



Cush Wind Farm
Phase II

Environmental Impact Assessment Report

Annex 5.4: Designated Sites and Potential Pathways

Cush Wind Limited

International Sites – Wind Farm (Planning boundary)

Site Code	Site Name	Distance	Qualifying Feature ¹	Pathways for potential effects	Considered further in screening [Y/N]	Potential Effects
4137	Dovegrove Callows SPA	3.84	Greenland White-fronted Goose (Anser albifrons flavirostris) [A395] (w)	<p>No hydrological connectivity – no downstream watercourses linking proposed development to SPA. Pathway screened out.</p> <p>Project and SPA partially in same Banagher groundwater body, but the callows, which form the SPA site, are not groundwater dependent (primarily floodplain wetlands dependent on seasonal river inundation). Pathway screened out.</p> <p>No Greenland white-fronted geese were recorded by surveys so no mobile species connectivity present. Pathway screened out.</p>	N	None
919	Ridge Road, SW of Rapemills SAC	4.67	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210]	There is no hydrological connectivity between the Project and this SAC. The habitat for which the SAC is designated is not groundwater dependant. Therefore, there is no connectivity.	N	None
566	All Saints Bog and Esker SAC	5.53	Active raised bogs [7110], Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) *	Downstream hydrological connectivity exists via the Rapemills River (c.7.5km instream distance), and a hydrogeological linkage occurs	N	None

¹ For birds, the season relating to the designated population is given as follows: w = wintering, r = reproducing, p = permanent

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			<p>important orchid sites [6210], Bog woodland [91D0],</p> <p>Depressions on peat substrates of the Rhynchosporion [7150], Degraded raised bogs still capable of natural regeneration [7120]</p>	<p>through the shared Banagher groundwater body. However, the SAC comprises raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.</p> <p>No Greenland white-fronted geese were recorded during site surveys and no functionally-linked land or other ecological connectivity to the qualifying feature species was identified. The mobile species pathway is screened out.</p>		
4103	All Saints Bog SPA	5.68	Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] (w)	There is a downstream hydrological connectivity between the grid connection route and the SPA via the Rapemills River. However, according to the conservation objectives for the SPA "Greenland Whitefronted Goose has not been recorded using the SPA since 1993/94 when 75 individuals were recorded (NPWS internal files), which	N	None

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				<p>coincides with a general shift by this species from foraging on peatland sites to grassland sites (Burke et al., 2014; NPWS internal files)". Therefore, there is no pathway for impacts on the qualifying interest via this route.</p> <p>There is hydrogeological linkage occurs through the shared Banagher groundwater body. However, the SPA comprises raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.</p> <p>No Greenland white-fronted geese were recorded during site surveys and no functionally-linked land or other ecological connectivity to the qualifying feature species was identified. The mobile species pathway is screened out.</p>		
4086	River Little Brosna Callows	6.39	Wigeon (Mareca penelope) [A050] (w), Whooper Swan (Cygnus	No downstream hydrological connectivity exists. However, River Little	Y	Pollution to ex-situ wetland

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	SPA		<p>cygnus) [A038] (w), Black-tailed Godwit (<i>Limosa limosa</i>) [A156] (w), Lapwing (<i>Vanellus vanellus</i>) [A142] (w), Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] (w), Pintail (<i>Anas acuta</i>) [A054] (w), Shoveler (<i>Anas clypeata</i>) [A056] (w), Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] (w), Golden Plover (<i>Pluvialis apricaria</i>) [A140] (w), Teal (<i>Anas crecca</i>) [A052] (w), Wetland and Waterbirds [A999]</p>	<p>Brosna Callows SPA SCI bird species are likely to utilise Middle Shannon Callows SPA on an ex-situ basis and so indirect effects on ex situ wetlands cannot be excluded.</p> <p>A hydrogeological linkage occurs through the shared Banagher groundwater body.</p> <p>Although the proposed development site and SPA occur within the same groundwater body, the qualifying wetland habitat comprises floodplain callows maintained principally by seasonal fluvial inundation. No evidence has been identified that the conservation interests of the SPA are dependent on groundwater discharge from the groundwater body. Accordingly, no significant hydrogeological pathway has been identified.</p> <p>Wigeon and black-tailed godwit were recorded by surveys >4km off-site, beyond the zone of influence.</p> <p>Greenland white-fronted goose, pintail and shoveler were not recorded by any surveys.</p> <p>Thus, a mobile species pathway for wigeon, black-tailed godwit, Greenland white-fronted goose, pintail and shoveler is screened out.</p> <p>Black-headed gull, golden plover,</p>		<p>habitats via hydrological pathway.</p> <p>Direct mortality (collision) for black-headed gull, golden plover and lapwing only.</p>

Site Code	Site Name	Distance	Qualifying Feature ¹	Pathways for potential effects	Considered further in screening [Y/N]	Potential Effects
				<p>lapwing, teal and whooper swan recorded within CRZ and spent time at PCH. This occurred within the winter for golden plover, lapwing and whooper swan.</p> <p>The core foraging ranges for these three species in winter are c. 12km for golden plover and lapwing (Gillings & Fuller, 1999), and 5 km for whooper swan (NatureScot, 2016). As the core foraging range is > the distance between the SPA and the proposed development, there is a potential mobile species pathway for golden plover and lapwing.</p> <p>Conversely, the core foraging range for whooper swan is < the distance between the SPA and proposed development, so there is no potential mobile species pathway to the SPA for this species</p> <p>Black-headed gull were recorded within the CRZ during the breeding season only. No black-headed gull were recorded within the zone of influence during winter surveys, with the nearest winter records located approximately 1.7km from the proposed development. Evidence of black-headed gull breeding was also recorded approximately 1.7km from the proposed development. Irish breeding black-headed gull are largely resident and may form part of the wider</p>		

Site Code	Site Name	Distance	Qualifying Feature ¹	Pathways for potential effects	Considered further in screening [Y/N]	Potential Effects
				<p>wintering population present in Ireland (Wernham et al., 2002), and black-headed gull are known to travel comparable or greater distances between breeding/roosting sites and foraging or wintering areas. Given this, and in the absence of any study establishing a defensible connectivity distance for this species and population type, a credible pathway exists whereby individuals from this breeding population could contribute to the SPA's wintering qualifying interest. A mobile species pathway between the breeding population recorded and the SPA's wintering black-headed gull interest is therefore screened in for further assessment.</p> <p>Teal were recorded within the CRZ during the breeding season only, whereas the SPA is designated for its wintering population. Breeding-season presence and a wintering qualifying interest are not automatically the same population: in Ireland, wintering teal numbers are substantially augmented by migrants arriving from Iceland, Britain and continental Europe (Wernham et al., 2002), so the individuals recorded during the breeding season are not necessarily connected to the SPA's wintering qualifying population. Breeding teal are also characteristically sedentary during the brood-rearing period: a long-running Finnish boreal-</p>		

