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An Coimisiún Pleanála - Case

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reference: PAX04.324165

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located in Ardrah, Maughanaclea,
Ballynamought, Gortloughra, Cousane,
Coomclogh, Derragh, Glanycarney,
Keenrath, Derrynacaheragh,
Shiplough, Coolsnaghtig and other
townlands Co. Cork

Cork County Council

Map does not exist

Description 10 year planning permission for Maughanaclea Wind Farm consisting of 14 no. wind turbines, a 110kV substation and 110kV underground cabling connection and associated works

Case type Private Development - REDIII Application

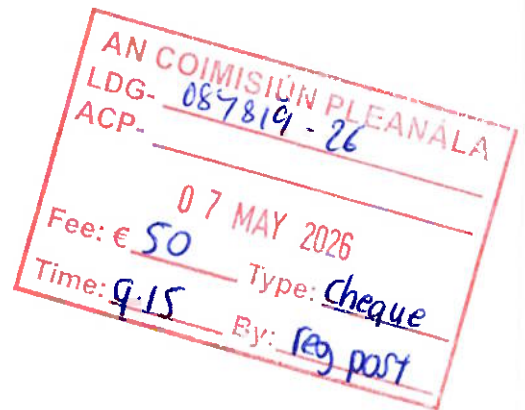
Decision Case is due to be decided by 29/03/2027

EIAR Yes

NIS Yes

Parties • Maughanaclea Ltd (Active)

History 30/03/2026 lodged



① 14cTB

AN COMISIUN PLEANALA

KATE & TIM BAKER

KNOCKDUFF

DUNMANWAY

P47 WR24

MAUGHANACLEA ACP PC04- 324165

6th May 2026

To whom it concerns

Please accept our submission

Cheque for 50-00 Euros enclosed

If this planning goes through it will be another Brutal Rape of the Landscape. this is not one wind farm it is two. Placing wind turbines on either side of the Cousane Gap must be near the top of any list of unacceptable proposals. To map this area as Open for Consideration continues to encourage developers to apply to place turbines almost anywhere in West Cork.

These companies and this particular company in the past have shown utter contempt for local communities. There has been a total lack of respect, or value or regard for anyone or their property. Their arrogant attitude and sloppy workmanship when they worked on the previous Carrigdangan and Shehy Moor wind farms and cable route.

Using incorrect and out of date information is totally unacceptable. Photomontages and wire frames lack definition". Misleading information does not aid open and honest consultation. accurate and complete prior consultation is essential to any largescale infrastructure project. apart from anything else it's the Law, baked into the Aarhus Convention across Europe and the UK.

Landscape Sensitivity

The landscape value cannot be simply dismissed as average, if you live in the Mealagh Valley half your skyline will be dominated by wind turbines. Our own views where we live are also becoming dominated by wind turbines.

The drive through the Cousane Gap is spectacular and dramatic these hills are noble in appearance and are magnets that catch the eye whenever seen, they are gently loved by those who live in their company, the whole forming a splendid and complete example of mountain structures especially seen from all directions. these hills and mountains make a perfect contribution to the scenic beauty

② KTB

of this area, they supply pure water, feed sheep and provide a recreation ground for all our visitors. One wishes they could be parcelled up and taken home for the back garden.

April/May 2026 in the past week the fire and rescue services tackled several fires in Northern Ireland probably started deliberately. 18 sq/km of protected habitat, plants burned and ground nesting

birds and their nests destroyed and the insects they feed on. We are already a nature depleted place and the uplands are a repository of our biodiversity and it is going to take many years to recover. Our mountains are sensitive and must be protected, all that biodiversity gone and all that natural beauty eroded.

COP 30 BRAZIL, numerous countries yet again refused to commit to phasing out fossil fuels, with 85 countries refusing to sign up to nationally determined contributions spelling out in detail how they would cut their emissions. At the time of the first COP event in 1995, fossil fuels provided 63% of global electricity in 2025 it was 59%, Green progress?

That is 30 years of COP talking shops with minimal progress. Here are just 10 of the numerous countries which are still burning coal to drive their economies.

China, India, US, Indonesia, Japan, Australia, Russia, South Africa, Poland, and Kazakhstan.

BIODIVERSITY PLANS

It states there will be a loss of 2.1 hectares of Annex 1 habitat. The enhancement area which is proposed to restore would extend to 5.4 hectares.

Annex 1 habitats in Ireland are semi-natural habitats protected under the EU Habitats Directive, critical for European biodiversity.

I suggest the best way to "restore native habitats and support our biodiversity, is NOT to disturb them in the first place and to recognize the Invasive Destruction this developer is trying to inflict on our ancient and precious landscape. Our landscape is naturally Wild. Compared to the size of the rest of the development you propose to reinstate a piddling little patch and its next to the road and next to the substation.

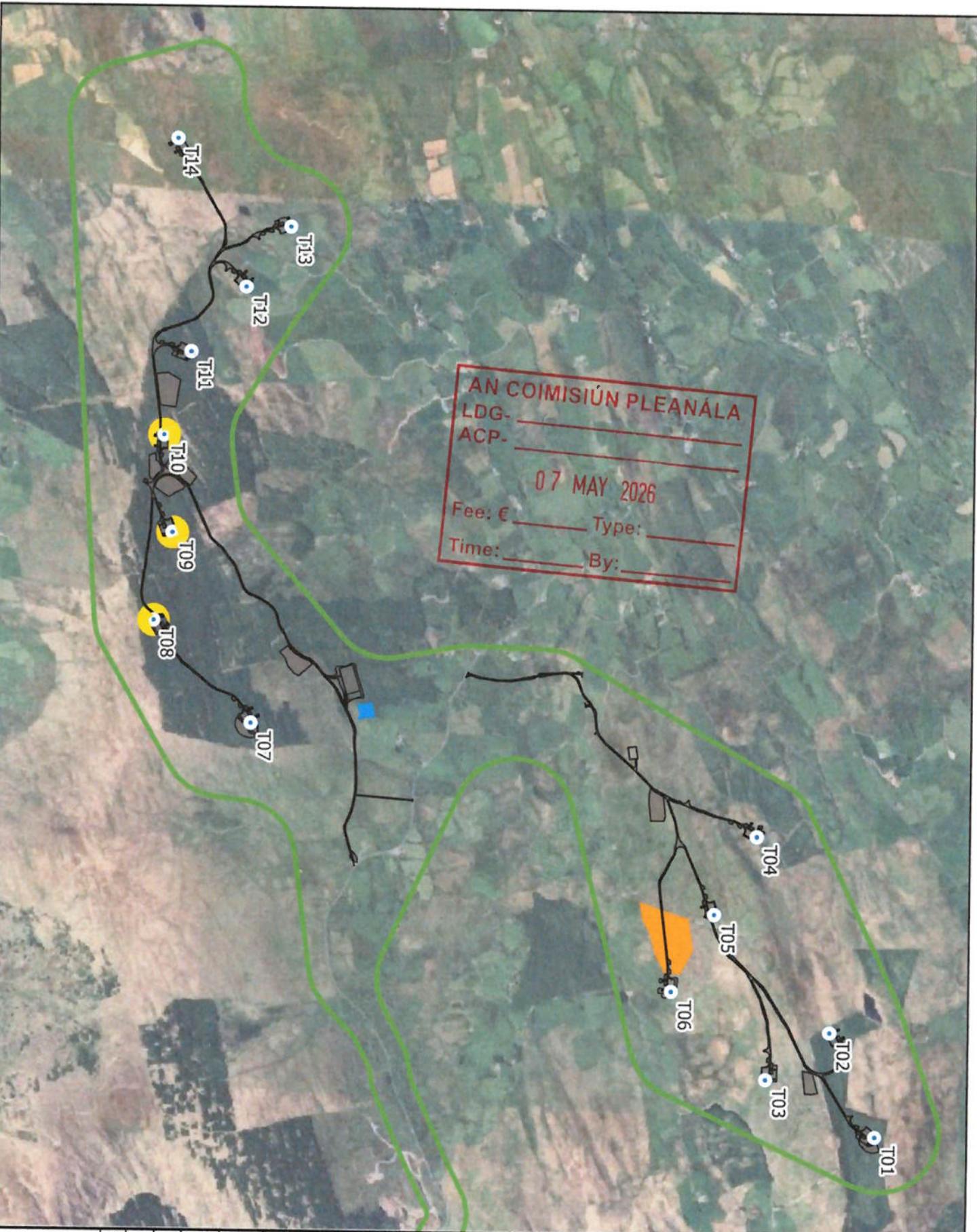
The substation will require drainage/ditches dug around it. What a stupid place to try and restore, next to a buzzing high voltage facility with switches, lighting, lightning arrestors and busbars and transformers etc.

MKO in their paperwork have now admitted that oil is used in the transformers in the turbines and in transformers in the substation. You could have gone further by stating the quantity of oil and how often the oil has to be changed. **QUESTION** how much electricity does a wind farm of this size need to operate, and how much electricity does the substation require to operate.

This oil can be restored or reused, but has to go through strict control measures to avoid environmental damage.

③

Kc T Baker



AN COIMISIÚN PLEANÁLA
 LDG- _____
 ACP- _____
 07 MAY 2026
 Fee: € _____ Type: _____
 Time: _____ By: _____



Ⓣ KcTB

Microsoft product screen shots reprinted with permission from Microsoft Corporation

- Map Legend**
- EAAR Boundary
 - Proposed Wind Farm Layout
 - Proposed Turbine Locations
 - Proposed Biodiversity Management and Enhancement Areas
 - Habitat Management for Kerry Slug
 - Native Woodland Planting
 - Wet Heath Enhancement

Drawing Title Proposed Enhancement and Management Areas	
Project Title Maughanadea Wind Farm	
Drawn By MK	Checked By JK
Project No. 240225	Drawing No. Figure 3-1
Scale 1:25,000	Date 20/03/2026

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 Planning and Environmental Consultants
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 Ireland, H91 WW84
 +353 (0) 91 755011

AN COIMISIÚN PLEANÁLA

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07 MAY 2026
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Time: _____ By: _____

POLLUTION

At Carrigdangan wind farm extension seen on Sunday 5th April. 2026 the so called Welfare Facility turned on its side **again**. was it tipped up because of the forecast gale.? **again**. DID SOMEONE NOT THINK TO EMPTY THE CHEMICAL OUT OF THE TOILET. WE COULD SEE THE TOILET ROLL COVERED IN BLUE DYE. LET US HOPE THE TOILET HAD NOT BEEN USED AND NOT EMPTIED. ALSO NOTICED ON DIFFERENT SUNDAYS THE DOOR SWINGING OPEN. TOILET PAPER ON THE FLOOR OUTSIDE NEAR THE DOOR. This toilet was positioned near a new constructed peaty ditch, I would say a couple of meters away frog spawn.

INVASIVE SPECIES

Mares Tail /Horsetail found growing last year 2025 at Carrigdangan wind farm opposite the substation, while native it is very invasive and can cause significant environmental changes and indirect damage to surrounding watercourses, can compact soil or do damage to peat, It has also spread into the ditch at the side of the substation. The Enerco contractors have been laying cables there and their digger was very close to it, it is also poisonous to life stock if digested, it is just starting to appear again this year.

MKO SHOULD HAVE AN (ECOW) ENVIRONMENTAL CLERK OF WORKS ON THIS SITE WHY DO YOUR STAFF MKO CONTINUE TO FAIL TO IDENTIFY INVASIVE SPECIES AND TAKE APPROPRIATE ACTION.

Do we trust your company to do a thorough survey, up at the MAUGHANACLEA HILLS where birds, bats invertebrates and mammals live.

The Carrigdangan wind farm site has had repeated anti-social behaviour, within and outside the main gates. You have failed to notice the rubbish in two places. a vehicle set on fire and dragged into the site, parts of cars on the track up to the turbines and on the new track leading to the new turbine extension, a fire had been lit burning some sort of metal just off the track before the substation, a fire outside the gate (looked like household rubbish). Also on the way up to the substation, looks like a spill of Mastick Tarmac/Asphalt which didn't melt during hot weather and MKO you are supposedly still doing surveys on this site. Let us not forget the remains of a Rook? Just off the track before the substation sat there for months.

They say the household type rubbish on the Carrigdangan site is not their problem, it does not seem to be Coillte problem either it seems no one wants to move it. If we all took that attitude there would be rubbish everywhere.

And they going to be allowed to damage another habitat. or maybe Carrigdangan has been chosen as the dumping ground. There are other things going on up on the site, is there going to be a problem in the future with litter vandalism and wild fires.

Carrigdangan Let us not forget the silty run off and bad drainage on the track, a concrete base at the gate stops some water, (ongoing pot hole) but silty dirty water has been seen running out of the gates on numerous occasions now and in past years. This whole track is under pressure in heavy rain, perhaps it was Coillte who had a few years ago constructed berms all along the original tracks, the foliage that is able to regenerate and colonize the verges gets constantly covered in dirty silty water. How is that good for animals, birds, butterflies and invertebrates that have to live up there. The Hare and the red Squirrel were observed near the rubbish on the bank near the substation.

⑤ VcTB

The developers concrete jointing bay slabs have been on the site since the original 5 Turbines were constructed 6 years ago , fencing dumped and 110kv cable pipe, those pipes can be re-used, they just need cleaning.

Arrived on site March/April 2026 cable from the Meenbog wind farm, there are nails sticking out of wood on the ground, just dumped.

I feel very protective of this site, and have witnessed a total lack of care by this developer and MKO.

Embedded into all wind far planning applications in the future, should actively encourage proactive biodiversity schemes, there should be a custodian of the site who's obligation is to maintain and where possible enhance the natural environment and not wait until 25 years for a bit of grass to grow.

WHY at Carrigdangan wind farm substation were 7 out of the 8 flood lights observed still on, on a control building on a sunny Sunday July morning, and were still observed still on, the following sunny Sunday July morning? They should not need to be on unless essential work is being done. No maintenance workers were on site, leaving lighting on at night would attract Bats.

Note Asbestos found in components in wind turbines brake pads. Chinese made. Noticed at wind farms in Australia and Canada.

Let us look at Carrigdangan/SheyMoor wind farms

(2020)16 turbines in total, 5 turbines on the Carrigarierck ridge (5 Nordex N117/ 3.6mMW and 11 x N100 3.3m MW. 125 m height & 134.5 m. hub height. 76m & 75m.

(2026) contractors are working on the 3turbine extension on the Carrigarierck ridge N133 4.8mw 176.5m height, hub height 110m.

I have walked up on to the Carrigdangan wind farm site, to witness the construction of the 3turbine extension. The first thing that started was tree felling, that required a lot of stone, quarried on site and also stone transported in from local quarries, and new drainage pipes put in.

Before the wind farm contractors started, the old tracks had to be upgraded and new roads were constructed, more stone was required ditches were constructed on both sides of the tracks, then before the cement was poured, the tracks were widened and upgraded again that required even more stone to be quarried on site and more stone transported from local quarries. After the concrete pour the turbine bases have to be filled in with more stone, and the crane hard standings also need stone. We have witnessed this track becoming wider and wider and not just around bends, you would have to go up there regularly to witness all this. Sunday 2nd May 2026 turbine ext 1 filled in with stone and more excavation works around Turbine 1extension , some peat infill now put into the second borrow pit, and more ground flattened. My photos do not show the real damage/dirt done on the Carrigdangan site and the same damage/dirt and a much wider area will undoubtedly have to be excavated out on the two hills at the Maughanaclea sites, much more than their maps are actually showing us.

