MWP

Appendix 14E- L1219, L1220 & L1222 Local Roads Visual Pavement Inspection Report

Ballynisky Wind Farm

Ballynisky Green Energy Ltd

December 2025

Contents

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1. Introduction

This L1219, L1220 and L1222 Local Roads Visual Pavement Inspection Report has been prepared on behalf of Ballynisky Green Energy Ltd., in respect of their proposed Ballynisky Wind Farm development, County Limerick.

This Local Roads Visual Pavement Inspection Report is for submission to Limerick City and County Council as part of the planning application for the proposed Ballynisky Wind Energy Project.

2. Methodology

This L1219, L1220 and L1222 Local Roads Visual Pavement Inspection Report has been prepared in the context of the following:

- Transport Infrastructure Ireland's (TII) Pavement Assessment, Repair and Renewal Principles AM-PAV-06050 March 2020;
- An on-site visual inspection by MWP of the L1219, L1220 and L1222 Local Roads, located along the proposed Ballynisky Wind Farm construction turbine delivery route, on the 1st October 2024, including on-site measurements and record photographs; and
- Limerick City and County Council's Limerick Development Plan 2022-2028.

3. Proposed Ballynisky Wind Farm Site Location and Access

The proposed Ballynisky Wind Farm development site is located to the south of Creeves Cross, County Limerick, approximately 9 kms north of Newcastle West and 6 kms northwest of Rathkeale, as shown in Figure 1. The site is located on the south side of the L1219 Local Road and its L1220 Local Road junction.

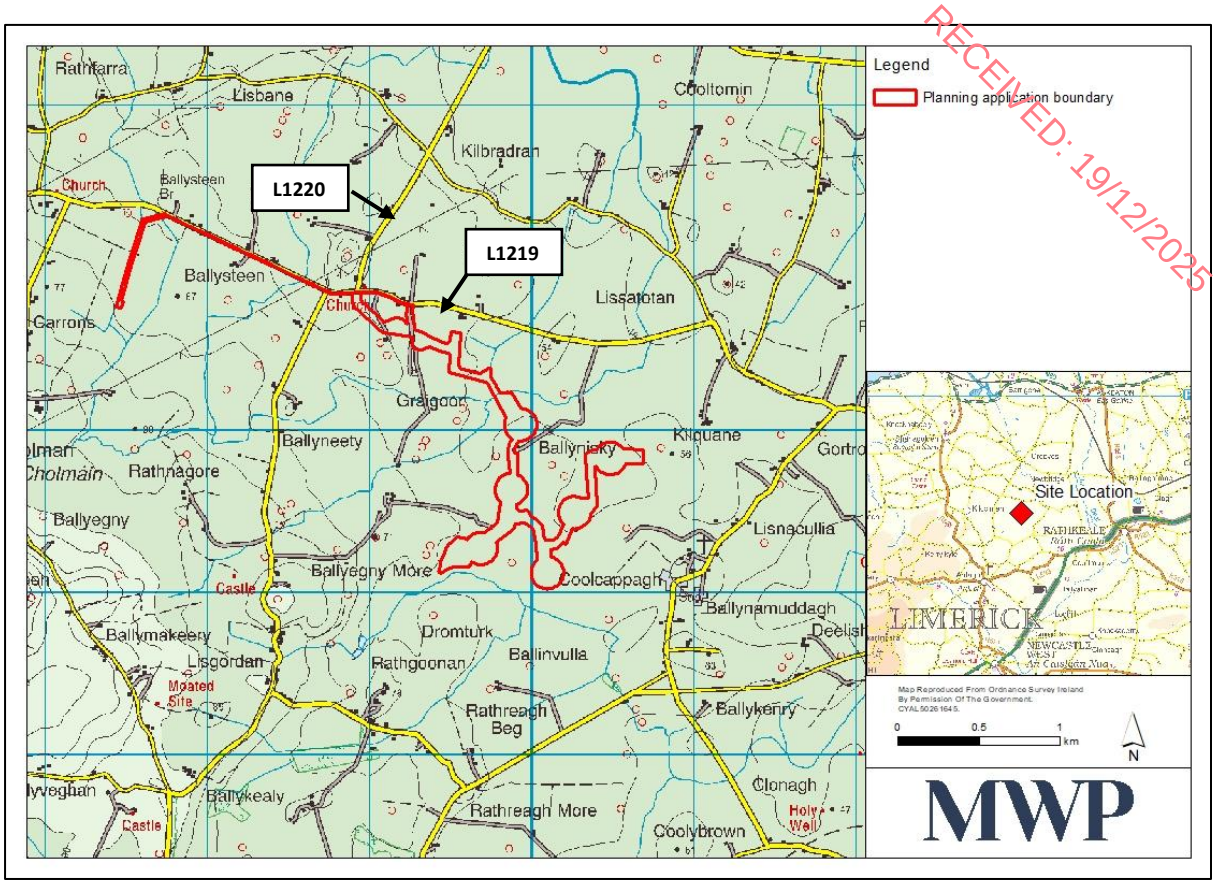

Figure 1: Proposed Ballynisky Wind Farm Location

The proposed Ballynisky Wind Farm site accesses on the L1219 Local Road are as follows:

