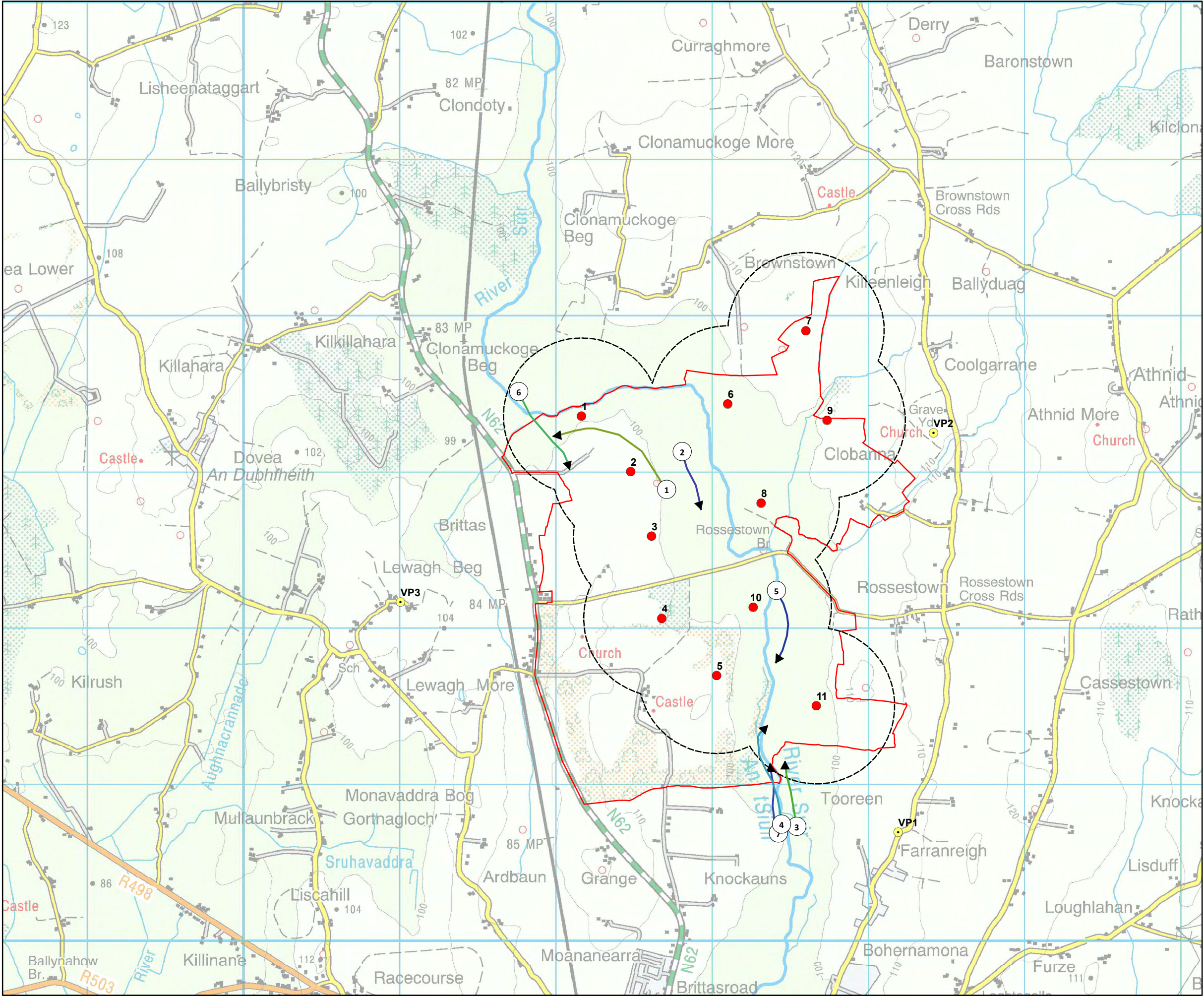
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Enerco

SCALE:	1:24000	REVISION:	0
DATE:	17/02/2022	PAGE SIZE:	A3

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Legend

Vantage Point Locations

Turbine Locations

Site Boundary

Proposed Turbines 500m Buffer

Flightline, Date, Time

1, 28/01/2021, 09:16

2, 05/02/2021, 09:44

3, 15/12/2020, 09:50

4, 20/12/2020, 09:58

5, 29/12/2020, 09:59

6, 30/12/2020, 10:06

7, 15/12/2020, 10:35

TITLE:

