

## National Peatlands Park-Ballydermot Boglands Area



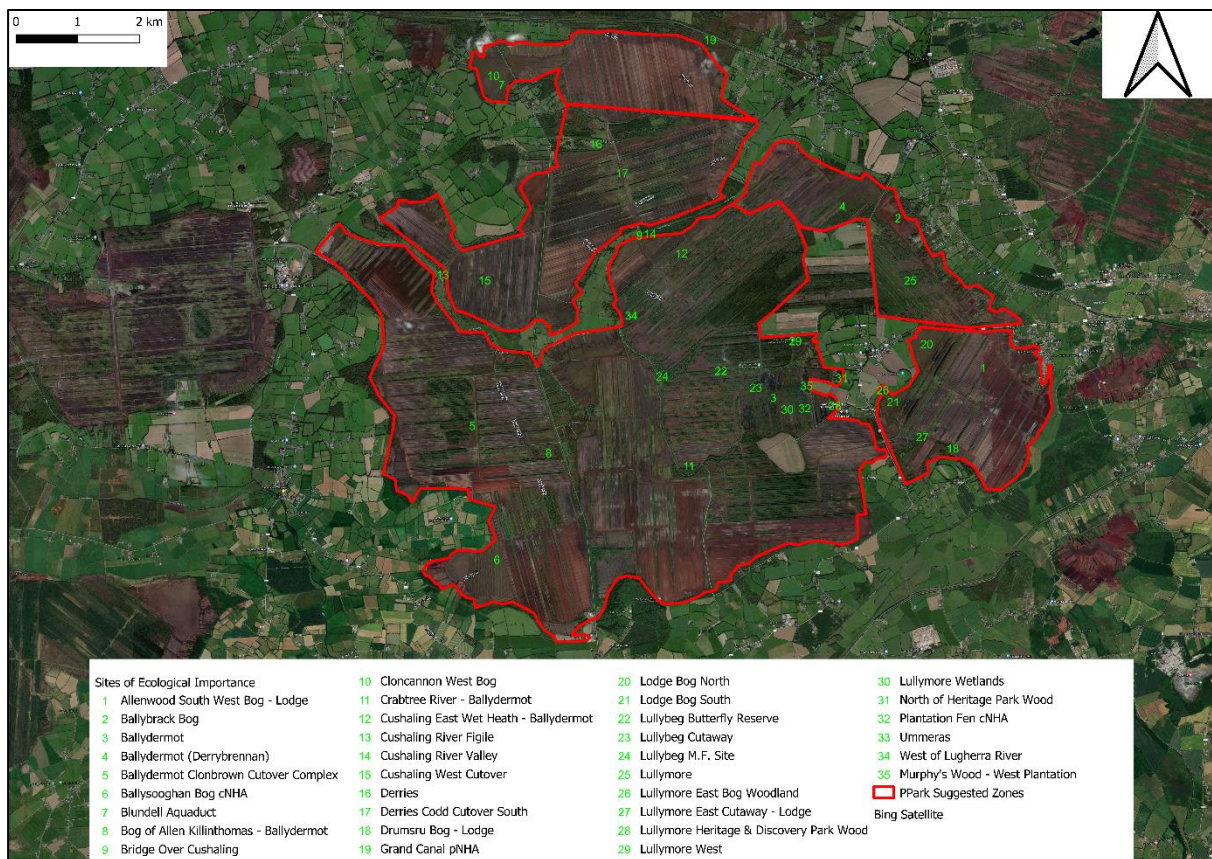
The Brimstone, a highly local butterfly in Ireland, appears in the National Peatlands Park each spring, its bright golden wings bringing colour and hope after a long winter. Photos below by award-winning photographer Tina Claffey: From Left to Right: Bee Orchid, Hairy Shield bugs, sleeping bumblebee.

### **Ballydermot Site List (Part of Proposed National Peatlands Park Area)**



## Introduction

In May 2019 the Dáil declared a national climate and biodiversity emergency. Action is needed to deal with the critical situation of the climate crisis and the shredding of the tapestry of life. The EU Biodiversity Strategy 2030 recognises the scale and urgency of action needed to halt and reverse declines in biodiversity, support climate mitigation and adaptation and improve ecosystem health. A major contribution to these objectives will be the creation of a new national park, the National Peatlands Park, in the Midlands, an extensive peatland landscape containing habitats and species that have become rare or extinct in the broader countryside. Member States of the European Union are invited to pledge, by the end of 2022, their contribution to ensuring well managed Protected Areas across 30% of the EU area by 2030. The National Peatlands Park group, a broad coalition of environmental and community organisations, want to see this realised in the Irish midlands which has seen large scale exploitation of peatlands. Only landscape scale conservation can save our wild places and species now. What follows is a brief synopsis of the biodiversity of a jewel in the crown of the proposed National Peatlands Park, known as the Ballydermot Bog Group. More information can be found at <https://www.nationalpeatlandspark.com/>



Map showing locations within the Ballydermot area of the National Peatlands Park. This map does not preclude additions to the National Park of non-adjointing, high-value peatlands elsewhere in the midlands.