Site Code	Site Name	Distance	Qualifying Feature ¹	Pathways for potential effects	Considered further in screening [Y/N]	Potential Effects
				lake dataset (Holopainen et al., 2014; Johan Elmerberg et al., 2005) demonstrates strong fidelity of breeding teal to a small number of preferred wetlands within a watershed, rather than ranging across the wider landscape. At a separation distance of 6.39km, this is well beyond the spatial scale over which breeding teal are known to operate. Therefore, no credible mobile species pathway exists between the proposed development and the SPA's qualifying interest, and likely significant effects can be screened out.		
216	River Shannon Callows SAC	7.80	Otter (<i>Lutra lutra</i>) [1355], Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410], Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>) [6510], Limestone pavements [8240], Alkaline fens [7230], Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, <i>Salicion albae</i>) [91E0]	<p>There is a hydrological connection between the Project site and the SAC via Rapemills river which flows westward to the SAC.</p> <p>The SAC is ca. 13km in-stream distance from the Project site. Otter have a range in Ireland of ca. 7 km (females) and ca. 13km (males 13 km) with some known to have expanded their range from 10 km to 20 km.</p> <p>Alkaline fen is a QI for this SAC and is a groundwater-dependant habitat. The SAC lies within the same groundwater body as the Project (Banagher).</p> <p>There is an ecological and hydrological connection to the SAC.</p>	Y	Potential for negative effects on water quality, prey availability for otter, and negative impacts on riparian habitats.

Site Code	Site Name	Distance	Qualifying Feature ¹	Pathways for potential effects	Considered further in screening [Y/N]	Potential Effects
4096	Middle Shannon Callows SPA	7.80	Lapwing (<i>Vanellus vanellus</i>) [A142] (w), Black-tailed Godwit (<i>Limosa limosa</i>) [A156] (w), Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] (w), Wigeon (<i>Anas penelope</i>) [A050] (w), Whooper Swan (<i>Cygnus cygnus</i>) [A038] (w), Wetland and Waterbirds [A999], Golden Plover (<i>Pluvialis apricaria</i>) [A140] (w), Corncrake (<i>Crex crex</i>) [A122] (currently under review)	<p>Downstream hydrological connectivity exists via the Rapemills River and a hydrogeological linkage occurs through the shared Banagher groundwater body.</p> <p>As the SPA comprises floodplain/callow habitats that are maintained by seasonal river inundation, pollutants entering the watercourse could potentially be transported downstream and affect the qualifying wetland habitat quality. Thus, a hydrological pathway is screened in.</p> <p>Although the proposed development site and SPA occur within the same groundwater body, the qualifying wetland habitat comprises floodplain callows maintained principally by seasonal fluvial inundation. No evidence has been identified that the conservation interests of the SPA are dependent on groundwater discharge from the groundwater body. Accordingly, no significant hydrogeological pathway has been identified.</p> <p>Wigeon and black-tailed godwit were recorded by surveys >4km off-site, beyond the zone of influence.</p> <p>Greenland white-fronted goose, corncrake were not recorded by any surveys.</p>	Y	<p>Pollution to wetland habitats via hydrological pathway.</p> <p>Direct mortality (collision) for black-headed gull, golden plover and lapwing only.</p>

Site Code	Site Name	Distance	Qualifying Feature ¹	Pathways for potential effects	Considered further in screening [Y/N]	Potential Effects
				<p>Thus, a mobile species pathway for wigeon, black-tailed godwit, Greenland white-fronted goose, and corncrake is screened out.</p> <p>Black-headed gull, golden plover, lapwing and whooper swan recorded within CRZ and spent time at PCH. This occurred within the winter for golden plover, lapwing and whooper swan.</p> <p>The core foraging ranges for these three species in winter are c. 12km for golden plover and lapwing (Gillings & Fuller, 1999), and 5km for whooper swan (NatureScot, 2016). As the core foraging range is > the distance between the SPA and the proposed development, there is a potential mobile species pathway for golden plover and lapwing.</p> <p>Conversely, the core foraging range for whooper swan is < the distance between the SPA and proposed development, so there is no potential mobile species pathway to the SPA for this species</p> <p>Black-headed gull were recorded within the CRZ during the breeding season only. No black-headed gull were recorded within the zone of influence during winter surveys, with the nearest winter records located approximately 1.7km from the proposed development. Evidence of</p>		

Site Code	Site Name	Distance	Qualifying Feature ¹	Pathways for potential effects	Considered further in screening [Y/N]	Potential Effects
				black-headed gull breeding was also recorded approximately 1.7km from the proposed development. Irish breeding black-headed gull are largely resident and may form part of the wider wintering population present in Ireland (Wernham et al., 2002), and black-headed gull are known to travel comparable or greater distances between breeding/roosting sites and foraging or wintering areas. Given this, and in the absence of any study establishing a defensible connectivity distance for this species and population type, a credible pathway exists whereby individuals from this breeding population could contribute to the SPA's wintering qualifying interest. A mobile species pathway between the breeding population recorded and the SPA's wintering black-headed gull interest is therefore screened in for further assessment.		
IE0002236	Island Fen SAC	9.06	Juniperus communis formations on heaths or calcareous grasslands [5130], Alkaline fens [7230]	<p>There is no ecological or hydrological connection between this SAC and the Project site.</p> <p>There is no hydrogeological connectivity that could present a potential impact pathway to the alkaline fen habitat as they lie within different groundwater bodies.</p>	N	None
2147	Lisduff Fen SAC	9.22	Geyer's whorl snail (Vertigo geyeri)	There is no ecological or hydrological	N	None