Your Stone Requirement Summary Grid Connection 7,400 stone vol(m3) TOTAL stone 204,640m3

All subject to confirmatory design?

⑥ V L & T R

And all this is for only 3 turbines at Carrigdangan. Maughanaclea is to have 14 turbines. that is going to require a lot of stone and concrete.

In my opinion up at the Carrigdangan site there is an unnecessary amount of stone deposited on those tracks.

Concrete trucks have to climb the tracks slowly as they are fully loaded and still turning and there is a danger of tipping over. Concrete trucks have to wash out drums and chutes to prevent any cement hardening. It is illegal to wash out on the ground, or near storm drains, or water bodies, the EPA recommends that washout areas be at least 50 feet from storm drains or open ditches. There were signs of cement spilt on the track on the way up to the wind turbines and there were signs of wash out on the track after the first pour, for the second and third pours, they had constructed a pit, but some cement wash out didn't make the pit.

LARCH DISEASE /SITKA SPRUCE primarily caused by the water mould PHYTOHORA RAMORUM.

There is no cure, Infected areas are subject to compulsory felling to stop the spread, with strict regulations on moving wood.

It is crucial that vehicles entering these wind farm sites are thoroughly cleaned. As witnessed by myself, up at the Carrigdangan wind farm, the tree harvester was unloaded opposite the substation and left a trail of mud and pine needles as it climbed the track, I have not seen any Wheel Washing facilities on the Carrigdangan site for the 3T extension.

PEAT

Peatlands act as an important carbon sink, so why are we continuing to destroy them.

Significant excavation works on this site will have to be undertaken. To make new tracks and widen old ones.

They say peatlands are crucial for water quality and richly diverse landscapes which slows down floods. it seems that every one of these wind farm developments in the Irish countryside is supposedly going to help the planet Earths Climate and Nature Emergency. peat has its own rare micro weather system which many species rely on. The Irish uplands are a harsh environment for any wildlife to survive, but survive it does.

These habitats give shelter from bad weather, predators and provide sustenance. for some it is an all year- round home and for others it is a vital stop over.

There is a Nature Emergency in Ireland we are making it worse by the wholesale destruction of blanket bogland Planting trees on these peatlands makes it worse with the trees drying out the peat.

As seen at Carrigdangan 2026 where stone is being borrowed, Iron running on both sides of newly excavated ditches, there is a lot of Manganese and Iron in a lot of areas of West Cork and if you get it in your water and your pipes it can be a very troublesome and expensive.

they are unable to put any Peat or spoil back in those Borrow pits until they have finished excavating, out the stone, but they have already disturbed it, months later its then it will have to be dug up again.

⑦ VLTB

BIRDS

The survey states that Choughs are breeding on this site. Maughanaclea

The Glengarriff Woods Nature Reserve announced that the first Chough egg was laid on the 28th march 2026, in the Mizen nest box, the pair laid their first egg on exactly the same day last year and on the 29th march in 2024, they described these amazing little Chough birds as consistent. 30% of the national population of Choughs are found in County Cork. They form long term bonds and often return to the same nesting sites. These Birds are reliant on this habitat for food and nesting materials we should be looking after their larder/habitat. This is not just for the Chough but for all other Birds. These places are so full of life.

No mention of the Goldcrest they have been put on the Amber list due to significant short-term decline in abundance, they are commonly found in coniferous forests and gardens, (including mine), I have Larch, Sessile Oak and coniferous trees, as seen at Carrigdangan 12th April 2026 in Sitka Spruce Goldcrests very busy, this is at the edge of the remaining trees right next to proposed extension 1 turbine. Stone Chats are another Bird that have declined in Europe, due to habitat loss.

Birdwatchers see a rare white throated needletail (Swift) fly into a turbine on Harris (Scotland) "Blown of course," collisions are rare but should not to be taken lightly.

Bird Watch Ireland has just published the latest report from Irish Wetland Trust (i-WeBs) documenting trends wintering Water Birds over the past 32 years. Like most wildlife birds are experiencing drastic population decline due to multiple factors including, climate change, limited resources and degradation. The report highlights some worrying decline overall. Ireland wintering wetland waterbird populations have dropped by a third since 1994. Many wader species, Curlew, Golden Plover, Lapwing and Redshank are in significant decline, while some wader birds such as Greenshank and Black tailed Godwit are faring better due to their adaptability. Alarmingly some species that were once common in areas of Ireland are now disappearing entirely.

We have no doubt that all birds will be disturbed as construction goes on.

Scotland has 4,464 on shore wind turbines sited all over the countryside, on 334 different sites, with another 1,555 turbines on 115 sites at planning stage and 640 turbines under construction on 29 different sites. (figures from 2023).

Whitlee Wind Farm Glasgow with 215 turbines the biggest onshore wind farm in the UK.

But we never hear of the number of **Birds** killed by these turbines. someone put a freedom of information request into **Nature Scott** in 2019 asking for the data they held for the amount of Raptors killed by wind turbines. Nature Scot admitted they do not have all the data, only a small proportion as obviously there are a lot more deaths than reported, especially with offshore wind turbines. they had records of 71 raptors deaths caused by wind turbine collisions for the preceding 10 years from (2019).

14 Ospreys 2 Barn Owls 9 White Tailed Sea Eagles 7 Red Kites 4 Hen Harriers 7 Golden Eagles 1 Goshawk

1 Merlin 6 Kestrels 16 Buzzards 2 Sparrow Hawks 2 Peregrine Falcons.

They have 7 offshore wind farms with 1,800 turbines

Plans for another wind farm (offshore) Berwick Bank (last July granted) 307 turbines Height 360m.

⑧ T C K B

It is projected there will be more than 31,000 Bird collisions in its 35year life. with Kittiwakes, Gannets and Herring Gulls being the main losers. Other countries which have data on wind turbine collisions is frightening, 9,000 Griffon Vultures killed in Spain in 20 years where a total of at least 33,000 raptors die per year due to electrocution.

The Raptor group of birds such as the Merlin which is our smallest bird of prey, could disappear. In a worst -case scenario Ireland is facing ecological point of no -return, some species could become extinct. some species that have been part of our landscape for centuries are now at risk of being lost, moths, butterflies, orchids, grasses, heath, some species are needed to aid pollination and food production.

Painting one turbine blade black has proven to be successful, but there would be a lot of complaints, but if it saved bird deaths.

CARCASS SEARCH National Institute of Health(gov)

Estimating mortality of small Passerines Birds colliding wind turbines by ALK Nilsson 2023 cited by 26 The post-construction study was financed by Guleslettene wind farm. Medium sized wind farm in Western Norway.

Abstract as demand for renewable energy is rising wind power development is rapidly growing worldwide. In its wake conflicts arise over land use changes converting pristine nature into industrial power plants, its associated adverse biodiversity effects, crowned by one of the most obvious and deadly consequences bird collisions. Most post construction studies report low level of avian mortality, but the majority of these studies are conducted primarily on larger birds, However the diversity and abundance of small passerine birds are in numeric proportion to their abundances should be the most numerous. The assumption that surveys find all carcasses seems thus rarely fulfilled and passerine mortality is likely to be grossly underestimated.

This is a very interesting report. Well worth reading MKO you might learn something.

BATS

Bat Conservation Ireland Bat Survey, Assessment & Mitigation Guidelines for Onshore Wind Turbines in Ireland. 2026.

they intend to restore habitat next to the substation see your map, **SMALL BLUE SQUARE** Sessile Oak /Scotts Pine were both mentioned, **BATS** Sessile Oak provides a good supply of food for Bird and Bats and would also provide a good roosting place for **BATS**. **Please Not next to a substation**, it is about one of the worst places you could have picked. See notes **BAT CONSERVATION IRELAND** Ancillary Infrastructure & Emerging Technologies 9.1 especially Noise and Lighting, 2.5 Preliminary Roost Assessment (PRA) & Irish Seasonality 2.5.1 The Irish Study Window.

ⓐ VLTB

County:

Order By:

Sightings : All Counties ▼

Latest First



Search

Sighting Ref : IB222962

Sighting Date : 11 Apr 26

Common Name : White-tailed Eagle

Scientific Name : *Haliaeetus albicilla*

Location : Bantry

County : Cork

Number Seen : 2

Principal Observer(s) : Gavin Ó' Sé Not Specified

Reported By : Not Specified

Comments : Immature birds. One bird with red tag on right, one with green tag on left, couldn't read any codes, too far. Storm Eddie.

Status : See IRBC Appendix 1

Photos :



Photographer(s) : © Gavin Ó' Sé

10 12c 73

[Printer Friendly Version](#)

KERRY SLUG

Before tree felling up at the CARRIGDANGAN 3T EXTENSION observed by myself on Coillte land two Kerry Slug Metric Refuse Traps on trees (one behind the other) near to the track, some weeks later the front trap was half hanging off, if they had finished the survey work, those traps should have been removed off the trees or maybe they were still doing survey work? Those traps were of a height that could have been dislodged by deer seen regularly on the site. weeks later no traps no trees, How can they survey and save the Kery Slug if they don't maintain the traps.

INVERTIBRATES

Frogs. Enerco presented a glossy brochure with a picture of a frog on. Carrigdangan 3T extension 2026 reported to James Crowley frogs and frogspawn on forestry track in a dirty puddle, contractors continuing to use this track in spite of the new track being finished. MKO ECOW should have been monitoring on this site, I was told it would be dealt with, and the frogspawn removed to a better place to give them a chance of survival. **It hadn't been done. I actually went on site when contractors were not working and did it myself. And still signs of it being used by a vehicle with caterpillar tracks.** they may have had permission to use these tracks to put in drainage, again the lack of ecological commitment by MKO staff is shockingly disgraceful.

We would suggest Survey staff prior to any work starting on any site and this includes the Curraglass site which planning has been approved, find appropriate habitats for the Frog population, dig out suitable sites if necessary, and well away from any works starting by contractors and tree removal machinery. They seem to forget FROGSPAWN/FROGS are protected by law.

VISULIZATIONS

Night views, why are there no night time ZTRs taken.? showing the effect the red lights that the turbines will have on the near and wider areas. We know how much the turbines stand out when the sun shines on the turbines in the day.

HEALTH/NOISE

MKO have been asked to update the health surveys from 2015

Wind Turbine Infrasond and Public Health—EUROPEAN PARLIAMENT—which took place on 24th March 2026, a conference titled “Unheard but not Harmless: Public Health & Wind Energy Infrasond” which took place in the European Parliament.

The event was hosted by MEP Fernand Kartheiser (Luxemberg) and MEP Virginie Joran (France) and featured presentations from:

Proffessor Ken Mattsson, Uppsala University, Sweden

Dr Ursula Maria—Bellut--Staeck, physician-scientist and expert in microcirculation

⑪ 12c TB



Save the Moat - Save the Sperrins
11 March at 11:32

Wind Turbine Infrasound and Public Health – EUROPEAN PARLIAMENT - On 24 March, a conference titled "Unheard but not Harmless. Public Health & Wind Energy Infrasound" will take place in the European Parliament.

The event is hosted by MEP Fernand Kartheiser (Luxembourg) and MEP Virginie Joron (France) and will feature presentations from:

- Professor Ken Mattsson, Uppsala University, Sweden
- Dr Ursula Maria Beifut-Szreck, physician-scientist and expert in microcirculation

The conference will examine potential public health impacts of wind turbine noise and infrasound, an issue increasingly being discussed across Europe as turbine sites grow and developments move closer to homes.

This topic is also relevant to the EU Environmental Noise Directive, as there is currently no specific EU legal framework addressing wind turbine noise or infrasound and its potential health implications.

Infrasound does not stop at the turbine base. It can pass through the walls of your home and be detected many many kilometres from the source.

👉 We will confirm the streaming and recording links and share them as soon as we have them.

24TH MARCH 2026
10:00-12:00

SPINELLI 66306, European Parliament

Unheard but not harmless

Public Health & Wind Energy Infrasound

Hosted by
MEP Fernand Kartheiser
& Virginie Joron



Write a comment...

12 VSTR





The conference examined potential public health impacts of wind turbine noise and infrasound, an issue increasingly being discussed across Europe as turbine sizes grow and developments move closer to homes.

This topic is also relevant to the E U Environmental Noise Directive, as there is currently no specific EU legal framework addressing wind turbine noise or infrasound and its potential health implications.

Infrasound does not stop at the turbine base it can pass through walls of your home and be detected many kilometers from the source.

This meeting can be viewed on You Tube.

There was a speaker from Euro Wind, Guy Williams who said we must all work together, and that wind energy manufactures are working to reduce noise from wind turbines, and infrasound did exist, but then went on to say, money will be available for projects in the communities. I thought this was a very weak delivery from the wind industry, and it didn't go down well with people in the room either. There was a legal expert who spoke and said the rules are inadequate and need reviewing, there unworkable and defected and in some cases absent. and these issues have been raised before going back 20 years and we still have not resolved it. Members from other countries attended and were able to put questions to the speakers.

Did anyone from our government attend this meeting.? If they didn't they should have.

The verdict is that the wind industry is not taking the issue of noise seriously.

This is why we are all still asking questions.

EFFECTS OF OPERATIONAL and ENVIRONMENTAL CONDITIONS on ESTIMATED DYNAMIC CHARACTERISTIC of a large in SERVICE WIND TURBINE Journal Vibration Engineering & Technologies authors: Onur Ozturkoglu, Ozgur Ozcelik Serkan Gunel (structural & vibration engineers) based on 7 months of real-world measurements from an operating wind turbine, Peer reviewed in 2024 the study didn't use computer guesses- it used actual vibration data from a working wind turbine. (some key findings from the study itself.)

The researches found that a wind turbine, dynamic characteristics vary significantly different with operational & environmental conditions, " they showed that changes in rotor speed wind speed, blade pitch, temperature & humidity all change how the turbines vibrate. The paper confirms that vibration frequencies, damping & mode shapes are not constant, meaning turbines do not behave the same way all the time. Critically the authors warn that if these changing conditions are not accounted for, monitoring & assessment can lead to incorrect conclusions.

In plain English Turbines don't vibrate in a fixed or predictable way, their vibration behavior changes depending on condition. Those forces travel down the tower into the foundations & into the ground types & terrain determine how far & how strongly those vibrations travel. This matters- because planning applications & noise assessments assume turbines behave in a static averaged way & they do not properly assess ground-borne vibrations at all.

So when you are told" it meets the limits" that often only refers to airborne noise models, not what is happening through the ground, under the real operating conditions, in real landscapes.

This research doesn't say turbines should or should not exist. what it does say-very clearly -is that - real world behavior is complex, & dismissing peoples lived experience without measuring it properly is not supported by the science.

We have experienced these changes ourselves, up at Carrigdangan wind farm and how it changes with wind speed and direction.

FACT if the Base Bolts on a wind turbine need checking & tightening every month due to vibration, that confirms significant dynamic forces are travelling down the foundations, & into the ground.

When trees are felled and have been removed and a substantial amount of stone has been borrowed /quarried the topography on this site it will significantly change the acoustic properties of the environment. Removing them typically leads to Increased sound transmission If any home has had to have a noise monitoring machine near their home, pre- wind farm development there is a chance that the findings could have changed.

The Irish government know the current guidelines are not fit for purpose on March 26th 2026 in the D'AIL when asked about the long overdue guidelines, the Taoiseach laughed- and then said when these guidelines emerge, it will lead to a reduction in wind farms. SO OUR GOVERNMENT is ALLOWING PROJECTS to CONTINUE UNDER OUTDATED STANDARDS. The government rather than producing guidelines to protect their citizens, would rather erect more wind turbines to power Data Centers MAN - 0 MACHINES - 1.