### Site No 1,18,20,21,26,27, Allenwood South, Lodge Bog Wetlands - Co. Kildare

Much of the Allen-Lullymore Bog complex became cutover or cutaway as long-term peat extraction activity reduced the peat reserves on individual bogs. Rehabilitation measures comprising naturalisation and development of alternative after-uses have been already explored at the Allen-Lullymore Bog Group, including coniferous forestry, biomass, agricultural grassland, amenity use, rare species conservation management and wetland creation. Some of this was carried out in the 1980s. While agricultural fields and coniferous forestry have been developed successfully on the cutaway bogs, it was found that these require financial investment that generally exceeds any potential commercial

output value. For this reason, it is unlikely that either agriculture or forestry will continue in the longer term and that the natural rehabilitation of the area through sensitive ecological management will become more attractive as land use priorities evolve toward climate mitigation and biodiversity recovery.

Part of this site area is a Bord na Móna site (~35ha ) that has come out of production. Rehabilitation has been underway since 2014/15. The site has been allowed to re-wet and has since become supporting habitat for Curlew *Numenius arquata* and a nesting ground for Lapwing *Vanellus vanellus* (Red Listed - The Birds of Conservation Concern in Ireland 2020-2026). Snipe *Gallinago gallinago* (Red-listed), Ringed Plover *Charadrius hiaticula*, Skylark *Alauda arvensis* (Amber-listed) and Meadow Pipit *Anthus pratensis* (Red-listed) nest in this area. The Irish Peatland Conservation Council (IPCC) monitor this site with the Bord na Móna ecologists as the IPCC Lodge Bog nature reserve is adjacent providing an open communication platform for the management of the two sites and monitoring rehabilitation progress. The rehabilitating cutaway is developing as an important biodiversity hotspot with many wetland bird species returning to use the site. Bord na Móna conducted sphagnum restoration trials for the potential use across other sites. Since production ended, Lodge Bog Wetlands is now supporting a population of breeding Lapwing and is showing promising returns of wintering wildfowl. Lullymore East Cutaway (N 71162452) holds a population of the Marsh Fritillary butterfly, ranked Vulnerable on the Ireland Butterfly Red List.



Beautiful Demoiselle *Calopteryx virgo*, Lullymore.

**Site no 2 N 71018 27996, Ballybrack Bog, Co. Kildare**

This site contains an expanse of mostly bare peat. Rehabilitation by re-wetting should improve overall ecological conditions, contribute to the development of wetland habitats and support the National Policies on Climate Action and Greenhouse Gas mitigation enhancing the current peat storage capacity of the bog (locking the carbon into the ground). It is expected that the bog will have reduced emissions (reduced source) and

in time develop its carbon sink function, in part, as peat-forming habitats develop on site in the future. It will also support Ireland's commitments towards Water Framework Directive and the National River Basin Management Plan 2018-2021.

**Site no 3 Ballydermot See Site no 23**

**Site no 4 N 70065 28492, Ballydermot (Derrybrennan), Co. Kildare**

This area comprises cutover bog, scrub, plantation forestry (coniferous) and dry grassland (probably dry-humid acid grassland and neutral and calcareous grassland due to the range soil types present), recolonising bare ground. The Wall Brown butterfly *Lasiommata megera* (ranked Endangered) was especially common on the latter two grassland habitats in the area in the past and habitat conditions suggest its continued presence.

**Site no 5 N 63899 24855, Ballydermot/Clonbrown Cutover Complex, Co. Offaly**

This is a severely cut bog. The peat depth here is likely to be shallow.

**Site no 6 N 64130 22458, Ballysooghan Bog cNHA Ballysooghan North, Co. Kildare/Co. Offaly**



This raised bog is listed in The Bog of Allen Heritage Survey 2005 (Hurley, C. 2005) which described it as actively forming peat with 75% Sphagnum cover. The IPCC Sites Database records this site as once being the only site within County Kildare with Golden Bog-moss *Sphagnum pulchrum* present.

Left: A view from a bridge over Cushaling River.