- A temporary construction access on the south side of the L1219 located directly opposite its L1220 junction, which is part of the proposed construction turbine delivery route. The temporary construction access is for the duration of the construction phase only and would be permanently closed at the completion of construction; and
- A permanent access for operational maintenance access on the south side of the L1219, located east of its L1220 junction, at the location of the existing site access.

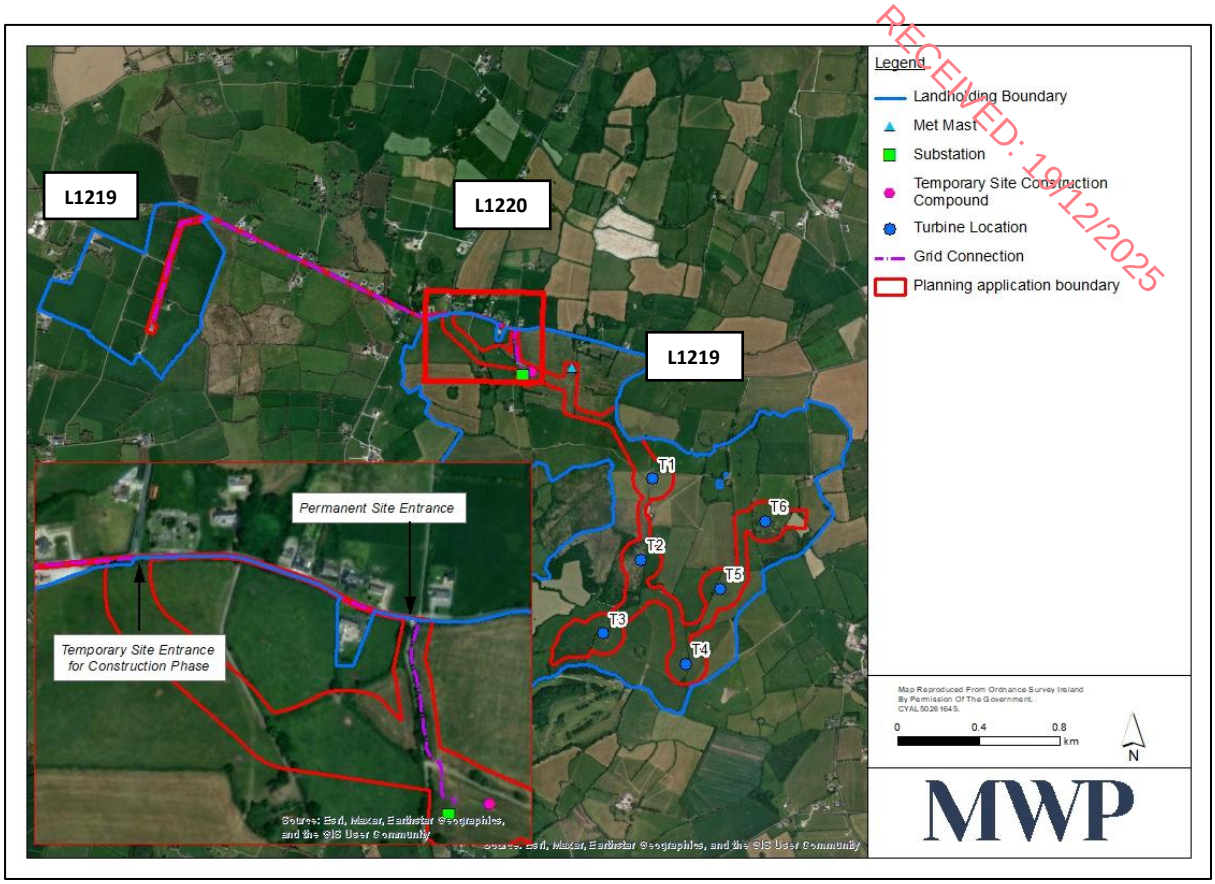

Figure 2: Proposed Ballynisky Wind Farm Site Accesses Location Map

The proposed Ballynisky Wind Farm construction turbine delivery route is from Foynes Port, south eastwards along the N69 National Road for 1.8 kms and turning onto the Local Roads network, as follows:

- Turn right onto the L1222 and travel southeast for 5.1 kms to Creeves Cross; and
- At Creeves Cross, turn right and head south along the L1220 for 2.5 kms to the proposed temporary construction site access located opposite the T-junction with the L1219.