Wind Europe Conference 150 delegates attending the conference, but they are not just delegates, they are Investors, and the Developers and the Bankers and the people who will making massive financial gains, we are talking millions from this tiny island of Ireland.

Our government have pushed rural communities aside to clear the way for Industrial-scale energy developers. Concerns are dismissed, questions go unanswered, and local democracy is treated as an inconvenience. Our voices are silenced as multinationals, corporations and global investors profit from developments they will never have to live beside. They tear up the environment to facilitate massive industrialization and then disappear leaving carnage behind. their industrial jackboots march over the natural world our hopes and dreams. this has all been enabled without a coherent plan or basic empathy is indefensible. Their parties of convenience "The Greens," are silent on adverse impacts as rural landscapes are industrialized with wind farms, solar farms, substations and Bess storage, they lost their environmental way all for "renewables" with no independently verified evidence produced to prove that this transformation will deliver the environmental benefits being promised.

Communities are expected to accept without scrutiny, without consent and without respect. Their mountains, valleys, shores and seas are not renewable once scarred by the concrete and steel road show there is no going back.

BORROW PITS

There are 4 borrow pits required for Maughanaclea I have witnessed the borrowing /quarrying of stone up at Carrigdangan. Borrow means to put something back. CARRIGDANGAN 3T extension stated one borrow pit on the planning application for the 3T ext. stone is now being borrowed from a further area close to extension T 1, that means there are two borrow pits, there are other areas on this site where stone is still been borrowed/taken from., and will not be put back. We hope the

(14) Kc ER

Maughanaclea 4 borrow pits proposed on the planning application will not grow into 6 borrow pits plus. IN SCOPING RESPONSES DEPARTMENT of HOUSING and LOCAL GOVERNMENT and HERITAGE has highlighted the importance to document sufficient details of **Extraction sites and borrow pits**. A further borrow pit was also seen to be excavated on the Shehy More wind farm site, again planning documents stated one borrow pit. **The developer has a habit of pushing the envelope at the expense of the environment.**

HOUSE PRICES

Appendix 5.2 House prices in Scotland 2016 10 years ago 500,000 property 1990—2014

There is proof out there that house prices are affected, but these survey results are based on houses sold, not houses that fail to sell or attract a buyer or the sale falls through when the buyer finds out a wind farm/pylon/solar farm or a Bess Storage Facility is being planned nearby. a report is only good as the data available.

WATER I have brought the subject of water for site operations up before on other wind farm planning applications.

It says portable water, where are they going to get it from? We know who supplied some of the water during the Carrigdangan/Shehy Moor wind farm construction and contractors were seen drawing it from the little stream at Ardacahan, fish Spawn in there, we saw several containers loaded onto a small truck, MPC Engineering. We had a spell of warm weather when construction works were on going. I would like a truthful answer please. It is up to you ACP to ask these questions.

COMMUNITY BENEFIT

One of the things that is constantly mentioned and is pushed at people is the so-called community benefit, which is pathetically small and too narrowly focused .as long as folk are getting enough payback from energy developments which they might not necessarily welcome, then all their reservations will melt away, the multinationals can push on with their destruction of the Irish landscape & subsidy farming. there are a couple of problems with this approach, firstly it assumes that everyone has a price. that there is nothing that the right compensation cannot supplement, that the wildlife, peatland, skyline and marine environment are all just dispensable collateral if a sufficiently large compensation is on offer. These companies rake in the profits for both generating electricity and not generating electricity. The millions handed out in constraint payments must be one of the outrageously unjust systems of financial payments.

Dunmanway Community Hospital applied for some community funding, (Shehy moor/Carrigdangan wind farm) and were refused, many people in the local community fundraise for the Hospital, just a few little extra treat's for the hospital Residents. **HOW MEAN** the dirt, noise from rock breakers and filthy water that occurred while you were putting in the cables on the L4621 to Ballyhalwick substation was disgusting, you also parked your vehicles in the Hospital entrance. You propose to use the L4621 as a possible diversion route, if this planning is passed, traffic will have to pass by the hospital again.

COMMUNICATION /COMPLAINTS Don't expect this developer or his chosen contractors to communicate with communities, do not expect them to listen, communication is a two-way dialogue, the top man actually came out to visit us at our home Michael Murnane. We told him about the

(S) K4 TR

challenging underground conditions and the spring opposite our house, and our worry about water. his reply was his team were experienced in such matters, as they dug the trench it quickly filled with water, they were unprepared. (pity he didn't pass this information onto his contractor) There was no response to the silt being pumped into the River Bandon SAC we had to complain to the local council. The main contractor in charge SUIR Engineering was shown the silt/mess, his reply was " I havn't got time for this" and he walked of, he hasn't got time, he has'nt got time for the environment working next to the Bandon River SAC. Co Co co do not have enough staff to police all this work, and the developer and their contractors don't give a toss. They are in a rush to finish the job, and there were plenty of mistakes made.

Who will people contact, who is responsible for any damage during construction work before and after works. We think people should be made aware of who to complain to. We do not expect the contractors to do a perfect job, just look at what is happening at the children's hospital .

DECCOMISSIONING

Renewables, they are not. So called renewables are not renewable after all as they age after 15—20 years what we will have is a giant 33mt tall grave yard of blades, hundreds of tonnes of pollution costing millions to get rid of and costing millions to replace, they do not magically renew themselves. There is one place at the moment that are taking blades Plaswire Ltd in Northern Ireland and their taking in Scotlands blades as well. A blade has to go through several processes to break it down so it can be made into another product. How much more energy is required.

929-000euros & over 1.5 million per turbine, for decommissioning, cost includes foundation removal and site restoration, labour, turbine size, local regulations and disposal of hazardous materials.

The guarantees in place to cover decommissioning liabilities appear to be shakey with significant amounts pledged on paper. if these companies go bankrupt, there is a significant risk the taxpayer will have to pick up the tab. the government should tighten the rules.

By- the -way Carrigdangan Turbine 1 rusty patches all around the lower stem. T3 rusty spot between first and second stems. And T 4 You don't need binoculars to see it. After only 6 years Going to have to be sprayed. They also need to be cleaned. Which products are used.?

SHADOW FLICKER

Your comments on shadow flicker are baffling, their argument is largely irrelevant. Shadow Flicker at the end of the day is unpleasant. There will still be a shadow even if they are not turning. MKO state on their documents, there will NOT be any shadow flicker when they are NOT turning. Carrigdangan/Shehy More, Derragh and Clenrath turbines are always seen not to be turning when there isn't much wind.

(16) KcTB

TOURISM

Failte Ireland has previously requested consideration of visual impact on sensitive areas and tourist routes within the context of wider renewable energy developments projects must be fully considered.

As reported in the Southern Star April 2026.

The start of the cruise season at Bantry signals a boost for Cork's wider tourism economy, supporting jobs and activity across shops, restaurants, cultural sites and transport services.

Passengers spending remains a valuable contributor to local businesses throughout the season, spending an average of 81 euros per passenger and 29 euros per crew member.

One of the first things people on board seem to do coming into a new port is stand out on deck to look at the landscape and views before the ship docks, not very welcoming to view wind turbines. An accumulation of more wind farms could have a more intolerable visual impact in the future.

HYDROLOGY/WATER

Manganese and Iron in drinking water... regulatory standards for public drinking water. While most people can tolerate increased levels of iron in their water or diet there are individuals who are unable to tolerate it. these people deserve to know when /if there is an excess in their drinking water if sediment is disturbed. Manganese occurs naturally in some water sources where it is dissolved from the surrounding rocks and enters the water supply and can become a problem at certain times of the year.

WATER TESTING especially at the nearest properties 2km or 1km from excavation works must be done and monitored to protect people's private water and they should be allowed to be present when it is tested.

They do not want any water up on these sites, any standing water or puddles anywhere will be gone and replaced with black plastic pipes, and sent down the hill, to where exactly? Just look at Carrigdangan, aggregate, everywhere, any one of these wet areas however small supports some sort of life, it is all part of the eco system.

An accidental boggy/wet area appeared after more trees were felled by Coillte up at Carrigdangan wind farm. It has been full of a variety of flying insects, recently a pair of Mallard ducks have been swimming in the water. this is now very close to **Turbine 1**, far to close in my opinion. This could attract Bats in search of insects. We have seen Swallows taking insects of the top of turbine 1(not turning).

(17) 14c TB

GRID CONNECTION

It appears the L 4621 has been identified as a potential diversion route for traffic, it states Traffic from regional and local roads being diverted onto other local roads of similar standard. The L4621 is not up to the same standard as the regional roads you are proposing to work on.

During the construction of the Carrigdangan wind farm the L4621 was badly impacted by the contractors and the subsequent resurfacing. **We live on that road.** The current state of the L4621 is rapidly wearing aware.

Some points to be highlighted about the grid connection routes.

Ardacahan, "Inchicuan crossroads" (commonly known as O 'Mahoney's crossroads), the Bandon river could be in flood during cable laying causing further chaos for motorists which would impact the diversion route and other roads.

Question is there going to be a second site identified? A second site for the storage of excavated spoil from the roadways, this could include scalplings. It states tar will be managed separately.

Question Where is your Materials Recovery Facility, IDENTIFY we need details please.

Question Identify places for storing excavated materials (documents states temporary).

Shanlaragh licenced facility was used for some of the cable trench spoil/ last time, NPWS Licences should be displayed on all vehicles transporting spoil to these sites.

During the laying of cables from Carrigdangan substation to Ballyhalwick substation a second site was required, Murray Brothers Tarmacadam Ardacahan was chosen, It would have been helpful

that this site had been included in the planning documents. Will it be used again? and if not, will there be another intermediate site identified on the documents.

The part of the site used is at the front of the tarmacadam plant.

A Peregrine Falcons nest is also in this part.

The site at Murray Bros received stone from another quarry for trench filling. The Murrays site contained three cabins, welfare facilities for staff, an office for meetings and one cabin contained computers. And in addition there were re-filling facilities. If this site is to be used again it should be included in EIAR. The site at Murrays has a large stand of Japanese Knotweed at the junction of their entrance with L4621 and the J/Knotweed had not been previously identified by MKO staff. This is not the only stand of Japanese Knotweed on the road. The Japanese Knotweed has been seen to be cut several years on the run by a contractor engaged by Murrays, where does he put the cuttings.?

To be fare to the man who was seen cutting it, if the signs are removed he wouldn't know.

Mc Sweeneys who were engaged to resurface the road on the L4621 threw two J/K, signs in the field and didn't put them back, Lissarda contractors threw another sign into the ditch (you were spotted doing it).

They also threw aggregate stone on top of the bank were some Japanese Knotweed had re sprouted, this can accelerate the root system, and it did, with vengeance. Thank you, someone listened, we did notice it had been sprayed.

(18) 1Lc TB

Dunmanway residents/commuters endured 12 months of road resurfacing works through the town center, then more resurfacing works were undertaken on Long Bridge and up to Ballyhalwick 2025 and an excellent job was done. Is this to be dug up again?

Information on time-lines of re-surfacing of R roads and L roads. will there be temporary road surfaces ?. L roads closures will these have temporary road surfaces? Will road surfacing be completed on some roads before starting cable trenching on other roads. R roads will require a robust surface. Will the L roads have to suffer with temporary road surfaces for months.?

Good luck with a leaflet drop, REGULAR UPDATES , ADVANCE NOTICE we know what happened last time. People had to drive through water/wet/dirty roads, contractors vehicles made ruts in road verges people in cars expected to drive through small gaps and not get stuck .

GRID CONNECTION continued

The licensed site/sites for material from cable trenches should be identified and mapped in the planning documents and the route /routes it will take to travel to these licensed facilities, were will the tarmac you are saving be transported to, and stored. A second site will create further traffic especially if the Murrays site is chosen it is also on the L4621 which has been identified as a possible diversion route for traffic. The L4621 could also be used by construction traffic to cut through to the Ballhalwick/Dunmanway, cable trench works, there was an increase in traffic as staff in their construction vehicles were constantly driving back and forth from one site to the other. When the Carrigdangan/Shehy More wind farms were under construction.

We insist that there will be a reduced speed limit on the L4621 50kmh (max)due to the narrowness and bends in the road, children playing, horse riders, walkers, are all significant reasons.

We know what happens when people are diverted onto other roads, panic sets in, they seem to speed up, to make up time. We know the L4621 has suffered and is suffering with increased traffic already, and some of it is big/heavy.

We were personally informed by Cait Lehane engineer Cork co council (we had to have several visits from the engineer as we had damage) that a two year agreement was in place, that if there was any damage or further works/snagging needed it was the developer who had to pay, and any subsequent reinstatement/maintenance needed to the roads after the two years would have been at the council's expense. One culvert had to be raised up on the Inchincurka Rd as there was not enough clearance for the cable trench pipes, resulting in flood waters from a steep road and hill constantly causing potholes, water has to go somewhere, on the 33kv cable route at Carrigdangan when water has to cross the road further down the hill this has caused constant potholes, and another recurring pothole outside entrance to the wind farm apparently a spring. not forgetting our culvert, continuous pot holes and noise due to the increase in the road height after resurfacing works.

It was our experience when the contractors were working on a two-lane road to excavate the cable trench they would come across a stone drain and replace only half of it. This meant that the junction between the stone and new plastic pipe was in the center of the road and hidden from view.

This junction subsequently blocked up within months as pieces of wood washed down and formed a blockage. Maintenance was impossible. the road had to be re-excavated and larger pipes put in, all the way across the road. half a pipe was taken out altogether further down the road and never replaced.

(19) K S T R

It is vital that when drainage pipes are put in to replace existing drainage systems that they are extended all the way across the road and they a sufficient size to take flood waters.

Even though we now have pipes that go all the way across the road at our culvert, the black pipes are ribbed and cut on the cross to receive water from the right the jagged ends constantly need unblocking. **This is not temporary this is permanent.** Water runs quicker through plastic pipes, foliage slows down water. our bank was removed against our wishes, it was there for a reason to soak up flood water, **This is not temporary**, we have been unable to reestablish our bank , We also have fish (small trout) come up to spawn when the water level in the Bandon river rises, our new pipes are now higher, meaning now any fish require the water levels to rise that bit higher to enable them pass through .**This is not temporary it is permanent.**

More attention and care by Hydrologists working on behalf of MKO on wind farms sites need to be aware of where that water will end up, as witnessed at Carrigdangan wind farm, Clenrath wind farm also had troubles with new pipes/water ingress.

Some farmers land was used (agreed by them) to store fuel for contractors vehicles/ machinery along the cable route, it backed fired on my neighbour across the road as they reversed the mobile toilet into his gate and bent it. they damaged his wall and knocked the stone into his ditch. this also is how the contractors working disposed of their rubbish, leaving it behind for someone else to clear it away.

The contractors ran over and into ditches and left big ruts in the verges on most of the roads. Their pipes to empty water from ditches were too short, and didn't reach the grass verge, people on the main Macroom road described it as Mud on the Move. Silt then mud entered the Bandon River, no silt fences or traps were used on the L4621, Mr Mc Partland from Irish Fisheries came out and had a word with the contractors working on the L4621. when silt fences were used they took them out strait away, this was seen to happen on all roads. The Big Pump had to be deployed at our house, but it wouldn't start. No protection or silt fences were used, a silt bag appeared but very few staff were seen to be working having to multi task, it ripped straight away, they carried on pumping filthy silty water in the stream opposite us, they worked in heavy rain, they worked until 9pm some nights then the flood/ Arc light was deployed. They damaged and knocked trees, one fell on the telephone land line cable close to us, we were able and did clear the branches up they ignored it and drove around the branches. Four of our neighbours homes had no telephone connection for two weeks as the contractors had damaged their underground telephone land line cable. Broadband is being rolled out on some of these roads, holes have to be dug in places and cable is temporally attached to the poles.