**Site no 7 N 64402 30415, Cloncannon Bog West**

This large area of intact raised bog lies north of The Long Derries on both sides of the local road but mainly west of the road. The area contains active raised bog analogous to the priority EU Habitats Directive Annex I habitat. The Large Heath butterfly *Coenonympha tullia*, ranked Vulnerable on the Ireland's Butterfly Red List, is present on the bog. This area, called Cloncannon Bog, was assessed by consultants for NPWS as part of the review of the raised bog Natural Heritage Area network (NPWS 2014).

**Site no 8 N 65413 24262, Bog of Allen Killinthomas-Ballydermot Co. Kildare**

This area contains cutover bog. An assessment of the peat depth should be carried out to consider whether re-wetting will assist in rehabilitating this bog.

**Site no 9 N 66801 27781, A view from a Bridge over Cushaling River. Photo above J. Harding**

This area contains a river and riparian woodland. This scenic area appears unmodified and unspoiled.

**Site no 10 Blundell Aqueduct N 64253 31297 Co. Kildare**

Built by the Grand Canal Company in 1793, Blundell aqueduct was partly funded by the local landlord and named after him. The canal opened in 1797. It is the only structure in Offaly that carries the canal over a road. Usually, a canal was dug out of the ground, but at certain stretches of the waterway, such as in Edenderry, the canal was constructed by building up banks for the canal on top of the bog. The result is a raised canal at a higher level than the land and roads. This aqueduct was constructed to pass over an existing route into Edenderry. The canal narrows as it passes through a limestone quay as it flows over the aqueduct. This structure is recorded in the National Inventory of Architectural Heritage.

**Site no 11 N 67135 25434, Crabtree River, Co. Kildare**

The Crabtree River rises in Lullybeg and flows south before flowing northwards alongside the Killyguire Road. It is joined by the Lugherra River, Cushaling River and the Black River before joining the Figile River. The Figile River joins the River Barrow beside Monasterevin. The Crabtree River has steep banks in west Lullybeg, just west of the point it is joined by the Lugherra River. The banks are rich in flora, including Meadowsweet *Filipendula ulmaria*, Wild Valerian *Valeriana officinalis*,

Common Fleabane *Pulicaria dysenterica* and, where drier, Common Knapweed *Centurea nigra*, Ox-eye Daisy *Chrysanthemum Leucanthemum*, Creeping Thistle *Cirsium arvense* and Wild Carrot *Daucus carota*. The river is used by Kingfisher *Alcedo atthis* (Amber-listed species), Grey Heron *Ardea cinerea* and a range of other birds, including Barn Swallow *Hirundo rustica* (Amber-listed). It is used by the Otter *Lutra lutra* (protected under Annex II and Annex IV(a) of the EU Habitats' Directive) for feeding and possibly for breeding. The banks also hold well developed scrub containing willow, Downy Birch *Betula pubescens* and Common Hawthorn *Crataegus monogyna*. Pollution control measures to ensure suspended solids and ammonia do not enter the river system should be undertaken if not in place.

**Site No 12 N 67468 27626, Cushaling East Wet Heath Ballydermot**

This area contains bare peat, raised bog, wet heath and revegetating cutover bog, containing light scrub. The wet areas especially the drains are the focus of activity of Keeled Skimmer and the blue damselflies.

**Site no 13 N 63548 27127, Cushaling River/River Figile, Site 14 N 64930 26101, Cushaling River Valley, Co. Kildare**

This shallow valley contains riparian woodland freshwater marsh, and flooded fields used by overwintering waders and breeding for Snipe in summer. This valley is highly scenic and contains very well-developed woodland comprising native trees with wet grassland bordering the river. The river has a moderate flow even following dry weather. The woodland contains trees such as Common Elder not found on bog soils, indicating the presence of mineral soils. The valley appears unaltered by peat extraction activities on the surrounding bogs and appears to offer excellent habitat for Otters and bats.

**Site no 15 N 63970 26998, Cushaling West Cutover Bog, Co. Kildare/Co. Offaly**

This is a large, flat area of severely cut peat. The peat depth in the area is likely to be shallow.

**Site No 16 The Long Derries SAC (Sitecode:000925) N 66101 29279 - Co. Offaly**

This 30.37ha stretch of low esker ridge mixed with loam and peat soils is designated under the E.U. Habitats Directive as it contains Orchid-rich Calcareous Grassland as a qualifying interest. Within the NPWS Site Synopsis the Nightjar *Caprimulgus europaeus* (Annex I of the E.U. Birds Directive) is listed as breeding on site and the Grey Partridge *Perdix perdix*, a Red-Listed bird in Ireland, is also present contributing to the high conservation importance of The Long Derries SAC. A Sand Martin *Riparia riparia* (Amber-listed) colony breeds on cut banks on the esker.