Winter Flightlines 2020/2021
Whooper Swan

PROJECT:

Brittas Wind Farm, Co. Tipperary

FIGURE NO:

-

CLIENT:

Enerco

SCALE:

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REVISION:

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DATE:

17/02/2022

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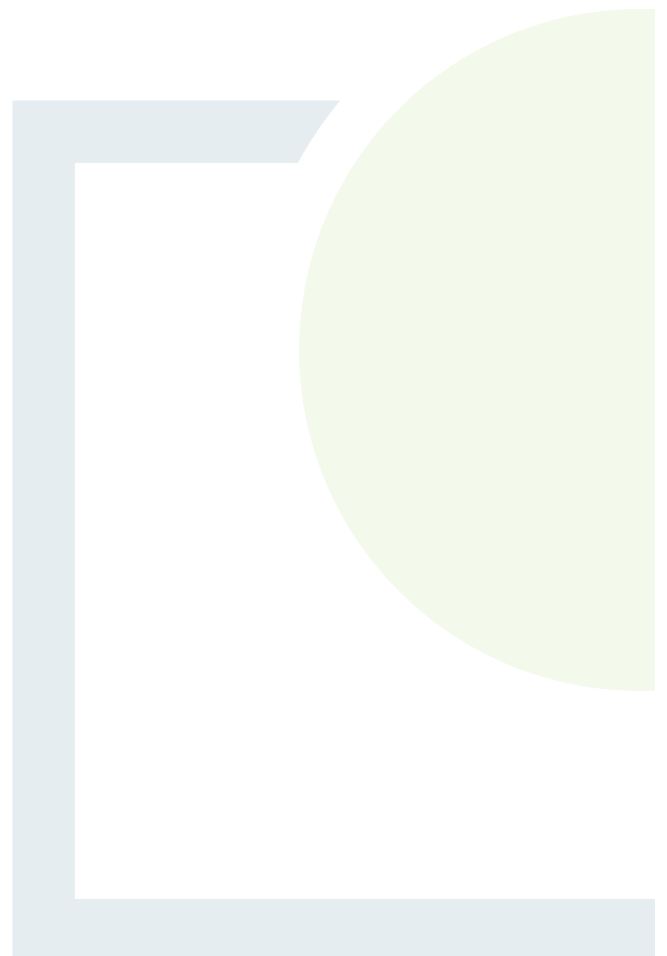




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APPENDIX 5

Hinterland Bird Survey Data



Hinterland Survey Data Winter 2020/21 – Summer 2021

Date	Site	Species	Species Quantity
12/11/20	Liathmore	Whooper swan	26
12/11/20	Loughmoe castle	Peregrine	1
12/11/20	The Tank, Thurles	Snipe	4
12/11/20	The Tank, Thurles	Grey Heron	2
12/11/20	The Tank, Thurles	Mute swan	2
12/11/20	Cabragh Wetlands	Grey Heron	2
12/11/20	Cabragh Wetlands	Coot	1
12/11/20	Cabragh Wetlands	Lapwing	350
12/11/20	Cabragh Wetlands	Garganey	4
12/11/20	Cabragh Wetlands	Shoveler	5
12/11/20	Cabragh Wetlands	Mallard	70
12/11/20	Cabragh Wetlands	Teal	350
12/11/20	Cabragh Wetlands	Wigeon	150
26/11/20	Ballydavid, Littleton	Lesser Black-backed gull	8
26/11/20	Ballydavid, Littleton	Lapwing	40
26/11/20	Ballydavid, Littleton	Teal	12
26/11/20	Lisheen Bog	Grey Heron	2
26/11/20	Lisheen Bog	Mallard	9
26/11/20	Lisheen Bog	Moorhen	1
26/11/20	Lisheen Bog	Teal	1
26/11/20	The Tank	Grey Heron	3
26/11/20	The Tank	Snipe	15
26/11/20	Cabragh Wetlands	Mallard	55
26/11/20	Cabragh Wetlands	Garganey	2
26/11/20	Cabragh Wetlands	Coot	1
26/11/20	Cabragh Wetlands	Mute Swan	8
26/11/20	Cabragh Wetlands	Lapwing	300
26/11/20	Cabragh Wetlands	Grey Heron	3
26/11/20	Cabragh Wetlands	Snipe	15
26/11/20	Cabragh Wetlands	Curlew	4
26/11/20	Cabragh Wetlands	Black-headed Gull	30
26/11/20	Cabragh Wetlands	Shelduck	8
26/11/20	Cabragh Wetlands	Teal	400
26/11/20	Cabragh Wetlands	Wigeon	350