The Friday flit, who wouldn't want to get home from a days work have a shower and something to eat, but the contractors working are in a hurray to finish for the day, and are unable to care or see what they are doing, they are unable to see working in the dark when they leave a site or road,(witnessed). Most of this work is done in the winter months it goes dark early.

A community care worker was constantly delayed as her clients were all in the area of the grid connection works, we had several conversations together for an update so she wouldn't get delayed, you never knew were they would be working. Signs said sorry for the inconvenience had to be changed to sorry for the delays 20 to 40 minute's some people had to wait, we drove through stop and go works on one road only to be met by workers on another road and you were told you had to turn round as they decide to just close the road, that happened a lot. A lady at Carrigdangan was continually being blocked in her own road driveway at the 33kv, cable route works, and she was

(20) Lc TB

delayed for no particular reason when she was coming home from having Cancer treatment from hospital the road signs were not kept up to date. And NO apologies were given.

Roads to be reinstated to pre-condition as agreed with the local authority.

The last developers contractors left the roads in a worse condition than they were before, that includes L4621, we suggest the local council ensures the developer pays for the roads to be resurfaced to a better standard and not just for road contractors to slap a bit of tar and chip on the L roads, and take note of drainage issues, the contractors actually damaged the new L4621 road surface while dismantling the road caging.

ROLES and RESPONSIBILITIES David Murnanes name was on the Traffic documents for the Carrigdangan/Shehy More wind farm works it does not matter who's name is on those documents, they should be seen to be present at all times on all roads to keep road signs up to date. Essential Contact numbers should be displayed and clearly visible especially on the cable routes, MKO must have enough staff working, not just one girl, there were contractors seen to be working up at the wind farm site and in two or three places on roads at the same time. As several complaints were made to the council as mitigation measures were ignored by the contractors, there was only one MKO staff member (young girl) working.

CONCLUSION

MKO can write as much as they like on these documents stating what they intend to do and what Mitigation measures are proposed, but when the developers contractors eventually start work, you find things have had to be changed, and it is without consultation to people who will find themselves impacted by this developer. We have no confidence in the survey work done by MKO in the past, we suggest you do not rely on A I or drones to find invasive species. Serious questions should be asked about your environmental standards.

The developers and their contractors just suit themselves, and they seem to think Political will be always on their side.

We have highlighted some of the things that we have been witnessing up at the Carrigdangan wind farm site (3T extension 2025/2026) and information about the damage and non -compliance on the cable route to Ballyhalwick substation, on the previous Carrigdangan /Shehy More wind farm development. **Because it matters,**

We fell for all this paperwork last time, but we are not going to fall for it again.

(21) 14621

Kate Baker

K. S. Baker

Tim Baker

T. Baker B.S.C.

1.0 Introduction: The Context for Sand and Gravel Extraction and Quarrying in Ireland

Extractive industries and aggregate production has supported economic development, the provision of housing and new infrastructure through a number of economic cycles in Ireland. Quarries and the extractive industry provide valuable sources of raw materials which are critical to the construction industry, infrastructure development and maintenance in particular.

Aggregates, such as stone, sand and gravel and concrete products contribute significantly to economic development. Notwithstanding this, the potential use of alternative sources of sustainable material such as construction and demolition (C&D) waste for civil and construction related projects is supported by government policy. The policy recommends that C&D waste should be used, where possible, in the interests of promoting the circular economy.

The planning system plays a key role in the management of natural resources and the protection of natural and cultural heritage.

It is over twenty years since the publication of statutory planning guidelines on quarries¹ which recognised this role. As the planning system embarks on further reform,² this case study paper provides an overview of how planning authorities have addressed the guidelines and the extractive industry sector in general. The case study paper draws from the OPR's experience and learnings, since its establishment in 2019, including its review of:

- > all city and county development plans across the state;³
- > eight local authorities; and
- > An Bord Pleanála.

¹ **Section 28 Quarries and Ancillary Activities – Guidelines for Planning Authorities** (2004).

² Enactment of the new Planning and Development Act 2024 (the 2024 Act) and the First Revision to the National Planning Framework (NPF).

³ Note this research is based on the OPR's review of 29 development plans and excludes a review of the development plans for Sligo and Monaghan which were still 'live' when that phase of the research was carried out.

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The case study paper examines how the planning system has evolved, and sets out broad conclusions for future policy.

In keeping with the goals and objectives of the OPR's Planning Research Framework it is intended that this case study paper will assist in addressing knowledge gaps, provide support for practitioners and planning authorities and highlight best practice to foster shared learning.

For clarity, this research did not entail an examination of development management processes in planning authorities (or An Bord Pleanála) in respect of planning applications for quarry development. Furthermore, planning enforcement of quarry developments was examined from a strategic level and specific cases were not analysed as part of this research.

1.1 Supply and Demand – The Bigger Picture

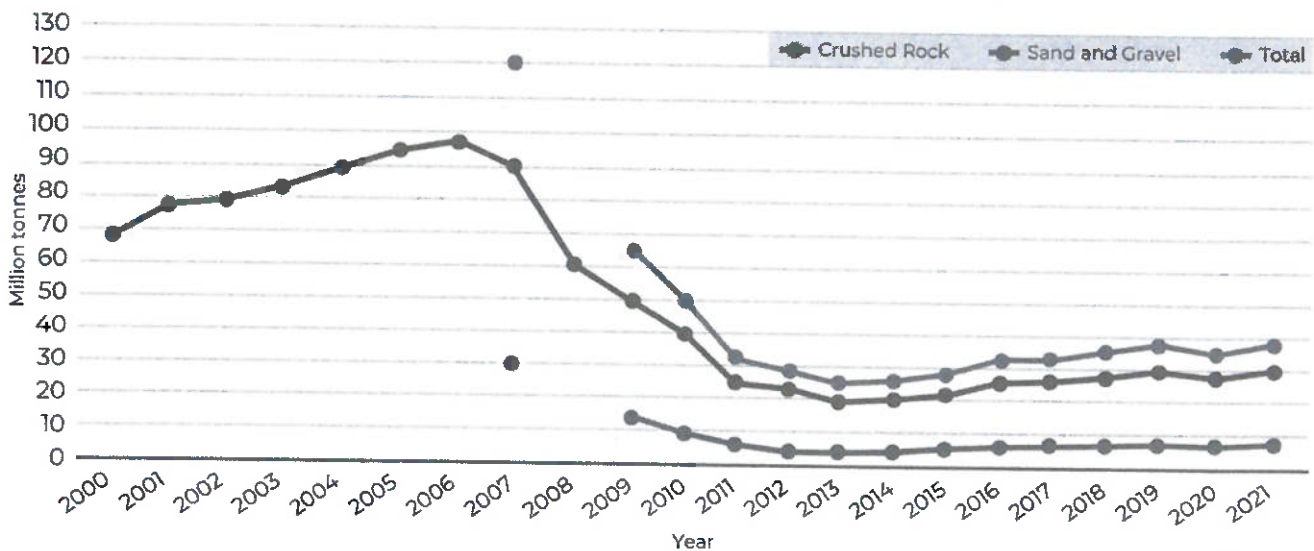
A SWECO report,⁴ prepared on behalf of the Environmental Protection Agency (EPA), in 2023 provided an analysis of aggregate use in Ireland.

The research was undertaken in support of developing national End-of-Waste (EoW) criteria. The objectives of the research were to understand:

- > current and future demand for quarried aggregates;
- > provision, within harmonised standards and specifications, for the use of recycled aggregates; and
- > the appetite or demand within the sector to use recycled aggregates alongside quarried aggregates.

The report found that the demand for aggregates in Ireland (12 tonnes per capita) is double the average demand in other European Union (EU) countries. The report quoted the Irish Concrete Federation's (ICF) estimate of Ireland's aggregate production rate in 2021 as approximately 38 million tonnes and the aggregate production rate over the period 2000 to 2021 was illustrated in the report and is shown in Figure 1 below.

Figure 1 - Irish Aggregate Production Estimates 2000-2021 (excluding concrete production).



Source: SWECO, 2023

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⁴ Analysis of Aggregates Market in Ireland (2023), an EPA commissioned report.



The report found that circa 40% of national civil and construction related activity occurs in the Dublin region, and accordingly this is where the highest demand for aggregates exists. While extensive national aggregate reserves exist throughout Ireland, reserves of specific aggregates such as high-quality sand and high Polished Stone Value (PSV)⁵ aggregates are nationally limited.

The report found that the use of recycled aggregates in products used in civil and construction projects is becoming of significant interest to customers, from a sustainability and embodied carbon perspective. This interest is driven by sustainability appraisal processes such as Leadership in Energy and Environmental Design (LEED) and the Building Research Establishment Environmental Assessment Method (BREEAM) as well as the ability to produce an Environmental Product Declaration (EPD).

Recycled aggregates are derived from the reprocessing of materials originally used in construction and are predominately derived from C&D waste. They include sand, gravel, crushed stone, asphalt and concrete which are crushed to a specific aggregation specification. A clear demand for recycled aggregates was identified in the report, driven by a desire not only to manage existing reserves but by procurement processes in the private and public sector seeking 'green materials'.

The report highlighted the importance of good source segregation of C&D material on the site of origin and found that this was a very important factor in the preparation of consistent, quality controlled material.

In conclusion, the report found that both the waste operators and virgin aggregate producers expressed a strong desire to see the establishment of relevant EoW criteria in relation to recycled aggregates in order to satisfy the emerging demand that exists, in terms of having a clear regulatory framework to oversee the management and subsequent use of recycled aggregates.

Essential Aggregates – Providing for Ireland's Needs to 2040, Irish Concrete Federation

In addition to the EPA-commissioned SWECO report, the Irish Concrete Federation (ICF) published a report entitled **Essential Aggregates - Providing for Ireland's Needs to 2040** (2019) following the Government's launch of Project Ireland 2040 (comprising the National Planning Framework (NPF) and National Development Plan 2021-2030) in 2018.

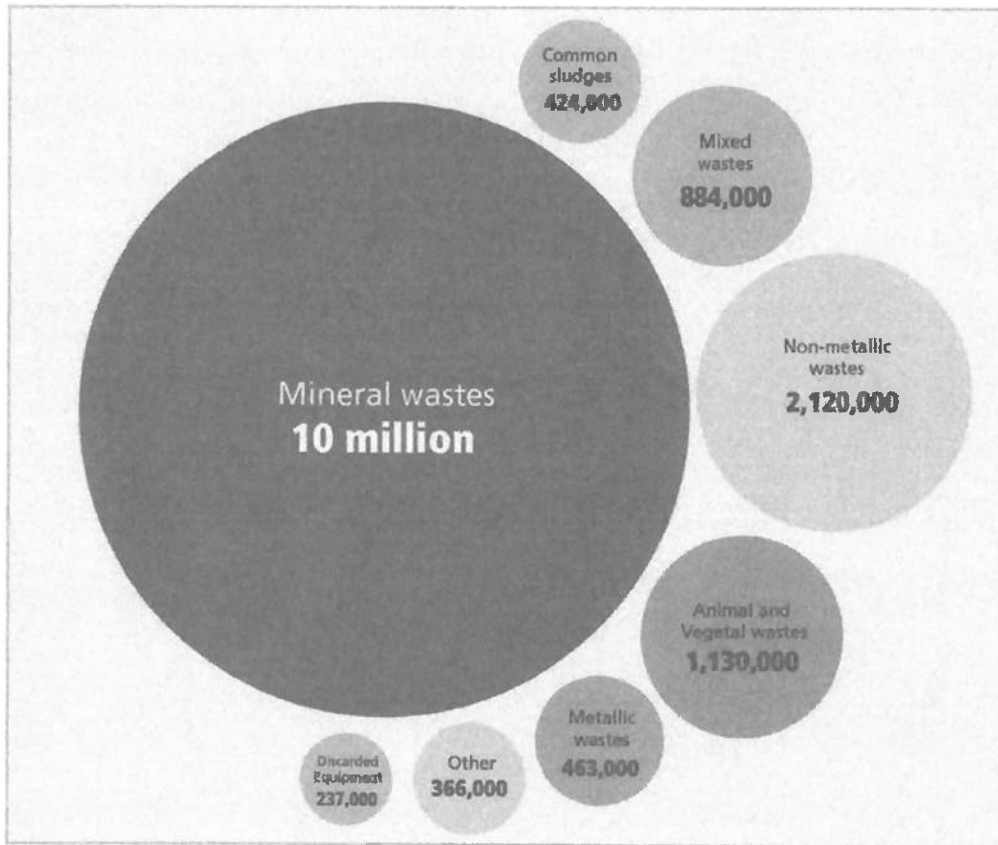
The ICF report acknowledged that the achievement of the objectives of Project Ireland 2040 will require access to significant reserves of aggregates (stone, sand and gravel) over the lifetime of the Government's strategy. The report suggested that while the importance of aggregates was acknowledged in the NPF, planning policy at national, regional and local level will need to prioritise the role that aggregate extraction plays in underpinning economic and social life.

The report highlighted the fact that every new home typically requires up to 400 tonnes of aggregates and that construction of one kilometre of roadway requires up to 30,000 tonnes of aggregates. The report suggested that demand for aggregate based construction materials will continue to increase and that approximately 1.5 billion tonnes of aggregates will be required to meet Ireland's needs to 2040.

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⁵ A PSV test is the evaluation method for determining the...

Figure 5 - Waste Generation by Material Type (Tonnes).



Source: Circular Economy and Waste Statistics Highlight Report 2022, EPA.

The EPA published **National End-of-Waste Criteria for Recycled Aggregates** (2023) and made numerous single-case EoW decisions for various other waste types.

As can be seen in Figure 5 above, mineral wastes are the largest waste material type, accounting for 10 million tonnes or two-thirds of all waste generated and includes:

- > Soil waste - 6.5 million tonnes;
- > Naturally occurring minerals (e.g. waste gravel, crushed rock, sand and clays) - 3 million tonnes; and
- > C&D wastes - 240,000 tonnes.

2.7.7 Health and Safety Guidance for Quarry Operations

As acknowledged in the Ministerial Guidelines for Planning Authorities on Quarries and Ancillary Activities (2004) health and safety issues associated with blasting are the responsibility of the Health and Safety Authority (HSA). The Health and Safety Act 1989, and the related Regulations on quarry operations were designed to protect those working in and visiting quarries and members of the public in the immediate vicinity who could be endangered by the operation of quarries.³⁵ The ICF Environmental Code for the aggregate and concrete product industries also contains guidance on the safe operation of quarries and the ICF have other resources for their members.

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³⁵ HSA resources on the Quarrying Industry are available [here](#).

The Strategy states that within the C&D sector, greater resource efficiency and resource re-use could avoid the need for millions of tonnes of virgin raw materials per annum, as well as reducing the carbon intensity of our built environment. It suggests that reducing the volume and associated costs of C&D waste could contribute to greater affordability, particularly in relation to the high-density residential sector. The Strategy concludes that access to resources will increasingly be a strategic consideration for developed and developing nations alike. Natural resources continue to provide crucial raw materials that are used across the global economy. Transitioning to a circular economy which reuses and retains the value of these resources and materials will support rising living standards without putting unsustainable pressure on the global environment.