The Marsh Fritillary butterfly breeds on the adjoining heath at N 67268 29453. Threatened and Near



Threatened butterfly species present on the Long Derries are Wall Brown (Endangered) and Dingy Skipper and Small Heath (Near Threatened). The esker area has an abundance of the Common Blue butterfly *Polyommatus icarus*.

Left: Irish Hare, Lullymore Heritage Park peatland biodiversity area (fen habitat). Photo Michael Anderton.

**Site no 17 N 66544 28721, Derries Codd Cutover South Co. Kildare/Co. Offaly**

This area mainly consists of cutover bog with bare peat but scrub and some reed swamp is present, especially east of the railway track. A major feature of interest lies in the industrial railway line which lies on calcareous material. The plants are calcicole species, including Common Knapweed, Selfheal *Prunella vulgaris*, Common Bird's-foot-trefoil *Lotus corniculatus*, Rough Hawkbit *Leontodon hispidus*, Common Cat's-ear *Hypochaeris radicata*, Common Marjoram *Origanum vulgare*, and Oxeye Daisy. The more calcareous grasslands are characterised by broadleaved herbs such as Field Scabious *Knautia arvensis*, Mountain Everlasting *Antennaria dioica*, Yellow-wort *Blackstonia perfoliata*, Salad Burnet *Sanguisorba minor* and Carline Thistle *Carlina vulgaris*, and may also be important for orchids, including *Ophrys* and *Orchis* spp. Maintenance of the rail track is recommended, along with scrub control along its length. Re-wetting the peat in this area is likely to extend the area of reed swamp.

**Site no 19 N 66816 31259, Grand Canal Greenway, Co. Kildare**

The Grand Canal passes north of the Ballydermot Bog Group and contains slow-moving water, like that found in a pond or lake. Kingfisher and Otter have been recorded on the canal, now being developed by Waterways Ireland along some of its length to greenway standard.

**Site No 20 Lodge Bog Nature Reserve N 71378 26237 - Co. Kildare**

This raised bog nature reserve is one of the very few last near intact examples of raised bog remnants within the entire Ballydermot Complex. It covers 35ha and while it was drained, it was never brought into production. IPCC manage this site with the financial and manual support of the members and volunteers, who IPCC represent. Two hundred dams have been built across the 5km of drains and the water levels are monitored year-round using the 118 piezometers installed along transects. The aim is to reverse the effects of drainage and the impact of industrial peat extraction on the bog margins. Lodge Bog provides refuge to three Curlew, consisting of a breeding pair and a single individual. Curlew are monogamous and show high site fidelity and preference, returning to their home breeding ground.

The Curlew is a long-term resident on Lodge Bog, officially identified in a baseline faunal survey carried out in 2005 by Michael O'Meara (Hurley, 2005). A study sponsored by Kildare County Council found evidence of breeding and that the adults have a high preference for Lodge Bog North (Ó Corcora, 2012). Since 2015 IPCC have monitored the arrival and behaviour of the Curlew when they return to Lodge Bog in March and stay until July. The indigenous Curlew population of Ireland has reduced in number by 96% (Lewis et al, 2019) and are listed "Red" within Birds of Conservation Concern in Ireland (National Parks & Wildlife Service (NPWS), 2019). There is a national effort to save this species from extinction and BirdWatch Ireland Kildare, NPWS and IPCC have been working together to implement measures on Lodge Bog to improve nesting success.



Seven-spot Ladybirds on Common Heather, Ballydermot.

**Site No 22 N 68626 25665, Lullybeg Butterfly Reserve - Co Kildare**



Lullybeg Butterfly Reserve.

Lullybeg Nature Reserve is a 10ha Bord na Móna rehabilitated cutaway, managed since 2010 by Butterfly Conservation Ireland. It is listed in the Bord na Móna Biodiversity Action Plan 2016-2021. This is an important conservation location (rated Nationally Important) as it is home to a population of Marsh Fritillary *Euphydryas aurinia*, the only protected species of butterfly in Ireland (protected under



Flower-rich area in Lullybeg.