Site Code	Site Name	Distance	Qualifying Feature ¹	Pathways for potential effects	Considered further in screening [Y/N]	Potential Effects
			[1013], Alkaline fens [7230], Petrifying springs with tufa formation (Cratoneurion) [7220]	<p>connection between this SAC and the Project site.</p> <p>There is no hydrogeological connectivity that could present a potential impact pathway to the alkaline fen habitat as they lie within different groundwater bodies.</p> <p>The distance and lack of suitable ecological corridor between the Project site and the SAC mean there is no suitable pathway for Geyer's whorl snail.</p>		
641	Ballyduff/ Clonfinane Bog SAC	9.42	<p>Active raised bogs [7110]</p> <p>Degraded raised bogs still capable of natural regeneration [7120]</p> <p>Depressions on peat substrates of the Rhynchosporion [7150]</p> <p>Bog woodland [91D0]</p>	<p>The SAC is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.</p> <p>The distance between the site and lack of ecological corridor mean there is no pathway for impacts on the bog woodland habitat.</p>	N	None

Site Code	Site Name	Distance	Qualifying Feature ¹	Pathways for potential effects	Considered further in screening [Y/N]	Potential Effects
IE0000585	Sharavogue Bog SAC	10.74	Active raised bogs [7110], Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the Rhynchosporion [7150]	The SAC is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.	N	None
4160	Slieve Bloom Mountains SPA	11.89	Hen harrier (<i>Circus cyaneus</i>) [A082] (r)	No hydro(geo)logical connectivity – no downstream watercourses linking proposed development to SPA and they are not located in shared groundwater bodies. Pathways screened out. SPA is designated for a permanent population of hen harrier. This species was recorded within the CRZ within the non-breeding season only. In the winter, this species is not a central-place forager and can range widely (Probst & Probst, 2025). Accordingly, there is a potential mobile species pathway.	Y	Direct mortality (collision) for hen harrier
IE0002353	Redwood Bog	11.97km	Degraded raised bogs still capable of natural regeneration [7120],	The SAC is designated for raised bog habitat which is ombrotrophic and	N	None

Site Code	Site Name	Distance	Qualifying Feature ¹	Pathways for potential effects	Considered further in screening [Y/N]	Potential Effects
	SAC		Depressions on peat substrates of the Rhynchosporion [7150], Active raised bogs [7110]	receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.		
IE0000581	Moyclare Bog SAC	12.24km	Active raised bogs [7110], Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the Rhynchosporion [7150]	The SAC is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.	N	None
IE0002207	Arragh More (Derrybreen) Bog SAC	13.24km	Degraded raised bogs still capable of natural regeneration [7120]	The SAC is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally	N	None

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				separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.		
IE0000412	Slieve Bloom Mountains SAC	13.81km	Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010], Blanket bogs * if active bog [7130], Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) [91E0]	The SAC is designated for blanket bog habitat which is ombrotrophic and receives its water supply principally from precipitation. There is no hydrological connectivity, nor is there an ecological connection between the habitats and the Project site. As such, there is no pathway for impacts.	N	None
IE0000647	Kilcarren-Firville Bog SAC	13.95km	Active raised bogs [7110], Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the Rhynchosporion [7150]	The SAC is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological	N	None

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				pathways are screened out.		
IE0000575	Ferbane Bog SAC	14.08km	Active raised bogs [7110], Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the Rhynchosporion [7150]	The SAC is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.	N	None
IE0000859	Clonaslee Eskers and Derry Bog SAC	15.11km	Geyer's whorl snail (<i>Vertigo geyeri</i>) [1013], Alkaline fens [7230]	There is no ecological or hydrological connection between this SAC and the Project site. There is no hydrogeological connectivity that could present a potential impact pathway to the alkaline fen habitat as they lie within different groundwater bodies. The distance and lack of suitable ecological corridor between the Project site and the SAC mean there is no suitable pathway for Geyer's whorl snail.	N	None
IE0001683	Liskeenan Fen	16.25km	Calcareous fens with <i>Cladium mariscus</i> and species of the	There is no ecological or hydrological connection between this SAC and the	N	None

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	SAC		Caricion davallianae [7210]	<p>Project site.</p> <p>There is no hydrogeological connectivity that could present a potential impact pathway to the fen habitat as they lie within different groundwater bodies.</p>		
IE0004097	River Suck Callows SPA	17.8km	Wetland and Waterbirds [A999], Wigeon (<i>Anas penelope</i>) [A050] (w), Lapwing (<i>Vanellus vanellus</i>) [A142] (w), Golden Plover (<i>Pluvialis apricaria</i>) [A140] (w), Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] (w), Whooper Swan (<i>Cygnus cygnus</i>) [A038] (w)	<p>No hydro(geo)logical connectivity – no downstream watercourses linking proposed development to SPA and they are not located in shared groundwater bodies. Pathways screened out.</p> <p>Wigeon was recorded by surveys >4km off-site, beyond the zone of influence.</p> <p>Greenland white-fronted goose was not recorded by any surveys.</p> <p>Thus, a mobile species pathway for wigeon and Greenland white-fronted goose is screened out.</p> <p>Golden plover, lapwing and whooper swan recorded within CRZ and spent time at PCH. This occurred within the winter for golden plover, lapwing and whooper swan.</p> <p>The core foraging ranges for these three species in winter are c. 12km for golden plover and lapwing (Gillings & Fuller, 1999), and 5km for whooper swan (NatureScot, 2016). As the core foraging range for golden plover, lapwing and whooper swan is < the</p>	N	None

Site Code	Site Name	Distance	Qualifying Feature ¹	Pathways for potential effects	Considered further in screening [Y/N]	Potential Effects
				distance between the SPA and proposed development, there is no potential mobile species pathway to the SPA for these species		
IE0000576	Fin Lough (Offaly) SAC	18.17km	Alkaline fens [7230], Geyer's whorl snail (<i>Vertigo geyeri</i>) [1013]	<p>There is no ecological or hydrological connection between this SAC and the Project site.</p> <p>There is no hydrogeological connectivity that could present a potential impact pathway to the alkaline fen habitat as they lie within different groundwater bodies.</p> <p>The significant distance and lack of suitable ecological corridor between the Project site and the SAC mean there is no suitable pathway for Geyer's whorl snail.</p>	N	None
IE0000580	Mongan Bog SAC	19.52km	Active raised bogs [7110], Depressions on peat substrates of the Rhynchosporion [7150], Degraded raised bogs still capable of natural regeneration [7120]	The SAC is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are	N	None