Potential actions for inclusion in sectoral circular economy roadmaps have been outlined for the construction sector within the Strategy and include increased use of offsite design and manufacture, modular building design, refurbishment and retrofitting existing stock, tackling dereliction and increased use of C&D waste as a secondary construction material.

2.7.5 Ireland's State of the Environment Report 2024, EPA

This report was published by the EPA in 2024 and presents the most recent integrated information on the quality of Ireland's environment. It also provides an update on the environmental challenges that are faced nationally and globally.

The report acknowledges the National Climate Objective provided for in the Climate Action and Low Carbon Development (Amendment) Act 2021 that Ireland transition to a climate-resilient, biodiversity-rich, environmentally sustainable and climate-neutral economy by 2050.

The report identifies that mining and quarrying affected 32% of protected habitats; this was due to the negative direct effects on habitats of the extraction of minerals and the impacts of peat extraction.

The report also highlights that using primary materials rather than secondary materials is the norm in Ireland as evidenced by Ireland's low material circularity rate (1.8% in 2022 compared with an EU average of 11.5%).

National targets set out in the National Waste Management Plan for a Circular Economy 2024-2030 are highlighted in the report. Target 1B in relation to construction materials requires a 12% reduction in C&D waste by 2030.

In relation to environmental policy implementation and performance, the report notes that the circular material use rates remain very low by comparison to the European average. The report suggests that Ireland must address this in moving from a linear to a circular economy.

2.7.6 Circular Economy and Waste Statistics Highlight Report 2022, EPA

This report was published by the EPA and highlights that the transition to a circular economy needs to be accelerated as Ireland is generating high levels of waste. A total of 15.7 million tonnes was generated in 2022.

The report notes that Article 27 of the European Communities (Waste Directive) Regulations, 2011, prevented soil and stone being designated as waste and that in 2022 over 2.6 million tonnes of soil and stone was determined as by-product and diverted from waste.

The report states that most C&D waste treated in Ireland was recovered by backfilling (81%), while 7% went for disposal and only 10% was recycled.

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2.7.4 Whole of Government Circular Economy Strategy 2022-2023 - Living More, Using Less

This strategy was prepared by DECC and is Ireland's first national circular economy strategy. Preparation of the strategy was a specific commitment in **A Waste Action Plan for a Circular Economy - Ireland's National Waste Policy 2020-2025** (WAPCE). The strategy explains why Ireland needs to achieve a circular economy.

On enactment in 2022, the Circular Economy and Miscellaneous Provisions Bill placed the Circular Economy Strategy on a statutory footing, making the ongoing development of circular economy policy a legal requirement of government.

National circular economy policy development, by government and the wider public sector, is carried out in the first instance by a Circular Economy Working Group chaired by DECC.

The provisions of the 2020 Programme for Government, Our Shared Future included a range of actions to support the transition to a circular economy. These provided for the establishment of a cross-government Circular Economy Unit in DECC and the adoption of a circular economy strategy. The 2025 Programme for Government – Securing Ireland's Future continues to support the promotion of a circular economy.

The Strategy highlights that increasing extraction of natural resources and disposal of waste is a major contributor to habitat and biodiversity loss and contributes to global warming. Half of total greenhouse gas (GHG) emissions and more than 90% of biodiversity loss and water stress come from resource extraction and processing, therefore achieving a circular economy will play an important part in reducing global carbon impact and protecting natural resources, environment and health.



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Navigation icons: back, forward, list, and numbered buttons 1 through 5.

5.0 Key Findings and Conclusions

5.1 Key Findings

From the research undertaken for this case study paper it is clear that while the majority of development plans reference the Ministerial Guidelines for Planning Authorities on Quarries and Ancillary Activities (2004) and recognise the importance of extractive industries from a number of perspectives, varying approaches are being used to the implementation of the guidelines. **Since the guidelines were published in 2004, changes in planning and environmental policies and expected growth in construction demand suggest a need for a more strategic approach to the extractive industry sector and development plan policies.** This could be achieved through an update of or revision to the guidelines, which would ultimately take the form of a new National Planning Statement provided for under the 2024 Act.

Building on existing development plan policies the approach suggested above would add strategic direction in identifying construction material requirements on a construction market basis. This approach would also be able to factor in the potential for construction and demolition material re-use and the wider circular economy. One of the benefits of a more strategic and coordinated approach would be the avoidance of any supply chain shortages, e.g. shortages in the availability of sand within the Dublin area which in turn can drive longer-distance haulage, increasing both carbon footprint and construction material costs.

Furthermore, a national system for predicting supply and demand using geoscience data could help manage resources sustainably and support long term planning. The system could work from a national register of extraction sites. Using the input from all relevant stakeholders this would ensure an up-to-date and accurate mechanism for the sector to underpin a more strategic plan-led approach, with a focus on the circular economy.

Similar approaches have been implemented in the spatial planning system in Ireland in the housing area and are planned in the near term for renewable energy. These are being prioritised in order to give the planning system better strategic direction and avoid challenges in supply in the near to medium term and a similar approach could benefit the extractive industry.

The Ministerial Guidelines for Planning Authorities on Quarries and Ancillary Activities (2004)

Notwithstanding that the guidelines are now over twenty years' old, they remain substantially robust in terms of supporting planning authorities in the performance of their functions. The research for this case study paper found that the guidelines are a key point of reference for the majority of development plans across the country.

Feedback from local authorities and regional assemblies suggest that updated quarry guidelines should have greater consideration of public participation and community engagement, environmental assessments (AA and EIA) and legislative changes.

Page 7 12c TB

National and Regional Policy

The requirements of the 2000 Act, together with the Ministerial Guidelines for Planning Authorities on Quarries and Ancillary Activities (2004), have set a clear context for local authorities in addressing quarries in their statutory development plans. Many of the development plans, reviewed as part of this research, contained detailed extractive industry policies and objectives reflecting the provisions of the Ministerial Guidelines for Planning Authorities on Quarries and Ancillary Activities (2004). In contrast, the strategic policy context, as set out in the NPF and RSEs, has been less instructive for local authorities, as metric targets or indicators are not provided for translation into local policy, or to enable local level monitoring, unlike in other policy sectors such as housing, employment and energy.

Given the regional impact of quarries there is an opportunity to strengthen policy within the three RSEs during their review process in 2025 and promote a more regional approach for quarries and the extractive industry.

Furthermore, with the increasing emphasis on climate change, stronger policies are needed for recycling aggregates and promoting a circular economy to support the decarbonisation of the extractive industry sector.

The stable supply of aggregates, which are a finite resource, to supply the construction industry in Ireland in the future is critical. Likewise, future development plans and local level plans will need to reflect this through more precise evidence based policies that can be readily monitored. This is particularly important for those development plans and local plans that contain strategic projects, such as the MetroLink.

A National Planning Statement that addresses inter alia marine aggregates may also be beneficial, having regard to the sensitive nature of marine environments, for example, the Dublin Bay Biosphere.

Finally, the review of the rural housing guidelines, which was also referred to by local authorities as a priority, would allow for the consideration of the location of reserves and existing quarries. Local authorities stated that there is often conflict between the residential amenity of rural one-off housing and the day to day operation of quarries.

Future Considerations

While the research undertaken confirmed that much of the policy guidance in the current quarry guidelines remains valid, there are specific matters that updated statutory guidance could address to take account of the evolution of the wider policy and regulatory context. These include, but are not limited to, consideration of the following:

1. Regional assemblies could play a role in coordinating regional assessments of aggregate requirements working in tandem with the State's geoscience expertise. This would enable local authorities to make clear provisions in their development plans to meet the identified requirements. This would be subject to the necessary technical support and resources being put in place.
2. Updating relevant provisions with regard to both Environmental Impact Assessment (EIA) and Appropriate Assessment (AA) and other environmental requirements, including the issue of abandonment, the circular economy and climate action, in light of extensive policy changes and case law.
3. Addressing marine planning for dredged aggregates and other issues, in the context of the expanded remit of local authorities and An Bord Pleanála.

Page 8
KTB





Publication

Construction and Demolition (C&D) Waste

From: Department of Climate, Energy and the Environment

Published on: 13 April 2021

Last updated on: 6 March 2024

Construction and Demolition (C&D) waste is waste from any building works, demolition and development (including transport infrastructure).

Excavated soil and stone makes up about 85% of this waste, with the remainder including concrete, brick, tiles, glass, metal, plastic and wood.

C&D is the largest single waste stream in the EU making up around one third of all waste produced annually so it is critical that we manage it effectively.

The Environmental Protection Agency (EPA) Circular Economy Programme have case studies and factsheets published on how to manage and reduce waste during C&D projects which highlight both the financial and environmental benefits of reducing waste. They have also developed a repository of guidance and reports on waste prevention and best practice in the C&D sector.

In December 2020, the Regional Waste Management Offices published a report detailing the capacity of the waste sector in Ireland to manage the current volumes of C&D wastes along with projections on the amount of such waste likely to arise up to 2029.

Page 9 Kc TB

Following measures set out in the Waste Action Plan for a Circular Economy, the EPA published "Best Practice Guidelines for the preparation of resources & waste management plans for construction & demolition projects" in December 2021 which are a revision of the 2006 "Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Waste Projects".

By-Products

Certain circumstances allow for a substance or object to be considered a by-product rather than a waste. The substance or object must be a production residue and must satisfy the following four conditions:

- further use of the substance or object is certain
- the substance or object can be used directly without any further processing other than normal industrial practice
- the substance or object is produced as an integral part of a production process
- further use is lawful in that the substance or object fulfils all relevant product, environmental and health protection requirements for the specific use and will not lead to overall adverse environmental or human health impacts

Material being considered as a by-product has clear economic value for operators as it can be treated as a resource rather than a waste. This has benefits for the circular economy by ensuring the productive life of resources is enhanced and extended but it requires an efficient, sustainable system to function effectively.

There are three levels at which by-product can be determined:

1. EU-level criteria – no by-product criteria have been set at the EU level to date.

Page 10 K&TP

2. National criteria which allow a producer of by-product material to register with the EPA. There are currently National criteria available for

- Copper scrap

EU-level criteria for plastics are currently under development. In addition, EU-level criteria for textiles are at the early stages of development.

2. National criteria, which apply to any producer of end-of-waste material that can demonstrate compliance with the criteria. The EPA have developed National criteria for recycled aggregates which are currently available for use in Ireland.

3. Single-case criteria, which apply only to the operator who made the application for end-of-waste status to the EPA for a decision.

The EPA are responsible for making decisions on end-of-waste applications in Ireland. End-of-waste decisions made to date are available to view on the [EPA website](#) and an [End-of-waste Register](#) has been set up to register activity under the national criteria.

Further information on the details of end-of-waste decisions granted to date can be found on the [EPA website](#).

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**Bat Survey, Assessment & Mitigation Guidelines
for Onshore Wind Turbines in Ireland | 2026**

① KcTB



BAT CONSERVATION
IRELAND

Professional Disclaimer (IMPORTANT)

This document does not constitute formal NPWS policy and is not a statutory guideline under Section 28 of the Planning and Development Act. It represents a professional best-practice framework derived from authoritative sources including NatureScot (2021), NIEA (2021), BCT (2023), NPWS (2022), EUROBATS (2014/2015) and BCI (2012).

The use of this document does not guarantee planning consent and does not override site-specific instructions from statutory consultees.

Citation: *Bat Conservation Ireland (2026) Bat Survey, Assessment and Mitigation Guidelines for Onshore Wind Farms in Ireland. Bat Conservation Ireland, Ireland.*

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② K & TR

1. INTRODUCTION

1.1 Purpose and Rationale

The Republic of Ireland currently lacks a single, contemporary national technical standard dedicated specifically to assessing the impacts of onshore wind energy developments on bats. Existing domestic guidance—most notably Bat Conservation Ireland (BCI) 2012—predates major sectoral changes including increased turbine dimensions, advances in acoustic technology, and greater availability of automated analysis tools. As a result, Irish practice increasingly requires alignment with more up to date international sources such as NatureScot (2021) and the Northern Ireland Environment Agency (NIEA) guidance (2021; updated listings 2024) (NatureScot, 2021; NIEA, 2021).

This document therefore seeks to provide a coherent, standardised framework for survey, assessment, and interpretation of bat activity at onshore wind energy developments in the Republic of Ireland. It localises recognised UK and European best practice to the Irish ecological and legislative context, complementing but not replacing the NPWS Bat Mitigation Guidelines for Ireland v2 (IWM 134) (NPWS, 2022).

1.2 The “Standard of Evidence”

A clear and consistent Standard of Evidence is necessary to reduce Requests for Further Information (RFIs), minimise planning delays, and prevent legal vulnerability at consent stage. This standard is built on three principles:

- Proportionate survey effort aligned to site-specific risk, turbine scale, and cumulative pressures, consistent with NatureScot (2021) and NIEA (2021/2024).
- Transparent data interpretation using both percentile-based tools (e.g., Ecobat or similar) and site-level metrics such as passes per hour (PPH), ensuring that changes in reference datasets do not inadvertently down-weight risk.
- Correct sequencing of Appropriate Assessment (AA): in line with People Over Wind (C-323/17), mitigation cannot be considered at AA screening, and screening must rely exclusively on the likelihood of significant effects based on objective information (CJEU, 2018).

1.3 Scope of Application

This guidance applies to all onshore wind energy developments in the Republic of Ireland, including:

- Utility-scale wind farms (defined here as projects with >1 turbine or tip heights >100m).
- Small-scale or “Auto-producer” turbines (proportional effort applies).
- Repowering projects and hybrid developments, recognising that modern turbines (>150 m tip) can introduce new vertical risk pathways that were absent in earlier schemes.

③ VERT

1.4 Legislative Anchor

Assessments conducted under this guidance are designed to fulfil the requirements of:

1. **EU Habitats Directive (92/43/EEC):** Specifically regarding Annex IV species (all bats) and Annex II species (*Rhinolophus hipposideros*).
2. **Wildlife Acts 1976–2022:** Ensuring “strict protection” of bat roosts and foraging habitats.
3. **The “People Over Wind” Ruling (C-323/17):** Ensuring a clear separation between “mitigation” and “screening” within the Appropriate Assessment (AA) process.

1.4.1 Legal and Planning Framework (The 2024 Act)

This guidance is designed to assist practitioners in meeting their obligations under the Planning and Development Act 2024 and the Birds and Natural Habitats Regulations 2011 (as amended).

- **The New Consent Authority:** All references to “The Board” or “An Bord Pleanála” are now replaced by An Coimisiún Pleanála (the Commission).
- **Mandatory Timelines:** Under the 2024 Act, the Commission is subject to mandatory decision-making timelines (e.g., 48 weeks for Chapter 4 developments such as Strategic Infrastructure). Robust bat data is critical to avoid “Clock-Stops” or Requests for Further Information (RFIs) that can delay projects beyond these statutory windows.
- **Design Flexibility:** The 2024 Act allows for greater “Design Flexibility” regarding turbine parameters. This guidance supports this by encouraging the use of the “Source-Pathway-Receptor” model (Section 2), which allows for an assessment of a “Turbine Envelope” rather than a single fixed model.
- Continued requirement for AA and EIA to follow established best scientific practice.
- Strong emphasis on Source–Pathway–Receptor (SPR) analysis in line with OPR Practice Note PN01 (OPR, 2021).

1.5 Professional Disclaimer (IMPORTANT)

NOTICE: This document has not been formally sanctioned, adopted, or published by the National Parks and Wildlife Service (NPWS), the Department of Housing, Local Government and Heritage, or any statutory planning authority.