The proposed Ballynisky Wind Farm Construction Turbine Delivery Route is shown in Figure 3.

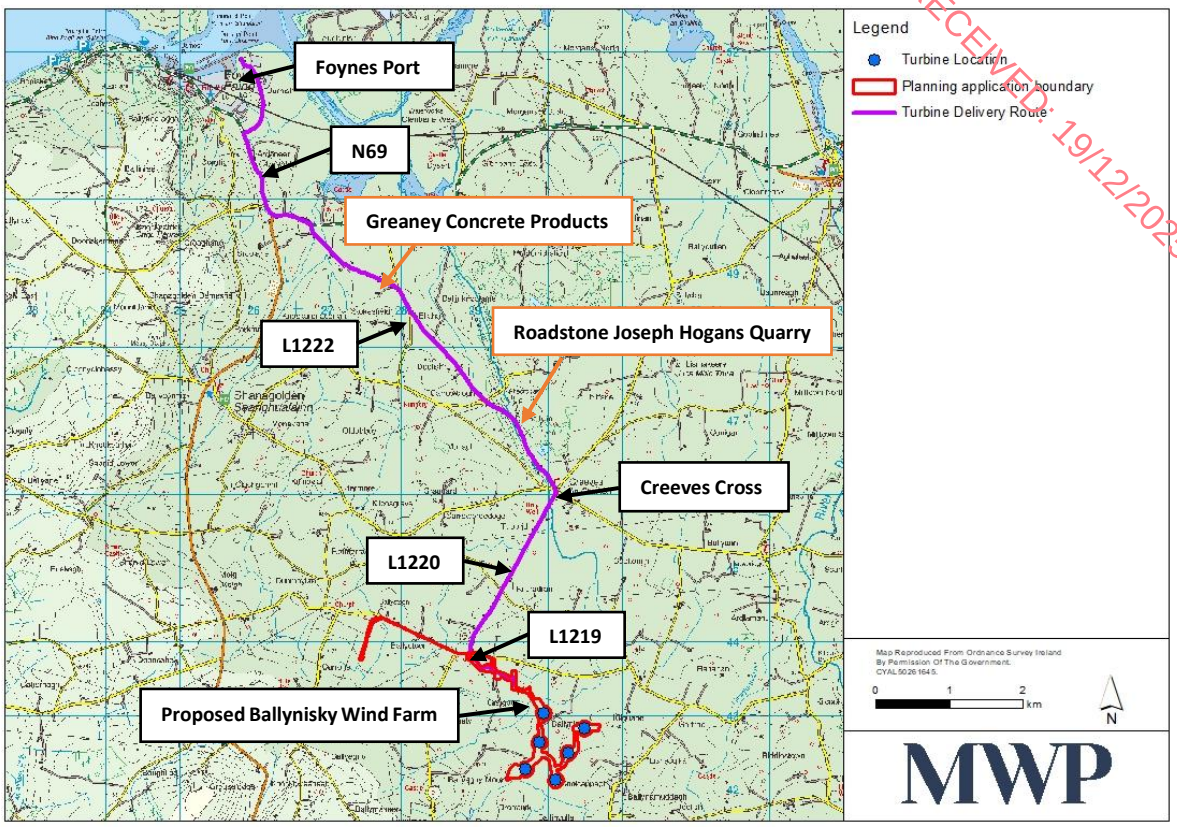

Figure 3: Proposed Construction Turbine Delivery Route

4. Existing Local Roads

The rural L1219, L1220 and L1222 Local Roads are located within the posted 80 km/hour rural speed limit zone; and the L1220 and L1222 Local Roads at Creeves Cross are located within its 50 km/hour urban posted speed limit zone.

As shown in Figure 3, the rural L1222 includes Greaney Concrete Products, located circa 1.3 kms south east of the N69; and Roadstone Joseph Hogans Quarry, located circa 4.0 kms south east of the N69.

The L1222 rural road, between its N69 T-junction and Creeves Cross, has a typical rural road carriageway width of 5.7 metres with centreline road markings. There are no centreline road markings on the L1222, locally, in the vicinity of Roadstone Joseph Hogans Quarry, where the road carriageway width is circa 6.0 metres, locally.