Site Code	Site Name	Distance	Qualifying Feature ¹	Pathways for potential effects	Considered further in screening [Y/N]	Potential Effects
				screened out.		
IE0004017	Mongan Bog SPA	19.54km	Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395]	<p>No hydro(geo)logical connectivity – no downstream watercourses linking proposed development to SPA and they are not located in shared groundwater bodies. Pathways screened out.</p> <p>No Greenland white-fronted geese were recorded by surveys so no mobile species connectivity present. Pathway screened out.</p>	N	None
IE0002241	Lough Derg, North-east Shore SAC	19.65km	Taxus baccata woods of the British Isles [91J0], Alkaline fens [7230], Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i> , <i>Salicion albae</i>) [91E0], Limestone pavements [8240], <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130], Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210]	<p>There is a hydrological connection between the Project site and the SAC via Rapemills river which drains to the river Shannon, and into Lough Derg.</p> <p>Alkaline fen is a QI for this SAC and is a groundwater-dependant habitat. The SAC lies within the same groundwater body as the Project (Banagher).</p> <p>There is an ecological and hydrological connection to the SAC.</p>	Y	Potential for negative effects on water quality, and negative impacts on riparian habitats.
IE0004058	Lough Derg (Shannon) SPA	19.93km	Common tern (<i>Sterna hirundo</i>) [A193] (r), Tufted Duck (<i>Aythya fuligula</i>) [A061] (w), Goldeneye (<i>Bucephala clangula</i>) [A067] (w), Wetland and Waterbirds [A999], Cormorant (<i>Phalacrocorax carbo</i>) [A017] (r)	Remote, downstream hydrological connectivity via Rapemills River and River Shannon (c.30km instream distance). Thus, pollutants entering the watercourse could potentially be transported downstream and affect the qualifying wetland habitat quality, accepting attenuation and dilution is	Y	Pollution to wetland habitats via hydrological pathway.

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				<p>highly likely. Thus, a hydrological pathway is screened in.</p> <p>Proposed development and SPA are in separate groundwater bodies; therefore, hydrogeological pathway is screened out.</p> <p>Common tern, tufted duck and goldeneye not recorded by any surveys.</p> <p>Thus, a mobile species pathway for common tern, tufted duck and goldeneye is screened out.</p> <p>Cormorant was recorded within the CRZ on only two occasions during two years of ornithological surveys, with both records relating to birds in flight over the CRZ during the non-breeding season, and no evidence of foraging, roosting or other site use. Lough Derg SPA is designated for its breeding population of cormorant. The extremely low frequency of records, the absence of any breeding-season observations, and the lack of evidence of foraging, commuting or roosting activity indicate that the proposed development site is not functionally linked to the SPA's breeding population. The cormorants recorded are considered to represent occasional transient individuals in flight, unconnected to breeding activity at the SPA. Therefore, no impact pathway to the qualifying breeding cormorant</p>		

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				population of Lough Derg SPA is identified, and the mobile species pathway is screened out.		

Table 1 International Sites - Wind Farm (Planning Boundary)

National Sites – Wind Farm (planning boundary)

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further in screening? [Y/N]	Potential Effects
Lough Coura pNHA	000909	In-filled lake transitioned to dry fen	National	0.90	No ecological connection. There is no surface waterbody connectivity. The site synopsis mentions fen which is a groundwater-dependant terrestrial habitat; the Project site and this pNHA lie within the same groundwater bodies (i.e. Banagher and Birr Gravels groundwater bodies).	N	None
Woodville Woods pNHA	000927	Estate woodland with peripheral lake/wetland; Pine Marten, Red Squirrel and Badger. Snipe	National	2.11	No hydro(geo)logical connection due to lack of downstream hydrological connection and fact that pNHA and proposed development are in separate groundwater bodies. No evidence of pine marten, red squirrel, or badger were recorded during surveys and more suitable	Y	Potential for collision related effects on snipe

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? in [Y/N]	Potential Effects
					<p>habitat (woodlands) in the wider area which are more likely to be utilised by the mammal populations within this pNHA.</p> <p>Snipe were recorded in the CRZ during surveys. The site synopsis does not distinguish between a breeding or non-breeding population of snipe.</p> <p>Common snipe were recorded within the CRZ in both season. Radio-tracking data for incubating female Common snipe (Green et al., 1990) show foraging trips from the nest of up to c. 390m, with the majority of foraging occurring within 70m. This is consistent with the wider literature characterising breeding snipe as tied to a small home range immediately around the nest for the duration of the breeding season (Green, 1988; Hoodless et al., 2007). As this maximum recorded foraging distance is substantially less than the 2.11km separating the proposed development from the pNHA, breeding-season records within the CRZ cannot represent foraging movements of the pNHA's breeding population. A mobile species pathway is therefore screened out for the breeding season.</p> <p>Winter records are more difficult to exclude on the same basis. No study establishing a defensible winter</p>		

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
					connectivity or screening distance for common snipe has been identified. Consequently, a mobile species pathway for the pNHA's wintering population cannot be excluded on distance grounds.		
Ross And Glenns Eskers pNHA	000920	Esker ridge, hazel scrub, yew, white willow, bee orchid, marsh helleborine	National	3.25	This pNHA is designated for habitats only. Considering the distance from the Project site and the lack of hydrological connectivity, there is no pathway for impacts.	N	None
Dovegrove Callows pNHA	000010	Overlaps Dovegrove Callows SPA	National	4.04	See Table 3.	See Table 3.	See Table 3.
Ridge Road, SW Of Rapemills pNHA	000919	Overlaps SAC of same name	National	4.68	See Table 3.	See Table 3.	See Table 3.
Derrykeel Meadows pNHA	000897	Wet meadows and stream	National	5.06	This pNHA is designated for habitats only. Considering the distance from the Project site and the lack of hydrological connectivity, there is no pathway for impacts.	N	None
All Saints Bog and Esker pNHA	000566	Overlaps SAC and SPA of same name	National	5.52	See Table 3.	See Table 3.	See Table 3.
Birr (Domestic Dwelling No. 2, Occupied) pNHA	000568	Leisler's bat nursery roost	National	5.74	Project site is outside the core sustenance zone for this species (i.e. 3km). Therefore, there is a lack of connectivity to this pNHA.	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? in [Y/N]	Potential Effects
Birr (Domestic Dwelling No.1, Occupied) pNHA	000569	Leisler's bat nursery roost	National	5.77	Project site is outside the core sustenance zone for this species (i.e. 3km). Therefore, there is a lack of connectivity to this pNHA.	N	None
Banagher (Domestic Dwelling, Occupied) pNHA	000567	Brown long-eared bat roost	National	6.19	Project site is outside the core sustenance zone for this species (i.e. 3km). Therefore, there is a lack of connectivity to this pNHA.	N	None
River Little Brosna Callows NHA	000564	Peatlands [4] Birds [12] (site synopsis mentions wintering Greenland white-fronted goose, black-tailed godwit, whooper swan, wigeon, teal, pintail, shoveler, golden plover, lapwing, mute swan, mallard and dunlin; also mentions breeding redshank, snipe, lapwing and corncrake).	National	6.37	No downstream hydrological connectivity exists; a hydrogeological linkage occurs through the shared Banagher groundwater body, at least in part. However, the wetland habitat of the NHA comprises floodplain callows maintained principally by seasonal fluvial inundation, and no evidence has been identified that its conservation interests are dependent on groundwater discharge from the groundwater body. The peatland element of the NHA is rainfed (ombrotrophic) and functionally separated from the regional groundwater regime. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.	Y	Potential for collision related effects on wintering golden plover and lapwing, and breeding snipe.