Until such time as this guidance receives formal endorsement, it should be treated as a Professional Statement of Best Practice. Authors of Environmental Impact Assessment Reports (EIAR) using this document do so under their own professional judgment. The use of this guidance does not guarantee planning consent and does not supersede direct instructions or site-specific requirements issued by statutory consultees.

④ Kc TB

1.6 Regional Justification

While this guidance draws upon the survey effort metrics of NatureScot (2021) and NIEA (2022), it transposes them specifically for the Irish environment. The adoption of a “10 consecutive night” minimum for static monitoring is not an arbitrary import; it is a response to the “Standard of Evidence” now required by the Irish Planning Authorities to satisfy the Strict Protection requirements of the Habitats Directive.

In Ireland, where the Leisler’s bat (*Nyctalus leisleri*) is a common and widespread high-flying species (unlike in much of the UK), a “robust baseline” must account for the high inter-night variability of Irish weather. A 10-night window ensures that even in a typical “wet” Irish week, a sufficient sample of “optimal” foraging weather is captured to allow for a defensible impact assessment.

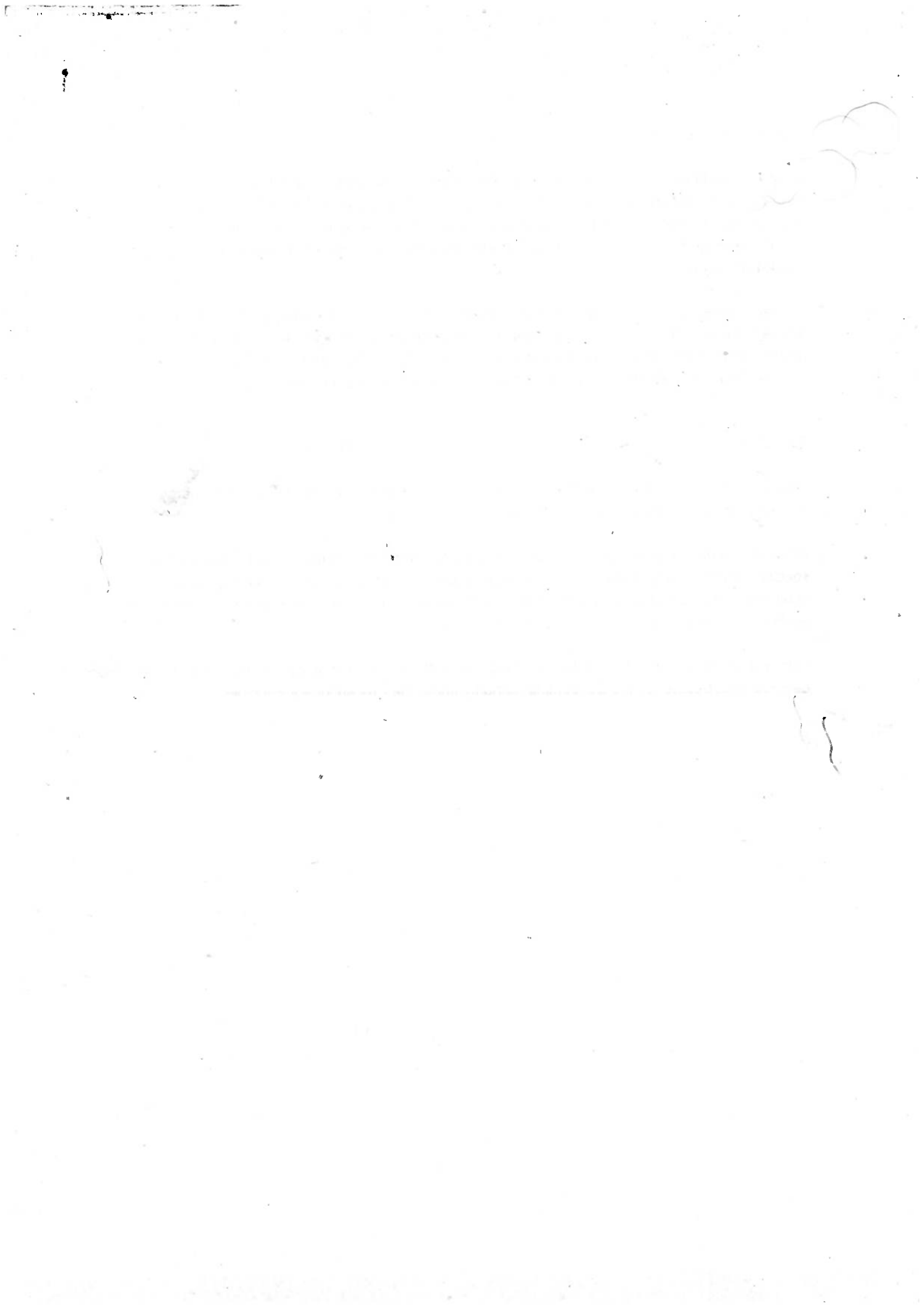
1.7 Use of Language and Professional Judgement

This guidance is intended to establish a high national standard for bat surveys at wind energy sites. The term “should” is used throughout to denote best practice.

While this guidance allows for professional judgement and the adaptation of methods to suit site-specific conditions, any deviation from the recommended minimum effort (e.g., timing, duration, or equipment) must be explicitly identified and technically justified in the “Limitations” or “Methodology” section of the baseline survey report and/or EIAR.

Failure to provide a robust scientific justification for such deviations may lead to the survey being deemed “Inadequate” by the Consenting Authority under the Precautionary Principle.

⑤ K & TB



2.5 Preliminary Roost Assessment (PRA) & Irish Seasonality

2.5.1 The Irish Survey Window

While UK-based guidance often suggests a broad summer window, the Irish climate and the specific phenology of Irish species (notably the earlier maternity clusters of lesser horseshoe and the late-summer peaks of Leisler bat) require a more focused approach.

Roost Type	Core Irish Survey Window	Rationale for ROI Adaptation
Maternity Roosts	May 15th – July 31st	To capture peak occupancy before post-lactation dispersal.
Mating/Swarming	August 15th – Sept 30th	Critical for Leisler's bats, the highest risk period for Irish wind farms (unpublished Illien report).
Hibernacula	December 1st – Feb 28th	To be conducted during sustained cold spells (<5°C).

2.5.2 Transition Periods and Irish Weather

Unlike the milder UK south coast, Irish "Shoulder Months" (April and October) are highly volatile.

- **The "April Constraint"**: Emergence surveys conducted in April for wind farm EIARs are generally not acceptable as a stand-alone baseline for maternity roosts, as occupancy in Irish stone buildings and trees is often delayed by late frosts.
- **The "October Extension"**: Conversely, in the South and West of Ireland, mild Octobers can see significant Leisler's activity. However, for roost *identification*, October surveys are considered "Supplementary" only.

2.5.3 Deployment of Night Vision Aids (NVA)

The use of NVAs (Infrared or Thermal Imaging) is mandatory for all roost emergence surveys at potential wind farm sites.

- **Rationale**: Manual "clicker" counts are no longer sufficient to satisfy the "Scientific Certainty" required for Appropriate Assessment in Ireland.
- **Standard**: A minimum of two surveyors (or one surveyor and two NVA cameras) must be used for any structure with multiple egress points.

⑥ 14cTB

9. ANCILLARY INFRASTRUCTURE & EMERGING TECHNOLOGIES

9.1 Battery Energy Storage Systems (BESS) & Substations

While smaller in footprint, ancillary infrastructure can create localised “Ecological Sinks” or “Barriers.”

- **Ultrasonic Noise Mitigation:** Inverters, transformers, and cooling fans in BESS units must undergo a verified audit for ultrasonic noise emissions (20kHz – 100kHz). If emissions are detected at levels that could interfere with bat echolocation, acoustic housing or baffles should be utilised.
- **The “Dark Corridor” Rule:** To protect light-sensitive species (e.g., *R. hipposideros* and *Myotis* spp.), artificial lighting at substations should be:
 - **Motion-Activated:** Only triggered for essential maintenance or security breaches.
 - **Directional:** Fully shielded (0% upward light ratio) and directed away from boundary habitats.
 - **Lighting Contours:** Lighting must utilise Warm LEDs (<2700K). EIA/R submissions must include light-spill contour maps demonstrating that illumination on boundary features is maintained at <0.5 Lux.
- **Buffer Zone:** A minimum 10m buffer of dark, unlit habitat should be maintained between any BESS/Substation fence line and the nearest ecological corridor.

9.2 Alternative At-Height Monitoring (AAHM)

Where a meteorological mast (met-mast) is not present or cannot be consented, at-height data should still be sought to characterise the risk to high-flying species. The following technologies while recognised are new and need to be considered for viability on a project-specific basis:

- **Tethered Drones (UAS) / Balloons (Helikites):** These allow for static detectors to be suspended at hub height. To be comparable to met-mast data, they should be deployed during the same 10-night windows and must be stable enough to avoid “microphone swing” noise.
- **UAVs (Drones):** While currently limited by battery life, drones equipped with ultrasonic recorders are acceptable for qualitative sampling (e.g., 30-minute transects at 100m altitude). They are not yet a substitute for the “10-night consecutive” quantitative baseline but can be used to justify a site’s risk profile.
- **Laser/Lidar-Based Detection:** Emerging remote sensing technologies that detect wing-beat frequencies should be considered on a “Trial Basis.” If used, the data should be cross-referenced with ground-level acoustic data to ensure species identification is accurate.

① KcTB

10. REFERENCES AND TECHNICAL STANDARDS

Bat Conservation Ireland (2012) Wind Turbine/Wind Farm Development Bat Survey Guidelines, Version 2.8, December 2012. Bat Conservation Ireland, Virginia, Co. Cavan.

Bat Conservation Trust (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition).

BCT & Institution of Lighting Professionals (ILP) (2023). Guidance Note 08/23: Bats and Artificial Lighting at Night.

Bernardino, F., et al. (2022). "Carcass persistence trials for estimating scavenger removal".

EUROBATS (2014). Guidelines for consideration of bats in wind farm projects. Publication Series No. 6.

Government of Ireland (2024). Planning and Development Act 2024. Dublin: Stationery Office.

Illien, K. (2022). The impact of wind farms on bat mortality in Ireland. Doctoral dissertation/Masters Study, University of Galway.

Lintott, P.R., and Mathews, F. (2018). "Basic principles and methods for monitoring bat activity at proposed wind farms." Mammal Society Guide to Bat Surveys.

Marnell, F., Kingston, N., and Looney, D. (2019). Ireland Red List No. 12: Terrestrial Mammals. National Parks and Wildlife Service, Dublin.

NatureScot (2021). Bats and Onshore Wind Turbines: Survey, Assessment and Mitigation.

Northern Ireland Environment Agency (NIEA) (2022). Guidance on Bat Surveys, Assessment & Mitigation for Onshore Wind Turbine Developments.

NPWS (2022). Bat Mitigation Guidelines for Ireland (v2). Irish Wildlife Manual No. 134.

Richardson, S.M., et al. (2021). "Peaks in bat activity at turbines and the implications for mitigating the impact of wind energy developments on bats." Nature Portfolio, 11;3636.

Roche, N., Aughney, T., Marnell, F., and Lundy, M. (2014). Irish Bats in the 21st Century. Bat Conservation Ireland, Cavan, Ireland.

Shiel, C., Shiel, R.E., and Fairley, J.S. (1999). "Foraging habits of Leisler's bat *Nyctalus leisleri* in the north-west of Ireland, as revealed by radio-tracking." Journal of Zoology, 248(2), pp. 227-232.

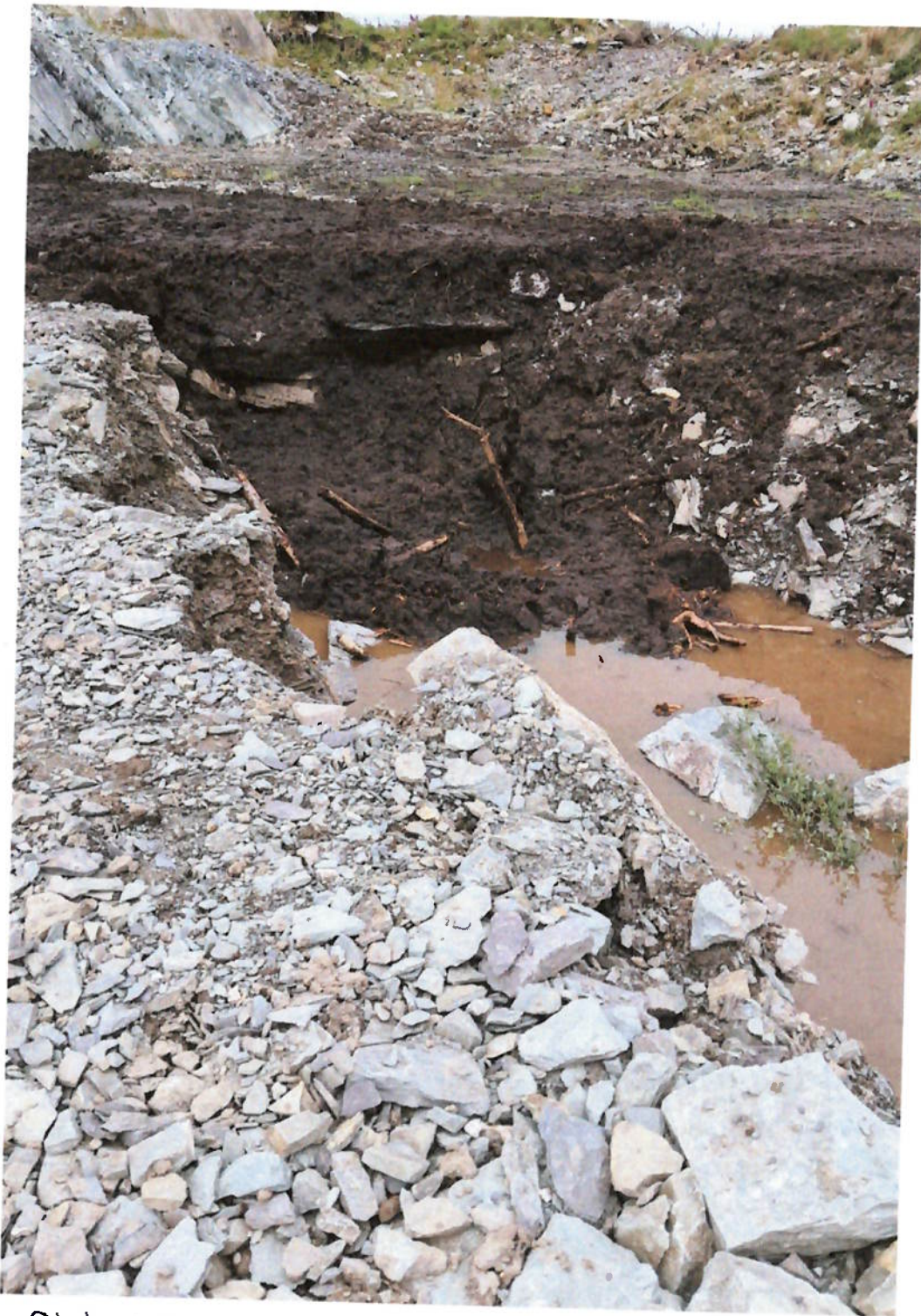
⑧ Kc TR



Older Quarried Site Carrigdangan ext 2025
Peat seen to be deposited on this site.