At Creeves Cross, the L1222 has a typical road carriageway width of 6.0 metres, with hard shoulders, locally, at its L1220 junction.

At Creeves Cross, the L1220 has a typical road carriageway width of 5.7 metres with centreline road markings and intermittent set back property boundaries.

The L1220 rural road, between Creeves Cross and its L1219 junction, has a typical rural carriageway width of 5.2 metres with centreline road markings.

At its L1220 junction, the L1219 has a rural road carriageway width of 5.3 metres, locally, with no road markings.

5. Technical Guidance

5.1 TII Pavement Assessment, Repair and Renewal Principles AM-PAV-06050 March 2020

The TII Pavement Assessment, Repair and Renewal Principles AM-PAV-06050 March 2020 Section 3 Visual Inspection Report includes the following:

> *"Visual inspection of the carriageway pavements should be carried out to identify areas of pavement defects and distress. Signs of such distress include potholing, patching, ravelling, bleeding, cracking and settlement."*

The TII Pavement Assessment, Repair and Renewal Principles AM-PAV-06050 March 2020 Appendix G Carriageway Pavement Defect Types includes the following:

> *"Surface Defects*
>
> *Ravelling*
>
> *Ravelling is progressive loss of binder and aggregate chippings from the pavement surface."*
>
> *"Binding and Fatting Up*
>
> *Fatting is due to embedment (in surface dressings) or loss of texture in the surface with binder filling the voids. Bleeding is often due to low viscosity binder being forced to the surface by the action of water and binder stripping."*
>
> *"Pavement Deformation*
>
> *Rutting*
>
> *Rutting is a permanent longitudinal deformation in the wheel paths caused by traffic loading."*
>
> *"Surface Distortion*
>
> *All permanent surface distortion, with the exception of rutting, is identified as surface distortion."*
>
> *"Cracks*
>
> *Alligator Cracking*
>
> *Alligator cracking is a series of interconnected cracks forming small, many-sided, sharp-angled polygons ranging in size from about 25 mm to 125 mm resembling chicken wire or the skin of an alligator."*
>
> *"Edge Breakup/Cracking*
>
> *Edge breakup can be caused by inadequate pavement width, inadequate lateral support to the pavement, moisture penetration, poor drainage or frost action. It is accelerated by repeated traffic loading."*
>
> "Other Cracking
>
> *"Longitudinal cracks are parallel to the pavement centreline. Transverse cracks extend across the pavement at approximately right angles to the pavement centreline and are often regularly spaced. Transverse cracking at regular, short intervals will often be seen on boggy ground."*
>
> *"Patching*
> *A patch is an area of pavement which has been replaced with new material to repair the original pavement. This indicates a pavement defect or utility cut excavation which has been repaired."*

"Potholes

Potholes are bowl-shaped depressions where part of the pavement has been removed, exposing the underlying layer(s)."

"Road Disintegration

Road disintegration is identified in two primary forms:

a) Loss of road surface resulting in unbound surfacing materials (gravel or stone).

b) Breakup of road into craters with less than 50% of the road width available to road traffic. The road is no longer passable at speeds above walking pace."

6. Local Road Visual Pavement Inspection

6.1 L1222 Local Road

6.1.1 L1222 Between N69 and Greaney Concrete Products

The following pavement conditions were observed during the Local Road visual pavement inspection, along the section of the L1222 located between the N69 and Greeney Concrete Products:

- Moderate ravelling along the L1222 (Photographs 1, 2, 4 and 6);
- Fatting up at locations along the L1222 (Photograph 3); and
- Surface deterioration (depression) on the L1222 (Photograph 5).

Photograph 1: View South of L1222 Ravelling from Southside of N69 Junction Area

Photograph 2: View South of L1222 Ravelling

Photograph 3: View North of L1222 Fatting Up on Approach to N69 Junction Area

Photograph 4: View South of L1222 Ravelling

Photograph 5: View North of L1222 Surface Deterioration (Depression)

Photograph 6: View South of L1222 Ravelling on Immediate North Side of Greaney Concrete Products

6.1.2 L1222 Between Greaney Concrete Products and Roadstone Joseph Hogans Quarry

The following pavement conditions were observed during the Local Road visual pavement inspection, along the section of the L1222 located between Greaney Concrete Products and Roadstone Joseph Hogans Quarry:

- Moderate ravelling along the L1222 (Photographs 7, 8 and 10);
- Moderate rutting, locally, on the L1222 (Photograph 8);
- Potholes, locally, on the west edge (northbound) of the L1222 (Photograph 9); and
- Potholes, locally, on the east edge (southbound) of the L1222 at Roadstone Joseph Hogans Quarry (Photograph 11).