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? in [Y/N]	Potential Effects
					<p>Wigeon and black-tailed godwit were recorded by surveys >4km off-site, beyond the zone of influence.</p> <p>Corncrake, dunlin, Greenland white-fronted goose, pintail, shoveler and redshank were not recorded by any surveys.</p> <p>Thus, a mobile species pathway for wigeon, black-tailed godwit, corncrake, dunlin, Greenland white-fronted goose, pintail and shoveler is screened out.</p> <p>Golden plover, lapwing, teal, snipe and whooper swan recorded within CRZ and spent time at PCH. This occurred within the winter for golden plover, lapwing and whooper swan, and both seasons for snipe.</p> <p>The core foraging ranges for these three species in winter are c. 12km for golden plover and lapwing (Gillings & Fuller, 1999)), and 5km for whooper swan (NatureScot, 2016). As the core foraging range is > the distance between the NHA and the proposed development, there is a potential mobile species pathway for golden plover and lapwing.</p> <p>Conversely, the core foraging range for whooper swan is < the distance between the NHA and proposed development, so there is no potential</p>		

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
					<p>mobile species pathway to the NHA for this species</p> <p>Teal were recorded within the CRZ during the breeding season only, whereas the NHA is designated for its wintering population. Breeding-season presence and a wintering qualifying interest are not automatically the same population: in Ireland, wintering teal numbers are substantially augmented by migrants arriving from Iceland, Britain and continental Europe (Wernham et al., 2002), so the individuals recorded during the breeding season are not necessarily connected to the NHA's wintering qualifying population. Breeding teal are also characteristically sedentary during the brood-rearing period: a long-running Finnish boreal-lake dataset (Holopainen et al., 2014; Johan Elmberg et al., 2005) demonstrates strong fidelity of breeding teal to a small number of preferred wetlands within a watershed, rather than ranging across the wider landscape. At a separation distance of 6.37km for the NHA, this is well beyond the spatial scale over which breeding teal are known to operate. Therefore, no credible mobile species pathway exists between the proposed development and the NHA's qualifying interest, and likely</p>		

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? in [Y/N]	Potential Effects
					<p>significant effects can be screened out.</p> <p>Common snipe were recorded within the CRZ in both seasons. Radio-tracking data for incubating female Common snipe (Green et al., 1990) show foraging trips from the nest of up to c. 390m, with the majority of foraging occurring within 70m. This is consistent with the wider literature characterising breeding snipe as tied to a small home range immediately around the nest for the duration of the breeding season (Green, 1988; Hoodless et al., 2007). As this maximum recorded foraging distance is substantially less than the 6.37km separating the proposed development from the NHA, breeding-season records within the CRZ cannot represent foraging movements of the NHA's breeding population. A mobile species pathway is therefore screened out for the breeding season.</p> <p>Winter records are more difficult to exclude on the same basis. Unlike the NHA's wintering qualifying interests above, the NHA's notified snipe interest is the breeding population itself, so the relevant question for winter records is not a roost-to-feed foraging distance but whether birds present at the proposed</p>		

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
					development in winter form part of the same population that breeds at the NHA. Irish breeding snipe are largely resident or short-distance movers, and Irish wintering flocks are also augmented by continental immigrants (Wernham et al., 2002), meaning the wintering population using the wider landscape, including the proposed development, is likely to be a mixed pool of local and immigrant birds rather than a population confined to, or excluded from, the NHA catchment. No study establishing a defensible winter connectivity or screening distance for common snipe has been identified. Consequently, a mobile species pathway for the NHA's breeding population cannot be excluded on distance grounds for the winter season.		
Bracken's Dwelling, Near Whiteford pNHA	002058	Leisler's bat nursery roost	National	6.54	Project site is outside the core sustenance zone for this species (i.e. 3km). Therefore, there is a lack of connectivity to this pNHA.	N	None
Kinnitty (Domestic Dwelling, Occupied) pNHA	000579	Leisler's bat summer roost	National	6.64	Project site is outside the core sustenance zone for this species (i.e. 3km). Therefore, there is a lack of connectivity to this pNHA.	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
Killeen Bog NHA	000648	Peatlands	National	7.73	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lagg zone.	N	None
River Shannon Callows pNHA	000216	Overlaps SAC of same name, and Middle Shannon Callows SPA	National	7.80	See Table 3.	See Table 3.	See Table 3.
Lough Boora pNHA	001365	Drained lake, fen and bog habitats	National	9.02	The pNHA is located upstream of the Project site. It is in a different groundwater body to the Project site. Therefore, there is no pathway for impacts on the fen habitat. There is also a lack of hydrological connectivity to the pNHA. Therefore, there is no ecological or hydrological connection between the pNHA and the Project site.	N	None
Grand Canal pNHA	002104	Otter, smooth newt, opposite-leaved pondweed	National	9.08	The pNHA is located upstream of the Project site and there is a lack of hydrological connectivity to the pNHA. Therefore, there is no ecological or hydrological connection between the pNHA and the Project site.	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
Ballyduff/Clonfinane Bog pNHA	000641	Overlaps SAC of same name	National	9.43	See Table 3.	See Table 3.	See Table 3.
Camcor Wood pNHA	000889	Woodland with wet marshy areas	National	10.15	The habitats listed are remote from the site and not groundwater dependant. There is also no ecological or hydrological connection between the pNHA and the Project site.	N	None
Fiagh Bog pNHA	000932	Calcium-rich fen, raised bog, <i>Vertigo geyeri</i>	National	10.15	<p>Fen is a groundwater dependant habitat. However, the Project site is in a different groundwater body to the pNHA.</p> <p>The distance and lack of suitable ecological corridor between the Project site and the pNHA mean there is no suitable pathway for Geyer's whorl snail.</p> <p>The pNHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lagg zone.</p>	N	None
Cloghanbeg pNHA	002059	Leisler's bat nursery roost	National	10.17	Project site is outside the core sustenance zone for this species (i.e. 3km). Therefore, there is a lack of connectivity to this pNHA.	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? in [Y/N]	Potential Effects
Annaghmore Lough Fen (Offaly) / Camcor Wood pNHA*	000413 / 000889	Woodland with wet marshy areas	National	10.17	The habitats listed are remote from the site and not groundwater dependant. There is also no ecological or hydrological connection between the pNHA and the Project site.	N	None
Slieve Bloom Mountains pNHA	000412	Overlaps SAC and SPA of same name	National	13.81	See Table 3.	See Table 3.	See Table 3.
Sharavogue Bog pNHA	000585	Overlaps SAC of same name	National	10.73	See Table 3.	See Table 3.	See Table 3.
Mount St. Joseph Woods pNHA	000913	Esker woodland	National	10.73	The habitats listed are remote from the site and not groundwater dependant. There is also no ecological or hydrological connection between the pNHA and the Project site.	N	None
Redwood Bog pNHA	000654	Overlaps SAC of same name	National	11.99	See Table 3.	See Table 3.	See Table 3.
Fin Lough (Offaly) pNHA	000576	Overlaps SAC of same name	National	11.99	See Table 3.	See Table 3.	See Table 3.
Clonaslee Eskers And Derry Bog pNHA	000859	Overlaps SAC of same name	National	12.12	See Table 3.	See Table 3.	See Table 3.
Moyclare Bog pNHA	000581	Overlaps SAC of same name	National	12.24	See Table 3.	See Table 3.	See Table 3.