Annex II of the Habitats' Directive 1992). Other important butterflies present are Dark Green Fritillary *Speyeria aglaja* (ranked Vulnerable), Wall Brown (ranked Endangered) and Small Heath *Coenonympha pamphilus* (ranked Near Threatened). Twenty-six butterfly species have been recorded on the reserve. The rewards of the conservation management and scrub removal/control are evident as the already impressive list of flora and fauna recorded on site is increasing. The site is used

as a transect for the Irish Butterfly Monitoring Scheme (IBMS) run by the National Biodiversity Data Centre, with 11 years of IBMS records underlining the site's importance for Lepidoptera. Moths that are present on the site include species ranked Near Threatened on the macro-moth Red List published by the National Parks and Wildlife Service in 2016 (Allen et al. 2016), such as Small Chocolate-tip

*Clostera pigra*, Dark Tussock *Dicallomera fascelina*, Small Purple-barred *Phytometra viridaria*, and species ranked as Vulnerable, such as Narrow-bordered Five-spot Burnet *Zygaena lonicerae*. Teal (Amber-listed), Woodcock (Red-listed), Snipe are among the breeding birds present. Merlin (Amber-listed), Buzzard, Kestrel (Red-listed), Sparrowhawk, Jay, Raven and Linnet (Amber-listed) occur here.

### **Sites no 3 and 23 N 68912 25488, Ballydermot and Lullybeg Cutaway**

Most of this flooded area on the cutover bog consists of open water with Reed Swamp, wet heath, poor fen and flush, fen, probably *Cladium mariscus* (Annex I habitat), marsh, wet grassland, scrub and bog woodland. The flooded area is a roosting site for Whooper Swan *Cygnus cygnus* (100 plus), a breeding area for Lapwing, Little Grebe *Tachybaptus ruficollis* and Water Rail *Rallus aquaticus*. Mute Swan *Cygnus olor* (Amber-listed) is also present. The area is especially striking in June when Common Cottongrass *Eriophorum angustifolia* is in bloom. Dry areas exist too, with berms containing gravel and marl holding plants characteristic of calcareous grassland.

### **Site no 24 N 67155 25381, Lullybeg Marsh Fritillary site**

This is a diverse site, bounded to the north by the adjoining Crabtree River. The habitat mosaic is like that found on Lullybeg Nature Reserve. The site contains mature woodland, scrub, dry grassland (probably dry-humid acid grassland and neutral and calcareous grassland due to the range soil types present), dry heath and cutover bog. There is peat soil and mineral soil, and exposed marl and gravel deposits. The flora includes Cowslip *Primula veris*, Devil's-bit Scabious *Succisa pratensis*, Common Dog-violet *Viola canina* and Common Knapweed. Grasses include False Oat-grass *Arrhenatherum elatius*, Red Fescue *Festuca rubra* and or Sheep's Fescue *Festuca ovina*, Heath-grass *Danthonia decumbens* and Quaking Grass *Briza media*.

Trees include Common Blackthorn *Prunus spinosa*, Common Hazel *Corylus avellana*, willow *Salix* spp, Downy Birch, poplar *Populus* spp, bramble *Rubus* spp, Ling *Caluna vulgaris* and Alder Buckthorn *Frangula alnus*. The site contains Marsh Fritillary, Dark Green Fritillary (both rated as under threat of extinction in Ireland), Silver-washed Fritillary *Argynnis paphia*, Small Heath and other species. The Red-tipped Clearwing moth *Synanthedon formicaeformis* is also present. The site is exceptionally rich in butterfly species. Management of scrub and maintenance of the route from Lullybeg Nature Reserve to the east and along the Killyguire Road which runs to the site from the south is recommended.



Foxes have mainly been seen in the Lullymore area.



**Site no 25 N 71004 27147 Lullymore**



Left: Dark Green Fritillary at Lullybeg Marsh Fritillary site.

This area of bog was prepared for production in the 1980s and early 1990s. Milling occurred in the southern section but ceased about 2010. There is bare peat especially in the southern and eastern sections while birch and willow scrub that developed along the drains has colonised much of the western

half of the bog and occurs in pockets elsewhere on the bog. Areas of species-rich grassland has developed on thin peat and marl on the western edges of the site, near the disused briquette factory. A large population of a rapidly declining butterfly, the Small Heath, currently ranked Near Threatened (this threat category is likely to be escalated when the red list is revised in 2023) is present in this area.

Gorse scrub occurs along the R414 road and scattered throughout the eastern section of the site. In the eastern section of the site a steep embankment containing scrub and woodland runs northwards from the R414 to the Grand Canal. Some peat cutting is still taking place at the eastern part of the bog (2021). Some of the cutover bog has Ling cover. A calibrated re-wetting to create mosaics of bog pools, reed swamp, scrub, woodland and wet bog is recommended. Management to maintain the walkway that exists on the embankment will ensure the commanding view and access will continue to be enjoyed. This can be connected to a walkway south of the R414 onto Allenwood Southwest Bog Lodge.