Date	Site	Species	Species Quantity
26/11/20	Cabragh Wetlands	Sparrowhawk	1
26/11/20	Clonamuckoge Beg	Whooper Swan	3
26/11/20	Clonamuckoge Beg	Golden Plover	200
26/11/20	Clonamuckoge Beg	Lapwing	180
08/12/20	Ballydavid, Littleton	Lapwing	45
08/12/20	Ballydavid, Littleton	Snipe	5
08/12/20	Ballydavid, Littleton	Moorhen	1
08/12/20	Ballydavid, Littleton	Teal	25
08/12/20	Liathmore	Whooper Swan	95
08/12/20	Lisheen Bog	Peregrine	1
08/12/20	Lisheen Bog	Little Egret	2
08/12/20	Lisheen Bog	Grey Heron	1
08/12/20	Clonamuckoge Beg	Whooper Swan	5
08/12/20	Clonamuckoge Beg	Lapwing	300
08/12/20	Clonamuckoge Beg	Golden Plover	200
08/12/20	The Tank	Grey Heron	3
08/12/20	The Tank	Snipe	12
08/12/20	Cabragh Wetlands	Sparrowhawk	1
08/12/20	Cabragh Wetlands	Snipe	8
08/12/20	Cabragh Wetlands	Mallard	35
08/12/20	Cabragh Wetlands	Teal	350
08/12/20	Cabragh Wetlands	Wigeon	250
08/12/20	Cabragh Wetlands	Lapwing	25
08/12/20	Cabragh Wetlands	Grey Heron	2
16/01/2021	Ballydavid, Littleton	Mute Swan	2
16/01/2021	Ballydavid, Littleton	Teal	12
16/01/2021	Ballydavid, Littleton	Lapwing	75
16/01/2021	Liathmore	Whooper swan	37
16/01/2021	Loghmore Castle	No birds	0
16/01/2021	Lisheen Bog	Little Egret	1
16/01/2021	Lisheen Bog	Mallard	7
16/01/2021	Lisheen Bog	Teal	1
16/01/2021	Lisheen Bog	Buzzard	2
16/01/2021	Lisheen Bog	Snipe	2
16/01/2021	Clonamuckoge Beg	Whooper Swan	5

Date	Site	Species	Species Quantity
16/01/2021	Clonamuckoge Beg	Golden Plover	700
16/01/2021	Clonamuckoge Beg	Lapwing	300
16/01/2021	The Tank	Grey Heron	2
16/01/2021	The Tank	Snipe	5
16/01/2021	Cabragh Wetlands	Grey Heron	4
16/01/2021	Cabragh Wetlands	Little Egret	1
16/01/2021	Cabragh Wetlands	Curlew	65
16/01/2021	Cabragh Wetlands	Lapwing	400
16/01/2021	Cabragh Wetlands	Garganey	2
16/01/2021	Cabragh Wetlands	Black-headed Gull	55
16/01/2021	Cabragh Wetlands	Pintail	6
16/01/2021	Cabragh Wetlands	Shoveler	6
16/01/2021	Cabragh Wetlands	Wigeon	350
16/01/2021	Cabragh Wetlands	Teal	300
16/01/2021	Cabragh Wetlands	Greylag Goose	12
16/01/2021	Cabragh Wetlands	Mallard	55
06/02/2021	Ballydavid, Littleton	Coot	1
06/02/2021	Ballydavid, Littleton	Mallard	4
06/02/2021	Ballydavid, Littleton	Moorhen	2
06/02/2021	Ballydavid, Littleton	Lesser Black-backed Gull	1
06/02/2021	Liathmore	Whooper Swan	22
06/02/2021	Liathmore	Golden Plover	5
06/02/2021	Loughmoe Castle	Peregrine	1
06/02/2021	Lisheen Bog	Mallard	5
06/02/2021	Lisheen Bog	Snipe	3
06/02/2021	Lisheen Bog	Grey Heron	1
06/02/2021	Lisheen Bog	Little egret	1
06/02/2021	Clonamuckoge Beg	Mute swan	6
06/02/2021	Clonamuckoge Beg	Lapwing	26
06/02/2021	Clonamuckoge Beg	Golden Plover	150
06/02/2021	Clonamuckoge Beg	Teal	14
06/02/2021	Clonamuckoge Beg	Mallard	2
06/02/2021	Clonamuckoge Beg	Moorhen	2
06/02/2021	The Tank	Grey Heron	3
06/02/2021	The Tank	Mallard	4