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? in [Y/N]	Potential Effects
Kilnaborris Bog NHA	000284	Peatlands	National	12.28	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.	N	None
Arragh More Bog NHA	000640	Peatlands	National	12.79	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.	N	None
Kilcarren-Firville Bog pNHA	000647	Overlaps SAC of same name	National	13.96	See Table 3.	See Table 3.	See Table 3.

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
Ferbane Bog pNHA	000575	Overlaps SAC of same name	National	14.06	See Table 3.	See Table 3.	See Table 3.
Lorrha Bog NHA	001684	Peatlands	National	15.09	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.	N	None
Redwood Bog pNHA	000654	Overlaps SAC of same name	National	15.24	See Table 3.	See Table 3.	See Table 3.
Ballymacegan Bog NHA	000642	Peatlands	National	15.36	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
					the qualifying interest species. The hydrological and hydrogeological pathways are screened out.		
Kilcormac Esker pNHA	000906	Esker ridge supporting woodland	National	15.63	There is no hydrological or ecological pathway between this pNHA and the Project site.	N	None
Clonfert Cathedral pNHA	000244	Brown long-eared bat colony	National	15.80	Project site is outside the core sustenance zone for this species (i.e. 3km). Therefore, there is a lack of connectivity to this pNHA.	N	None
Clonlyon Glebe Bog pNHA	000893	Domed bog	National	15.88	The pNHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lag zone.	N	None
Cangort Bog NHA	000890	Peatlands	National	16.03	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lag zone.	N	None
Golden Grove	000903	Beech plantation	National	16.20	There is no hydrological or ecological pathway between this pNHA and the	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
Woods pNHA		and woodland			Project site		
Drumakeenan, Eagle Hill And Perry's Mill pNHA	000900	Blue moor-grass; nettle-leaved bellflower	National	16.25	There is no hydrological or ecological pathway between this pNHA and the Project site	N	None
Liskeenan Fen pNHA	001683	Overlaps SAC of same name	National	17.04	See Table 3.	See Table 3.	See Table 3.
Drumakeenan National School pNHA	002064	Brown long-eared bat colony	National	17.20	Project site is outside the core sustenance zone for this species (i.e. 3km). Therefore, there is a lack of connectivity to this pNHA.	N	None
Lough Nahinch (Tipperary) pNHA	000936	Redshank, snipe, water rail (all breeding season)	National	17.37	<p>No hydro(geo)logical connection due to lack of downstream hydrological connection and fact that pNHA and proposed development are in separate groundwater bodies.</p> <p>Redshank and water rail were not recorded by any surveys.</p> <p>Thus, a mobile species pathway for redshank and water rail is screened out.</p> <p>Common snipe were recorded within the CRZ in both seasons. Radio-tracking data for incubating female Common snipe (Green et al., 1990) show foraging trips from the nest of up to c. 390m, with the majority of foraging occurring within 70m. This is consistent with the wider literature</p>	Y	Potential collision related effects on the breeding population of snipe during the winter season.

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
					<p>characterising breeding snipe as tied to a small home range immediately around the nest for the duration of the breeding season (Green, 1988; Hoodless et al., 2007). As this maximum recorded foraging distance is substantially less than the 17.37km separating the proposed development from the pNHA, breeding-season records within the CRZ cannot represent foraging movements of the pNHA's breeding population. A mobile species pathway is therefore screened out for the breeding season.</p> <p>Winter records are more difficult to exclude on the same basis. Unlike the pNHA's wintering qualifying interests above, the pNHA's notified snipe interest is the breeding population itself, so the relevant question for winter records is not a roost-to-feed foraging distance but whether birds present at the proposed development in winter form part of the same population that breeds at the pNHA. Irish breeding snipe are largely resident or short-distance movers, and Irish wintering flocks are also augmented by continental immigrants (Wernham et al., 2002), meaning the wintering population using the wider landscape, including the proposed development, is likely to be a mixed pool of local and</p>		

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
					immigrant birds rather than a population confined to, or excluded from, the pNHA catchment. No study establishing a defensible winter connectivity or screening distance for common snipe has been identified. Consequently, a mobile species pathway for the pNHA's breeding population cannot be excluded on distance grounds for the winter season.		
Meeneen Bog NHA	000310	Peatlands	National	17.45	<p>The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lagg zone.</p> <p>There is also a lack of hydrological connectivity.</p>	N	None
Pallas Lough pNHA	000916	Mallard (r), teal (r), wigeon (r), marsh harrier (no season information given)	National	17.67	<p>No hydro(geo)logical connection due to lack of downstream hydrological connection and fact that pNHA and proposed development are in separate groundwater bodies. Pathways scoped out.</p> <p>Wigeon was recorded by surveys >4km off-site, beyond the zone of</p>	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
					<p>influence.</p> <p>Marsh harrier was not recorded by any surveys.</p> <p>Thus, a mobile species pathway for wigeon and marsh harrier is screened out.</p> <p>Mallard and teal were recorded within CRZ and spent time at PCH.</p> <p>This occurred within the breeding season for teal and both seasons for mallard.</p> <p>For mallard, brood movement away from the nest is rapid in the days immediately following hatching but plateaus quickly thereafter. Peterson et al. (2026), in a four-year radio-tracking study of dabbling duck broods, found that ducklings averaged 0.8–1.4km from the nest at five days old, increasing only to 1.0–1.6km by fourteen days, with 90% of fourteen-day-old broods remaining within 2.4km of the natal nest. Rotella & Ratti (1992) recorded nest-to-water distances of 45 to 3,076m in a Manitoba study population. The most extreme brood movement reported in the wider literature is a single brood that moved 4.8km in one week and 8km over nine days in Saskatchewan (Dzubin & Gollop, 1972), and breeding home ranges reported</p>		