**Site no 26 N 70736 25270, Lullymore East Bog Woodland**

The woodland is birch-Purple Moor-grass woodland with Grey Willow *Salix cinerea* and occasional Common Holly *Ilex aquifolium*. Rowan *Sorbus aucuparia* and Scots Pine *Pinus sylvestris* may be present. Bilberry *Vaccinium myrtillus*, Ling and bramble is present in the shrub layer with Purple Moor-grass, mosses and ferns comprising the ground flora.

**Site no 28 N 69969 25004 Lullymore Heritage and Discovery Park Wood**

The area contains gardens, woodland and wetland areas. Some of the woodland, known locally as Foran's Wood, on peat soil, is birch-Purple Moor-grass woodland but a transition to ash-ivy woodland can be seen in areas adjoining soils containing mineral soil, with this area being more proximal to Lullymore mineral island. The part of the wood that is closer to mineral soil also holds oak, Wild Crab Apple *Malus sylvestris*, Common Blackthorn, Common Hawthorn, Common Holly, Mountain Ash and Common Beech *Fagus sylvatica*. In the birch-Purple Moor-grass area, the shrub layer consists of mainly of bramble, Bracken *Pteridium aquilinum*, Ling and Bilberry.

This area has been extensively trapped for moths, with a high species diversity and abundance recorded. Notable species recorded include the Suspected moth *Parastichtis suspecta*, declared extinct by the National Parks and Wildlife Service (Allen et al. 2016). Forester moth *Adscita statice* ranked Endangered, is also present. Dark Tussock *Dicallomera fascelina* and Small Chocolate-tip *Clostera*

*pigra*, both ranked Near Threatened have also been recorded, among other Near Threatened species. Long-eared Owl *Asio otus* and Spotted Flycatcher *Musciapa striata* (Amber-listed) occur in the wooded areas.



Left: Cinnabar Moth. Hundreds of moth species thrive in the region.

The open wetland area is cutover bog with a series of pools. Common Lizard *Zootoca vivipara*, Common Frog *Rana temporaria* and Smooth Newt *Lissotriton vulgaris* occur in the wetland. Mammals in the open wetland and wood include Irish Hare *Lepus timidus hibernicus* and Red Squirrel

*Sciurus vulgaris*. Wetland nesting birds are Mallard *Anas platyrhynchos*, Teal *Anas crecca*, Little Grebe, Snipe and Woodcock *Scolopax rusticola*, while Lapwing nested two years ago (2020). Mute Swan, Little Egret *Egretta garzetta*, Grey Heron and Curlew use the area for feeding, along with Hen Harrier and Peregrine Falcon.

A rich odonata fauna is also found in this complex wetland. Plants that occur include Common Cottongrass, Common Heather (Ling), Round-leaved Sundew *Drosera rotundifolia*, sphagnum, Purple Moor-grass *Molinia caerulea*, Soft Rush *Juncus effusus*, Purple Loosestrife *Lythrum salicaria*, Devil's-bit Scabious, Common Knapweed, Grey Willow, Downy Birch and Common Gorse *Ulex europaeus*. The range of habitats within this compact area provides a high species diversity. There is scattered scrub on soil containing peat and marl at the eastern edge of the wood such as at N 69590 25245. This area has Yellowhammers *Emberiza citrinella*, a Red-listed bird.

#### **Site No 29 N 69268 26058 Lullymore West Nature Reserve**

This 4.5ha area is a species rich nature reserve consisting of calcareous and acid grassland, fen, deciduous woodland and cutaway raised bog. The IPCC have owned and managed the site since 2005. The diversity of habitats within the small area adds to the importance of the site as well as the established population of the Annex II Priority Species Marsh Fritillary butterfly, which are monitored throughout the year. The site is actively managed with ongoing scrub removal, grazing trials, a weekly butterfly survey (24 species recorded).

Freshwater invertebrate monitoring is also ongoing. Previous works have included drain blocking and tree removal. Volunteers are an important part of IPCC's site management work and Lullymore West provides a backdrop for community engagement. This nature reserve is open to the public and visited daily by locals and tourists (national and international) as a natural amenity. The specialised grassland habitats display rare orchids and the wetland refugia provides for many species of dragonfly and other invertebrates. The presence of the Annex II Marsh Fritillary highlights the importance of this site - for monitoring and research, community engagement, biodiversity protection and international tourism.