Photograph 7: View North of L1222 Ravelling

Photograph 8: View South of L1222 Rutting and Ravelling

Photograph 9: View South of Potholes on West Edge of L1222

Photograph 10: View South of L1222 Ravelling

Photograph 11: View South of Potholes on East Edge of L1222 at Roadstone Joseph Hogans Quarry

6.1.3 L1222 Between Roadstone Joseph Hogans Quarry and L1220

The following pavement conditions were observed during the Local Road visual pavement inspection, along the section of the L1222 located between Roadstone Joseph Hogans Quarry and the L1220:

- Potholes and cracking, locally, on the east edge (southbound) of the L1222 at Roadstone Joseph Hogans Quarry (Photograph 12);
- Moderate ravelling along the L1222 (Photographs 13, 14, 15, 16, 17 and 18); and
- Patching on the L1222 at the L1220 junction area (Photograph 19).

Photograph 12: View South of L1222 Potholes and Cracking on South Side of Roadstone Joseph Hogans Quarry

Photograph 13: View North to Roadstone Joseph Hogans Quarry of L1222 Ravelling

Photograph 14: View South of L1222 Ravelling

Photograph 15: View South of L1222 Ravelling

Photograph 16: View South to Creeves Cross 50 km/hour Signs of L1222 Ravelling

Photograph 17: View North Within Creeves Cross 50 km/hour Zone of L1222 Ravelling

Photograph 18: View South Within Creeves Cross 50 km/hour Zone of L1222 Ravelling

Photograph 19: View South of L1222 patching at L1220 Junction Area

6.2 L1220 Local Road

6.2.1 L1220 At Creeves Cross

The following pavement conditions were observed during the Local Road visual pavement inspection, along the section of the L1220 located at Creeves Cross, between the L1222 and the 80 km/hour speed limit signs:

- Moderate ravelling along the L1220 (Photographs 20, 21, 22 and 23);
- Patching on the L1220 at the L1222 junction area (Photograph 20); and
- Edge breakup along the L1220 at the 50/80 km/hour speed limit zones interface area (Photograph 23).

Photograph 20: View North Within Creeves Cross 50 km/hour Zone of L1220 Ravelling and Patching

Photograph 21: View South Within Creeves Cross 50 km/hour Zone of L1220 Ravelling

Photograph 22: View North Within Creeves Cross 50 km/hour Zone of L1220 Ravelling

Photograph 23: View South Within Creeves Cross 50 km/hour Zone of L1220 Ravelling and Edge Breakup

6.2.2 L1220 Between Creeves Cross and L1219

The following pavement conditions were observed during the Local Road visual pavement inspection, along the section of the L1220 located the Creeves Cross 50 km/hour speed limit signs and the L1219:

- Moderate ravelling along the L1220 (Photographs 24, 25, 26, 27, 28 and 29);
- Edge breakup along the L1220 (Photograph 24, 25 and 26);
- Moderate rutting, locally, along the L1220 (Photograph 25); and

- Patching on the L1220 at the L1219 junction area (Photograph 29).

Photograph 24: View South of L1220 Ravelling and Edge Break Up

Photograph 25: View South of L1220 Ravelling, Rutting and Edge Break Up

Photograph 26: View North of L1220 Ravelling and Edge Break Up

Photograph 27: View South of L1220 Ravelling

Photograph 28: View South to L1219 Junction of L1220 Ravelling

Photograph 29: View South to L1219 Junction of L1220 Patching and Ravelling

6.3 L1219 Local Road AT L1220

The following pavement conditions were observed during the Local Road visual pavement inspection, along the section of the L1219, locally, at its L1220 junction:

- Moderate ravelling along the L1219 (Photographs 30 and 31); and
- Patching on the L1219 at the L1220 junction area (Photographs 30 and 31).

Photograph 30: View East of L1219 Ravelling and Patching

Photograph 31: View West of L1219 Ravelling and Patching

7. Summary and Conclusions

During the Local Roads visual pavement inspection, heavy vehicles generated by Greaney Concrete Products and Roadstone Joseph Hogans Quarry were observed in both directions along the L1222. Agricultural vehicles were observed along the L1222, L1220 and L1219.

The L1222 has extensive moderate ravelling, particularly along heavy vehicle wheel tracks. Instances of fatting up, surface deterioration (depression), moderate rutting, edge potholes, cracking and junction patching were observed on the L1222 but were not extensive.

The L1220 has regular moderate ravelling. Instances of junction patching, edge breakup and moderate rutting were observed on the L1220 but were not extensive.

The L1219 has moderate ravelling and junction patching at its L1220 junction.