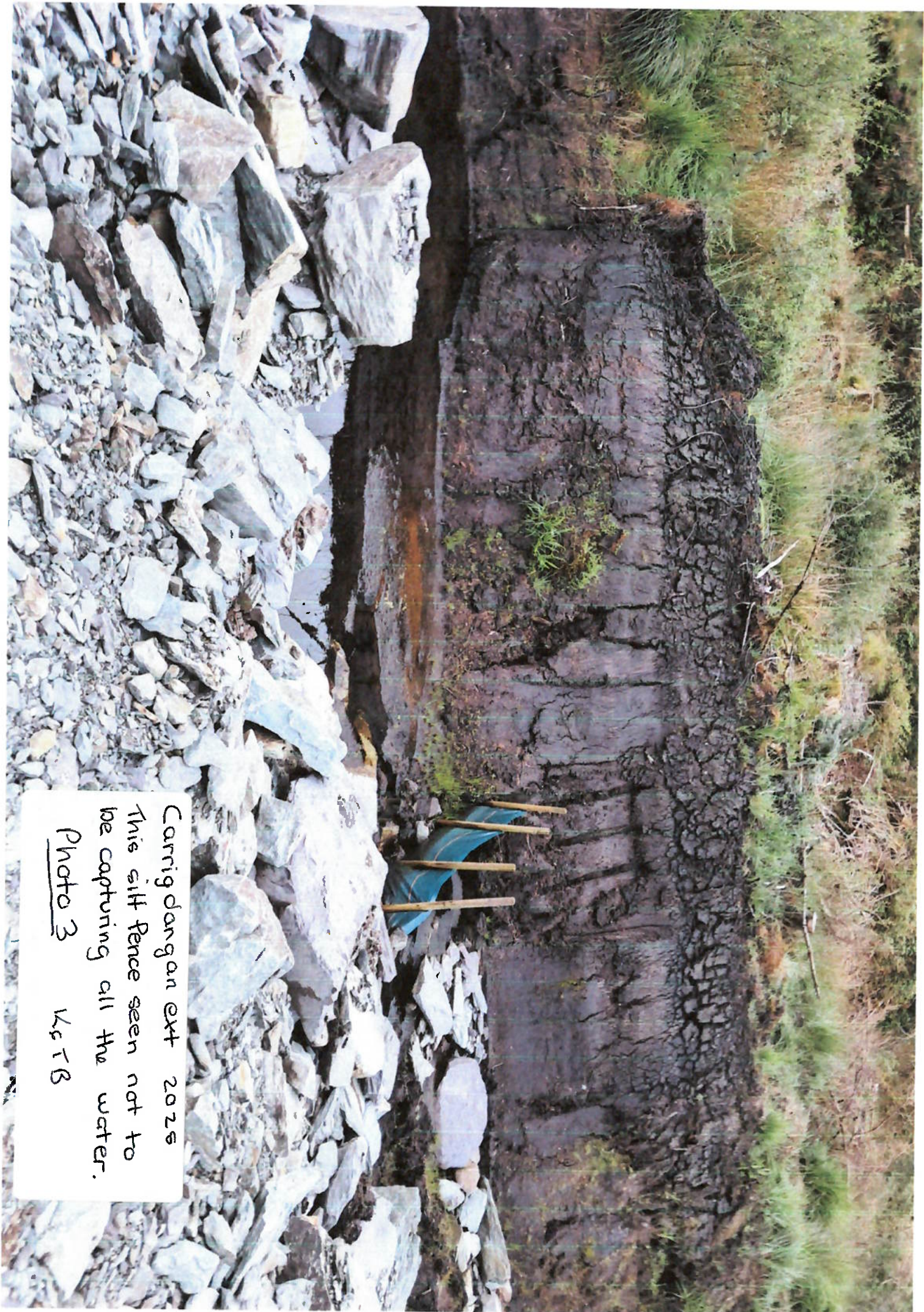
Photo 1

① K6TB



Older Quarried Site Carrigdangan ext 1025
Photo 2

@ KCTR



Carrigdangan ext 2026
This silt fence seen not to
be capturing all the water.
Photo 3 K&TB



Carrigdangan ext
Photo 4

Peat & spoil on new track, no particular separation of stone, peat, brash or logs.

④ K&TB

Carrigdangan ext

Photo 5

⑤ VSTR

Peat bank running
with water



Photo 6 Carrigdangan ext 2026
Cement From 1st pour. Cement trucks spill going up
the track.

Page 6 METB

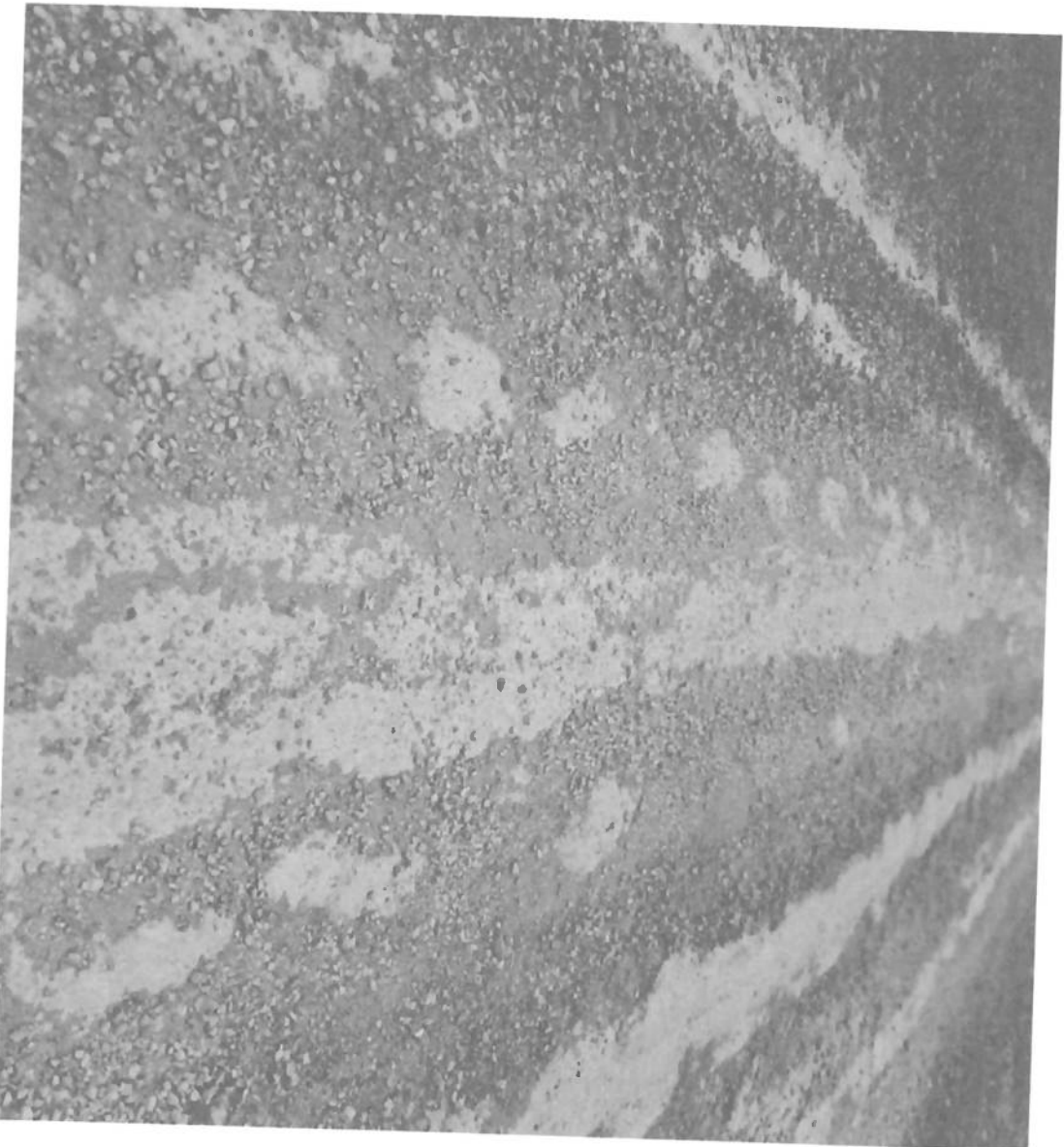


Photo 7

Carrigdangan ext

Cement pour 263
missed the pit, which is
to the left of this photo.

Page 7
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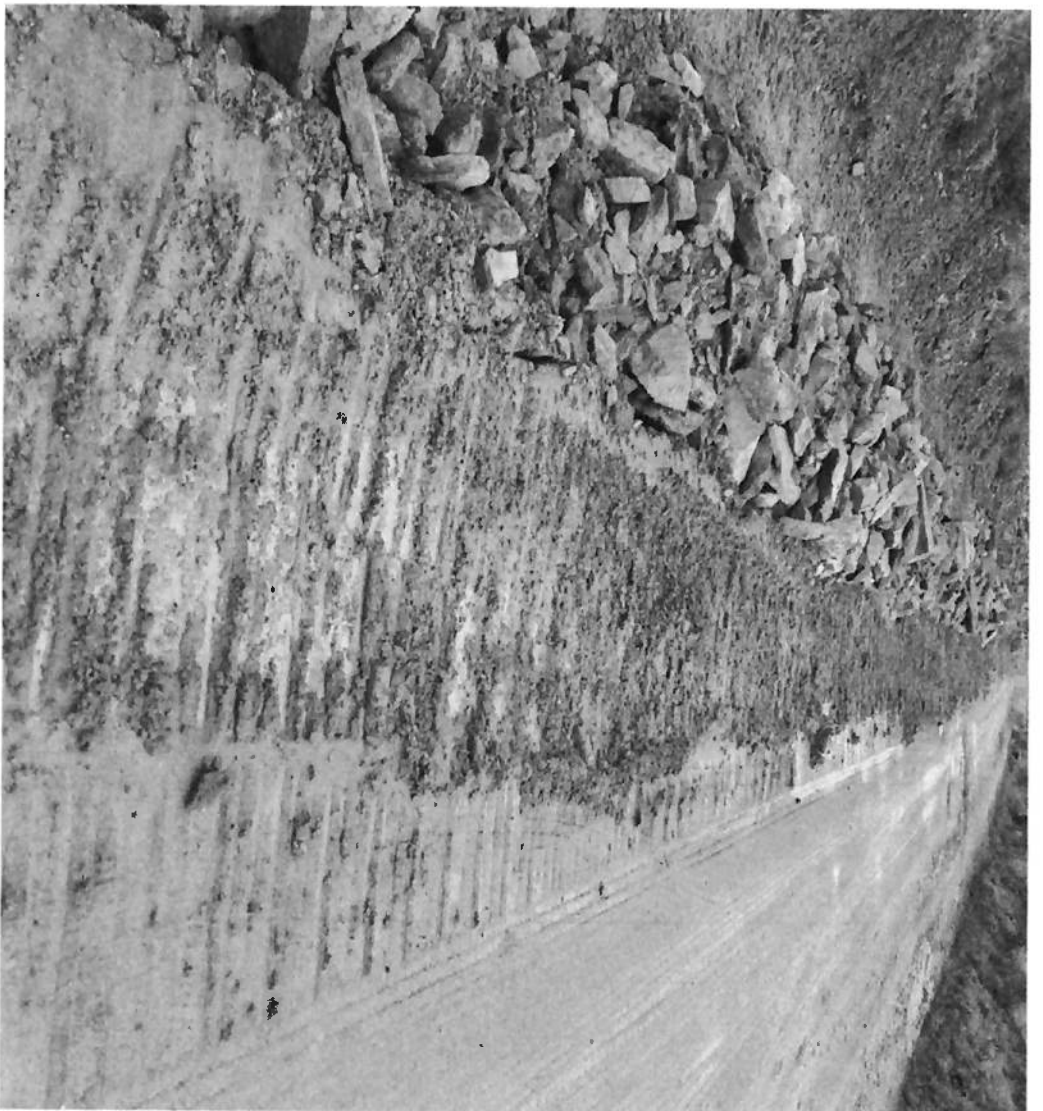
Photo 8

Carrigdangan ext 2026

Shows new cable trench & cement. Track much wider. Bad run off. This is the existing track.

Page 8

USTR

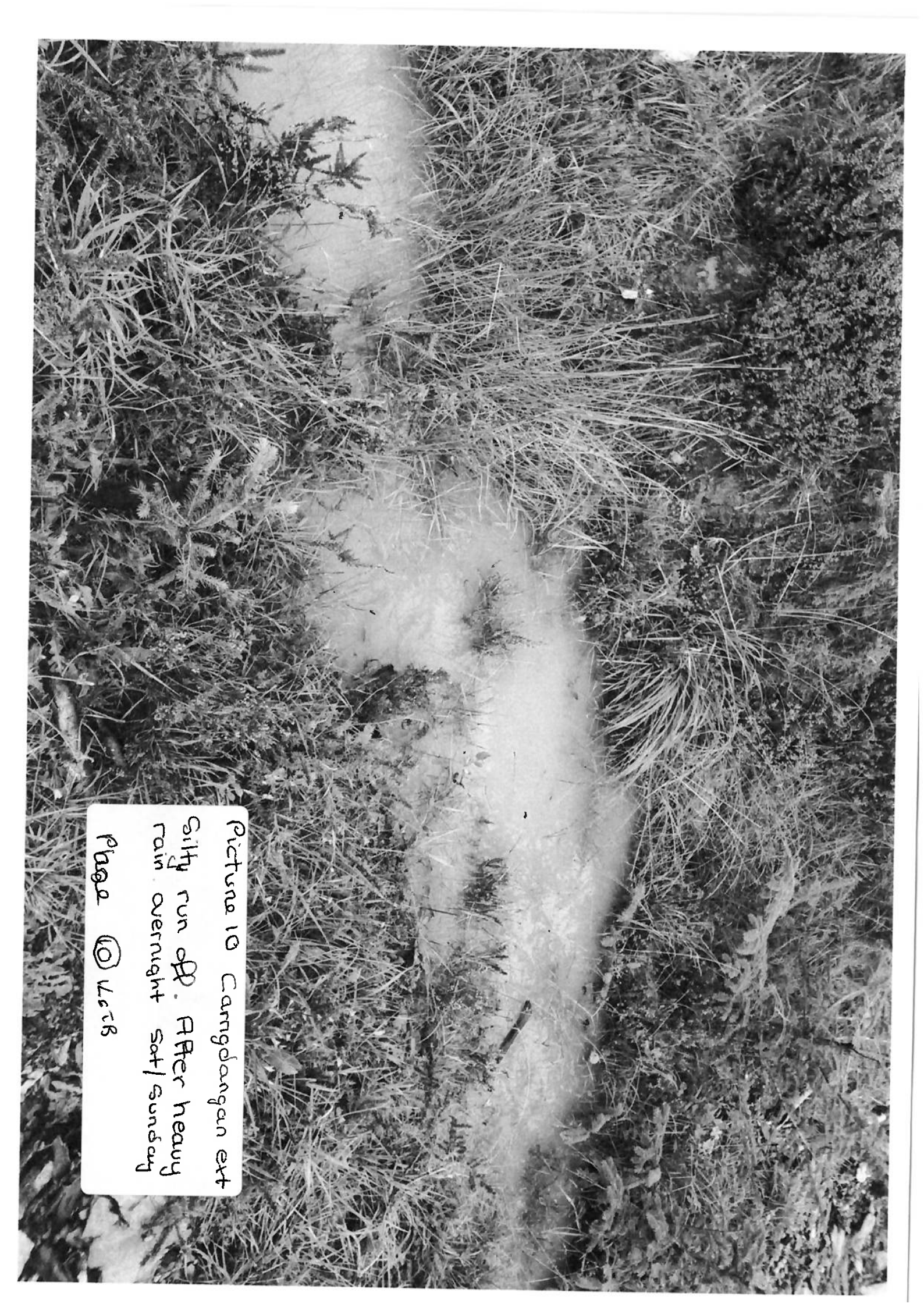




Picture 9
Camgdangan
ext 2025

Page 9^{K&TB}

spoil.?