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? in [Y/N]	Potential Effects
					<p>across several North American studies fall between 66 and 760 ha (Gilmer et al., 1975), equivalent to roughly a 0.5–1.5km radius if treated as circular. Even the most extreme recorded movement (8km) represents under half the 17.67km separation distance to the pNHA.</p> <p>Comparable linear movement distances are not well quantified for teal, but a long-running Finnish boreal-lake dataset (Holopainen et al., 2014; Johan Elmberg et al., 2005) demonstrates strong fidelity of breeding teal to a small number of preferred wetlands within a watershed throughout the brood-rearing period, rather than ranging across the wider landscape. This indicates that breeding teal are, if anything, more spatially restricted during this period than mallard.</p> <p>The North American mallard studies and the Finnish boreal teal studies are not Irish or UK-specific, and some caution is warranted in transferring absolute figures to an Irish landscape context. However, given that even the most extreme recorded mallard brood movement (8km) is less than half the separation distance to the pNHA, and that breeding teal ecology points toward even greater site fidelity, this uncertainty does not</p>		

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
					<p>affect the overall conclusion.</p> <p>Johnson et al. (2014) report that winter roost-to-feed flights among dabbling ducks are typically of the order of a few kilometres, and Vallecillo et al. (2023) recorded wintering teal associated with wetlands up to 5km of day roosts. The separation distance between the project site and the pNHA is 17.6km, more than three times the upper end of the association distances reported in this literature. On this basis, wintering mallard recorded at the project site can be treated as functionally independent of the pNHA population, and no meaningful pathway for winter connectivity is identified.</p> <p>Mobile species pathways for mallard and teal are therefore excluded.</p>		
Suck River Callows NHA	000222	Peatlands [4] Birds [12] (site synopsis mentions wintering Greenland white-fronted goose, whooper swan, wigeon, lapwing, mute swan, teal, pintail, curlew and golden plover).	National	17.80	<p>The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lagg zone.</p> <p>The NHA overlaps substantially with the River Suck Callows SPA (site code</p>	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
					<p>004097). The wintering waterfowl interest for which both sites are notified (wigeon, lapwing, golden plover, Greenland white-fronted goose and whooper swan) is considered together under the SPA, as no population data specific to the NHA exist independently of the SPA conservation objectives and IWeBS data, which represent the best available information for both designations. As for the SPA of the same name, wigeon, lapwing golden plover, Greenland white-fronted goose and whooper swan are scoped out.</p> <p>Wintering mute swan, teal, pintail and curlew are mentioned in the site synopsis for the NHA but not the River Suck Callows SPA.</p> <p>Mute swan were recorded only off-site, with the nearest record located approximately 1.7km from the proposed development. No evidence was obtained that qualifying birds from the NHA utilise habitats within the zone of influence of the proposed development. Accordingly, no credible impact pathway linking the proposed development to the NHA's wintering mute swan population is identified, and likely significant effects can be screened out.</p>		

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? in [Y/N]	Potential Effects
					<p>Pintail were not recorded by any surveys. Thus, a mobile species pathway for pintail is screened out.</p> <p>Teal were recorded within the CRZ during the breeding season only, whereas the NHA is designated for its wintering population. Breeding-season presence and a wintering qualifying interest are not automatically the same population: in Ireland, wintering teal numbers are substantially augmented by migrants arriving from Iceland, Britain and continental Europe (Wernham et al., 2002), so the individuals recorded during the breeding season are not necessarily connected to the SPA's wintering qualifying population. Breeding teal are also characteristically sedentary during the brood-rearing period: a long-running Finnish boreal-lake dataset (Holopainen et al., 2014; Johan Elmberg et al., 2005) demonstrates strong fidelity of breeding teal to a small number of preferred wetlands within a watershed, rather than ranging across the wider landscape. At a separation distance of 17.8km, this is well beyond the spatial scale over which breeding teal are known to operate. Therefore, no credible mobile species pathway exists between the proposed development and the NHA's qualifying interest, and</p>		

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
					<p>likely significant effects can be screened out.</p> <p>Curlew were recorded within the CRZ, with breeding season observations located over 500m from any infrastructure and non-breeding season records limited to auditory detections only, with no located record establishing use of habitat within the CRZ. Goodship et al. (2022) show curlew are only disturbed within 300m of disturbance sources. As no breeding season record has been located within this distance of infrastructure, there is no credible pathway for disturbance or mortality effects on curlew, and a mobile species pathway to the NHA's wintering qualifying interest is screened out.</p> <p>The NHA boundary extends beyond the SPA in places to include peatlands, which are qualifying interests of the NHA but not the SPA</p> <p>No hydro(geo)logical connection due to lack of downstream hydrological connection and fact that NHA and proposed development are in separate groundwater bodies. Pathways scoped out.</p>		
Kinnitty	000579	Leisler's bat summer	National	17.90	Project site is outside the core	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
(Domestic Dwelling, Occupied) pNHA		roost			sustenance zone for this species (i.e. 3km). Therefore, there is a lack of connectivity to this pNHA.		
Liskeenan Fen pNHA	001683	Overlaps SAC of same name	National	18.11	See Table 3.	See Table 3.	See Table 3.
Moyclare Bog pNHA	000581	Overlaps SAC of same name	National	18.19	See Table 3.	See Table 3.	See Table 3.
Friar's Lough pNHA	000933	Lake, woodland, alder buckthorn	National	18.20	No ecological or hydrological connection.	N	None
St. Joseph's, Mountheaton pNHA	002063	Brown long-eared bat colony	National	18.36	Project site is outside the core sustenance zone for this species (i.e. 3km). Therefore, there is a lack of connectivity to this pNHA.	N	None
Roscrea Bog pNHA	000583	Fen, Vertigo genesii, snipe and curlew (no seasonal information given for the bird populations)	National	18.51	<p>No hydro(geo)logical connection due to lack of downstream hydrological connection and fact that pNHA and proposed development are in separate groundwater bodies.</p> <p>Both snipe and curlew were recorded by surveys in both seasons. Curlew was recorded >500m from any infrastructure in the breeding season and heard only in the non-breeding season. As the breeding season observation was outside the CRZ, no mortality impacts due to collision are likely. Goodship et al. (2022) show</p>	Y	Potential collision related effects on the breeding population of snipe during the winter season.