The biodiverse habitats found on Lullymore West Nature Reserve extend to the south and then west where it extends into Lullybeg Nature Reserve. The habitat corridor linking the reserves is managed for invertebrates, especially for the Marsh Fritillary and receives much visitor attention. This corridor, at N 68945 25649 runs east to west and is sheltered to the north and south by woodland. This area contains the rare plant, Round-leaved Wintergreen *Pyrola rotundifolia* and a colony of the highly local tree, Alder

Buckthorn *Frangula alnus*. Notably, this tree is growing among specimens of a related tree, Purging Buckthorn *Rhamnus cathartica*. This circumstance is extremely unusual as these trees favour differing soil chemistry, with Alder Buckthorn preferring acid peat and Purging Buckthorn growing only in calcareous soil. Both the trees feed the caterpillars of the highly local Brimstone butterfly *Gonepteryx rhamni*. Moving west along this corridor towards Lullybeg Nature Reserve, wet heath grades into scrub and dry-humid acid grassland dominated by Purple Moor-grass (*Molinia* meadows on calcareous, peaty or clayey-silt-laden soils Annex I habitat).

This area, like much of the Ballydermot Bog Group, is rich in odonate species. Ten of Ireland's fourteen dragonfly species have been recorded here, including the Black-tailed Skimmer *Orthetrum cancellatum*, a species not usually associated with bogs. Its highly unusual presence may be due to the presence of alkaline conditions in the adjoining flooded cutover bog (site no 20). A 12th species, the Keeled Skimmer, occurs just west of the corridor area. Eight of Ireland's eleven damselflies have been recorded here, with Beautiful Demoiselle not usually associated with bogs, breeding in the river immediately south of the corridor. This area is ranked Nationally Important.



Badger family beside their sett in Lullybeg wildlife corridor. Photo Pat Wyse.

#### **Site no 30 N 69014 24799, Lullymore Wetlands - Co. Kildare**

This is a 100ha rehabilitated area in Bord na Móna ownership developing into fen habitat, with scattered scrub and woodland. A portion of the site is leased by the Lullymore Heritage & Discovery Park and has been developed as a wetland walk which supports a large amount of annual national and international tourists. There is a population of Red-listed Lapwing using the area and Bord na Móna have liaised with BirdWatch Ireland Kildare regarding the protection and management of the birds. In 2016 - in conjunction with UCD, a green-house gas monitoring station was installed to research the emissions from cutaway habitats near birch woodland.

#### **Site no 31 N 70031 25503/ North of Heritage Park Wood**

The wood north of the Heritage Park is a mixture of bog woodland and wood on mineral soil, like the wood described at Site 23.

### **Site No 32 N 69376 24820, Plantation fen c NHA**

The site comprised fen habitat with abundant Common Cottongrass, Purple Moor-grass, New Zealand moss *Scleranthus biflorus* and patches of sphagnum. Birch and willow scrub exists here. Birds include Snipe and Meadow Pipit. The Irish Hare feeds on birch saplings in this area.

### **Site no 33 N 62662 16304, Umeras Bog, Co. Kildare/Co. Offaly**

This bog is located south of the Ballydermot Bog Group. It is currently undergoing rehabilitation works by Bord na Móna as part of the Peatland Climate Action Scheme. A comprehensive ecological survey is being carried out by Umeras Community Development GLC. Much of the site comprises extensive areas dominated by bare peat, although there is some emerging pioneer poor fen vegetation and some small areas of birch woodland, with some Scots Pine.

Some of the habitats present around the margins of the site such as remnant high bog, cutover bog and scrub. There is ditched degraded raised bog in the north-east corner. This section has intact vegetation and still has some remnant sphagnum cover and newer sphagnum cover developing in depressions. It is possible that this area retains a population of the Large Heath butterfly. Patches of Birch woodland and wet grassland are located along the margins of the site.

The site has records for Ringed Plover, Raven, Peregrine Falcon *Falco peregrinus*, Woodcock, Teal, Snipe and Kingfisher. The Marsh Fritillary breeds on adjoining habitat southeast of the bog and may colonise part of the bog if the vegetation developing on bare and partly vegetated peat becomes suitable.

### **Site 34 N 66674 26115, West of Lugherra River, Co. Kildare**

This area contains some bare peat. Deep peat exists here, and the area will benefit from re-wetting.

This area also contains a section of raised bog bordered to the north by the Crabtree River and by the Black River to the west. This remnant contains characteristic vegetation of a midlands type raised bog. Cross-leaved Heath *Erica tetralix* and Hare's-tail Cottongrass *Eriophorum vaginatum* are abundant. Skylark and Meadow Pipit, birds of conservation concern breed on this bog. The Large Heath butterfly, ranked Vulnerable on the Red List of Irish Butterflies, breeds on the bog. Another localised species, the Green Hairstreak butterfly *Callophrys rubi* breeds on the wet bog, using Cross-leaved Heath as the breeding plant. This plant requires a water table at or close to the surface of the bog. Peat cutting was observed here in June 2020.