A black and white photograph showing a dirt path or streambed cutting through dense, tall grass and other vegetation. A prominent, light-colored, silty runoff channel runs down the center of the path, indicating recent heavy rain. The surrounding plants are dense and appear to be a mix of grasses and leafy ground cover.

Picture 10 Carrngdangan ext
Silty run off. After heavy
rain overnight Sat/Sunday

Page 10 of 16

Photo 11
Carrigdangan ext
Run off

Page 11
L. 78



Photo 19 Carrigdangan ext 2026
More stone excavated to widen the original track before
T1

Page 12 of 18



Photo 13

Page 13
K. 52
Carigdangan ext
Borau Pit no 1

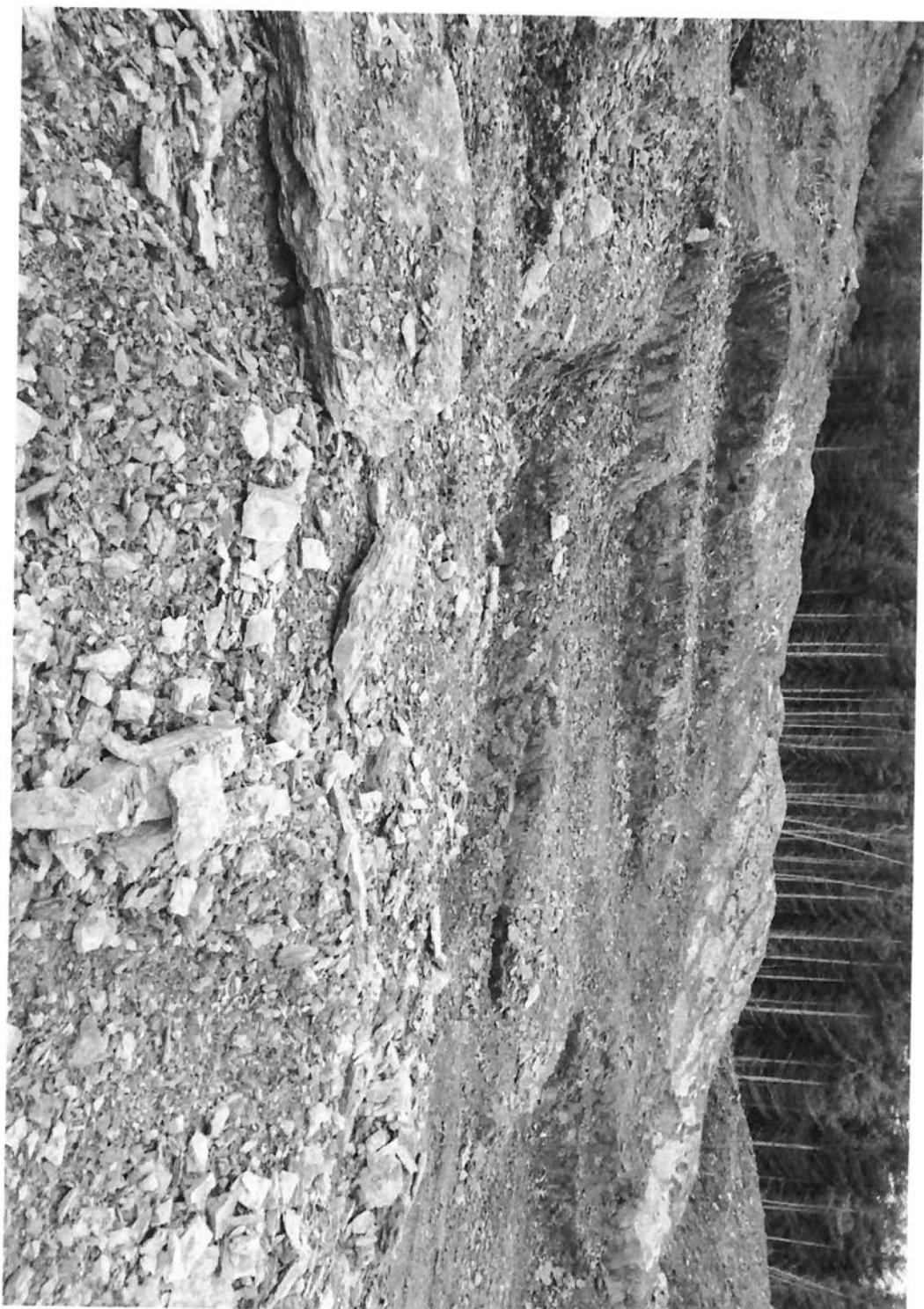


Photo 14 Carngdangan ext and bonaw pit
next to T1 ext



Page 14
KCTR

Photo (15)
Carrigdangan ext
2025

Page (15) KSTs
Iron run off



Photo 16

Campdangan ext

Welfare Facility

door swinging open, turned
on its side often.
Start of the ditch on the left, new
track.

Page 16

LC TRS





Photo 17 Caringdangan
Mares tail/Horse tail
opposite substation

Page 17 WSTR

Photo 18

Catigdangan
opposite substation .

Contractors digger
Mareetail Horsetail
new growth.

I can assure you it is
starting to grow.

Is also growing in the ditch
at the side of the substation

Page 18 VSTR



Photo 19 Carrigdangan ext
we call this the Crossroads
To the left T1 ext. To the left back Oerragh & Clenrath
wind farms

Page 19
14 & 18



Photo 20 Camigdangan
accidental area. After
harvesting of trees
Turbine 1 to the left

Page 20 125 TR



Photo 21
Canggihangan
just before the
substation.
Who is lighting
fires and burning
rubbish

Page 21
LCTIS



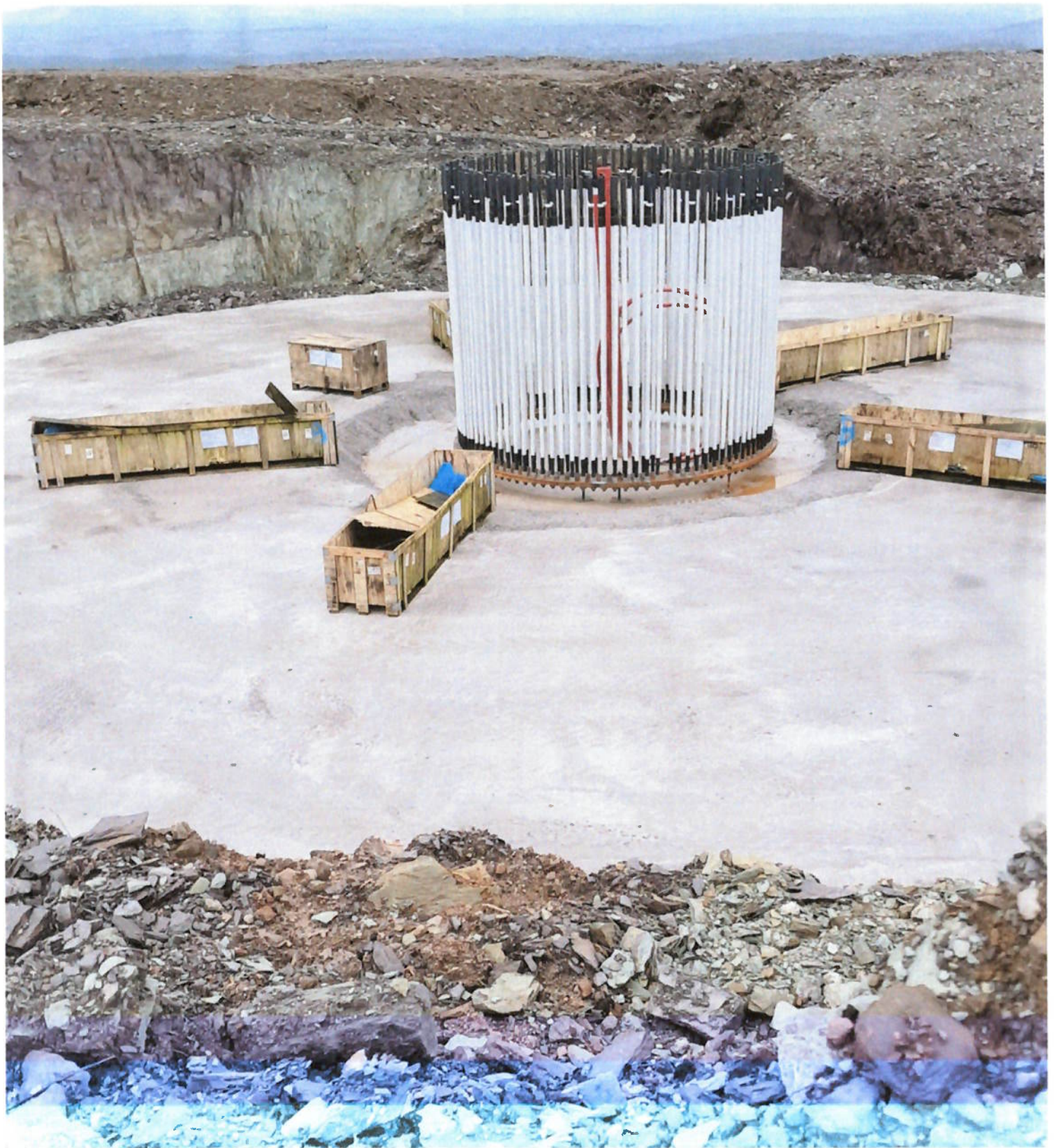


Photo 22

Carigbangan ext T1
in the making

Photo 23
Carigdangan
wind farm on ground
next to T4
nails in wood.
Meenbog cabling



Page 214
V. TP



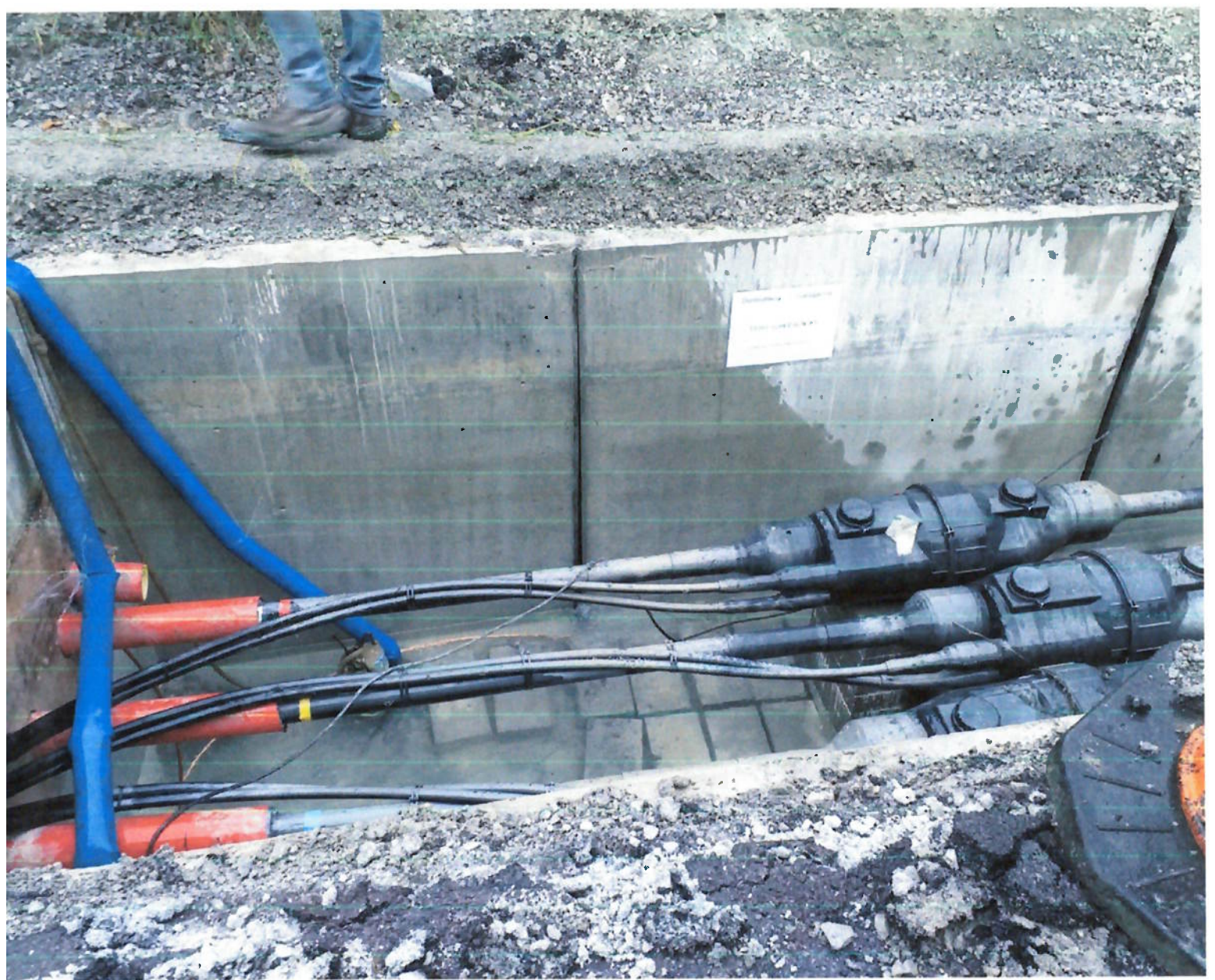
Photo 25
Camigdangan
Meenbog
cabling

May 5th 2026
as yet not used.

Photo 26 Camgdangan
Ext. Tadpoles Dead.
2026
didn't manage to save them
all.

Page 26 VC TP





Jointing Bay Photo 27 on L4621. this is 1 of 4 on this road. This one is labelled Carrigarick 5. each jointing bay needs a switch box / connection Box This one continually flooded.

Also on L4621 HDD under the little bridge Ardacahan. They require a box either side (Link Boxes) some of these are now subject to continuous Potholes.

Page (27) KATR

CONCLUSION

To build these 14 wind turbines at Maughanaclea will require more stone, blasting has not been ruled out, more track will be needed and more of this upland will be lost. They are proposing to re-establish a small area at the Maughanaclea site, to replace Annex 1 loss habitat, these developers seem to think that it is acceptable. This is no substitute, we have tried to show the on-going work and damage/dirt on the site at Carrigrierck Ridge for just 3 turbines, Unless you are able to visit these sites on a regular basis, before any work starts and then re-visit during construction work, only then you will realize what a huge amount of work is involved and the loss of habitat.

These are just a few photographs, but there is no substitute for the naked eye.

The developers and their contractors and MKO are instructed by yourselves and the local councils, on the final documents and what conditions must to be strictly followed, if there is a disagreement or a dispute arises or a condition is not met. These conditions are specifically designed to address issues regarding environmental protection, construction, management, and impacts on adjoining properties. **Mitigation Measures**, the developer is legally required to implement all mitigation measures outlined in the Environmental Impact Assessment (EIA) and Nature Impact Statement (NIS). If the developer fails to meet these conditions set by the board, they are in a breach of planning permission, which can lead to enforcement action by the local authority.

We know if planning is granted for this project, that mitigation measures will be breached, this developer their contractors and MKO staff are unlikely to carry out their roles and responsibilities.

We know from experience.

Kate Baker

K.S. Baker

Page (28)

Tim Baker

T.B. Baker

B.S.E