Date	Site	Species	Species Quantity
06/02/2021	The Tank	Snipe	7
06/02/2021	Cabragh Wetlands	Gadwall	4
06/02/2021	Cabragh Wetlands	Collard dove	1
06/02/2021	Cabragh Wetlands	Lapwing	150
06/02/2021	Cabragh Wetlands	Golden Plover	300
06/02/2021	Cabragh Wetlands	Grey Heron	4
06/02/2021	Cabragh Wetlands	Chaffinch	31
06/02/2021	Cabragh Wetlands	Black headed gull	110
06/02/2021	Cabragh Wetlands	Mallard	15
06/02/2021	Cabragh Wetlands	Wigeon	75
06/02/2021	Cabragh Wetlands	Teal	150
06/02/2021	Cabragh Wetlands	Shoveler	45
06/02/2021	Cabragh Wetlands	Garganey	1
07/03/2021	Ballydavid, Littleton	Lesser Black-backed Gull	1
07/03/2021	Ballydavid, Littleton	Black-headed Gull	45
07/03/2021	Ballydavid, Littleton	Coot	4
07/03/2021	Ballydavid, Littleton	Moorhen	6
07/03/2021	Ballydavid, Littleton	Teal	4
07/03/2021	Liathmore	Whooper Swan	60
07/03/2021	Lisheen Bog	Mallard	5
07/03/2021	Lisheen Bog	Moorhen	2
07/03/2021	Lisheen Bog	Little Grebe	2
07/03/2021	Lisheen Bog	Snipe	1
07/03/2021	Clonamuckoge Beg	Mute Swan	4
07/03/2021	The Tank, Thurles	Snipe	5
07/03/2021	The Tank, Thurles	Grey Heron	3
07/03/2021	Cabragh Wetlands	Grey Heron	5
07/03/2021	Cabragh Wetlands	Little Egret	3
07/03/2021	Cabragh Wetlands	Black-headed Gull	68
07/03/2021	Cabragh Wetlands	Water Rail	2
07/03/2021	Cabragh Wetlands	Lapwing	28
07/03/2021	Cabragh Wetlands	Teal	30
07/03/2021	Cabragh Wetlands	Gadwall	6
07/03/2021	Cabragh Wetlands	Mallard	12
07/03/2021	Cabragh Wetlands	Wigeon	230

Date	Site	Species	Species Quantity
26/06/2021	Ballydavid, Littleton	Coot	8
26/06/2021	Ballydavid, Littleton	Little Grebe	5
26/06/2021	Ballydavid, Littleton	Lesser Black-backed Gull	1
26/06/2021	Ballydavid, Littleton	Moorhen	2
26/06/2021	Lisheen Bog	Ringed Plover	2 pairs
26/06/2021	Lisheen Bog	Lapwing	1 pair
26/06/2021	Lisheen Bog	Grey Heron	1
26/06/2021	Cabragh Wetlands	Lapwing	1 pair
26/06/2021	Cabragh Wetlands	Snipe	4 pairs
27/07/2021	Ballydavid, Littleton	Coot	6
27/07/2021	Lisheen Bog	Grey Heron	3
27/07/2021	Lisheen Bog	Snipe	3
27/07/2021	Lisheen Bog	Curlew	20
27/07/2021	Lisheen Bog	Black-headed Gull	1
27/07/2021	Lisheen Bog	Little Egret	1
27/07/2021	Littleton Bog	Lapwing	1
27/07/2021	Littleton Bog	Mallard	4
27/07/2021	Littleton Bog	Teal	2
27/07/2021	Littleton Bog	Moorhen	2
27/07/2021	Littleton Bog	Little grebe	2
27/07/2021	Littleton Bog	Snipe	2



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ENVIRONMENTAL SCIENCE
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www.fehilytimoney.ie

CORK OFFICE

Core House,
Pouladuff Road,
Cork, T12 D773,
Ireland
+353 21 496 4133

Dublin Office

J5 Plaza,
North Park Business Park,
North Road, Dublin 11, D11 PXT0,
Ireland
+353 1 658 3500

Carlow Office

Unit 6, Bagenalstown Industrial
Park, Royal Oak Road,
Muine Bheag,
Co. Carlow, R21 XW81,
Ireland
+353 59 972 3800