Cutting, which may be by domestic users, must cease and rehabilitation measures such as drain blocking and developing a slope profile from the raised bog remnant to extend the high bog habitat is recommended. On the areas of bare peat, which appears to be sufficiently deep, rehabilitation by re-wetting should improve overall ecological conditions, contribute to the development of wetland habitats and support the National Policies on Climate Action and Greenhouse Gas mitigation enhancing the current peat storage capacity of the bog (locking the carbon into the ground). It is expected that the bog will have reduced emissions (reduced source) and in time develop its carbon sink function, in part, as peat-forming habitats develop on site in the future. It will also support Ireland's commitments towards Water Framework Directive and the National River Basin Management Plan 2018-2021.

The bog can be reached from the Killyguire Road (an access track) that lies to the south.

## Site No 35 Murphy's Wood N 69496 25450



Left: Murphy's Wood foregrounded by fen to the west also known locally as West Plantation, part of the Lullymore Heritage & Discovery Park complex is in part a plantation woodland associated with William Martin Murphy, the owner of the Dublin United Tramways Company and the Irish Independent newspaper in the early decades of the twentieth century and leader of the Employers' Federation during the

Dublin Strike and Lockout 1913. The hunting lodge used by Murphy, now a private residence, is adjacent to the Bog of Allen Nature. This is a mature woodland mainly situated on mineral soil with some peat soils which contains elements of birch-Purple Moor-grass woodland located around the margins of the site. The woodland contains Beech, Sycamore, Scots Pine, Common Holly and Mountain Ash. The presence of oak adds to the diversity of invertebrate life in the wood. The transitional zone with the bog where there is more peat. contains species such as Bilberry and Heather.

Birds that occur in the wood include Buzzard *Buteo buteo*, Sparrowhawk *Accipiter nisus*, Great-spotted Woodpecker *Dendrocopos major*, Jay *Garrulus glandarius*, Raven *Corvus corax*, Tree Creeper *Certhia familiaris*, Goldcrest *Regulus regulus* (Amber-listed), Crossbill *Loxia curvirostra*, and Siskin *Carduelis spinus*. Mammal inhabitants are Red Squirrel, Pine Marten *Martes martes* and Badger *Meles meles* (active sett is present).

### Conclusion

Our natural world is in crisis. We cannot bemoan the ravaging of tropical rainforests and overlook our own record of environmental and biodiversity loss. Wildlife needs space to feed, grow, breed and move. The end of industrial peat extraction offers the opportunity to repair the damage and reverse the trend of loss. The next step is to rehabilitate the deep peat areas by re-wetting to return the peat to the condition needed for it to absorb climate-changing gases. Damaged peatlands emit vast amounts of Carbon Dioxide, up to 10% of the global CO<sub>2</sub> emissions. Protecting and restoring peatlands is a 'low hanging fruit' and among the most cost-effective options for mitigating climate change.

The EU Biodiversity Strategy 2030 highlights that significant areas of carbon-rich ecosystems, such as peatlands, grasslands, wetlands, mangroves and seagrass meadows should be strictly protected. The five main drivers of biodiversity loss, changes in land (and sea) use, overexploitation, climate change, pollution and invasive alien species, have all had an impact on the Ballydermot Bog Group area. The good news is that the funding and technology exists to address these challenges. Conservation organisations with reserves in the area are already working to address these challenges. National Park status, together with targeted re-wetting of deep peat areas, will go a long way towards healing this landscape and meeting Government pledge targets under the Strategy.

What is good for nature is good for everyone. The world has lost an estimated €3.5-18.5 trillion per year in ecosystem services from 1997-2011 due to land cover changes alone (EU Biodiversity Strategy 2020). We have lost places to breath clean air, to listen and look, to absorb the world around us. Let the healing begin.



The Marsh Fritillary, protected under the Habitats' Directive, occupies several areas of habitat within the park in a metapopulation structure. It is thriving in this landscape, thanks to important habitat management work carried out by Butterfly Conservation Ireland and the Irish Peatland Conservation Council. The survival of this butterfly depends on protecting the landscape, as this butterfly cannot exist in the long term on isolated sites. Its conservation status assessed by the National Parks and Wildlife Service 2013-2018, is Unfavourable/Inadequate.



Round-leaved Sundew. Photo Tina Claffey.