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? in [Y/N]	Potential Effects
					<p>curlew are only disturbed within 300m of disturbance sources. Therefore, there is no pathway for impacts on any curlew from the pNHA and a mobile species pathway is excluded.</p> <p>Common snipe were recorded within the CRZ in both seasons. Radio-tracking data for incubating female Common snipe (Green et al., 1990) show foraging trips from the nest of up to c. 390m, with the majority of foraging occurring within 70m. This is consistent with the wider literature characterising breeding snipe as tied to a small home range immediately around the nest for the duration of the breeding season (Green, 1988; Hoodless et al., 2007). As this maximum recorded foraging distance is substantially less than the 18.51km separating the proposed development from the pNHA, breeding-season records within the CRZ cannot represent foraging movements of the pNHA's breeding population. A mobile species pathway is therefore screened out for the breeding season.</p> <p>Winter records are more difficult to exclude on the same basis. Unlike the pNHA's wintering qualifying interests above, the pNHA's notified snipe interest is the breeding population itself, so the relevant question for</p>		

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? in [Y/N]	Potential Effects
					winter records is not a roost-to-feed foraging distance but whether birds present at the proposed development in winter form part of the same population that breeds at the pNHA. Irish breeding snipe are largely resident or short-distance movers, and Irish wintering flocks are also augmented by continental immigrants (Wernham et al., 2002), meaning the wintering population using the wider landscape, including the proposed development, is likely to be a mixed pool of local and immigrant birds rather than a population confined to, or excluded from, the pNHA catchment. No study establishing a defensible winter connectivity or screening distance for common snipe has been identified. Consequently, a mobile species pathway for the pNHA's breeding population cannot be excluded on distance grounds for the winter season.		
Clorhane Wood pNHA	000894	Overlaps River Shannon SAC Callows	National	18.74	See Table 3.	See Table 3.	See Table 3.
Screggan Bog NHA	000921	Peatlands	National	18.82	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from Proposed Project	Connectivity	Considered further screening? [Y/N]	Potential Effects
					functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lagg zone.		
Clonfinlough Esker pNHA	000892	Species-rich glacial ridge	National	18.82	No ecological or hydrological connection.	N	None
Lough Nanag Esker pNHA	000910	Esker, peatland lake and wetland	National	19.00	No ecological or hydrological connection.	N	None
Monaincha Bog/Ballaghmore Bog NHA	000652	Peatlands	National	19.14	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lagg zone.	N	None
Miltown, Shinrone pNHA	002065	Natterer's bat winter roost	National	19.40	Project site is outside the core sustenance zone for this species (i.e. 4km). Therefore, there is a lack of connectivity to this pNHA.	N	None
Mongan Bog pNHA	000580	Overlaps SAC and SPA of same name	National	19.52	See Table 3.	See Table 3.	See Table 3.
Lough Derg pNHA	000011	Overlaps Lough Derg north-east shore SAC	National	19.81	See Table 3.	See Table 3.	See Table 3.

Table 2 National Sites - Wind Farm (Planning Boundary)

Overlapping Natura Sites – Wind Farm (Planning boundary)

Designated Site	Distance (km)	Overlapping European Site
Dovegrove Callows pNHA (000010)	4.04	Dovegrove Callows SPA
Ridge Road, SW of Rapemills pNHA (000919)	4.68	Ridge Road, SW of Rapemills SAC
All Saints Bog And Esker pNHA (000566)	5.52	All Saints Bog and Esker SAC; All Saints Bog SPA
River Little Brosna Callows NHA	6.37	River Little Brosna Callows SPA
River Shannon Callows pNHA (000216)	7.80	River Shannon Callows SAC; Middle Shannon Callows SPA
Ballyduff/Clonfinane Bog pNHA (000641)	9.43	Ballyduff/Clonfinane Bog SAC
Slieve Bloom Mountains pNHA (000412)	13.81	Slieve Bloom Mountains SPA
Slieve Bloom Mountains pNHA (000412)	13.81	Slieve Bloom Mountains SAC
Sharavogue Bog pNHA (000585)	10.73	Sharavogue Bog SAC
Fin Lough (Offaly) pNHA (000576)	11.99	Fin Lough (Offaly) SAC
Redwood Bog pNHA (000654)	11.99	Redwood Bog SAC

Designated Site	Distance (km)	Overlapping European Site
Clonaslee Eskers And Derry Bog pNHA (000859)	12.12	Clonaslee Eskers and Derry Bog SAC
Moyclare Bog pNHA (000581)	12.24	Moyclare Bog SAC
Kilcarren-Firville Bog pNHA	13.96	Kilcarren-Firville Bog SAC
Ferbane Bog pNHA	14.06	Ferbane Bog SAC
Liskeenan Fen pNHA (001683)	17.04	Liskeenan Fen SAC
Suck River Callows NHA	17.80	River Suck Callows SPA
Clorhane Wood pNHA (000894)	18.74	River Shannon Callows SAC; Middle Shannon Callows SPA
Delour River Near Lacca Manor	19.42	Slieve Bloom Mountains SPA; River Barrow and River Nore SAC
Mongan Bog pNHA (000580)	19.52	Mongan Bog SAC; Mongan Bog SPA (004017)
Lough Derg pNHA (000011)	19.81	Lough Derg, North-east Shore SAC

Table 3 Nationally Designated Sites which overlap with European Sites – Wind Farm (Planning Boundary

International Sites - UGL

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
Dovegrove Callows SPA	IE0004137	Greenland White-fronted Goose (Anser albifrons flavirostris) [A395]	International	4.44km	<p>There is no hydrological connectivity between the GCR and the SPA.</p> <p>The GCR lies in different groundwater bodies to the SPA; therefore, no hydrogeological connectivity.</p> <p>The GCR will be buried underground, so no direct mortality impacts to ex situ birds are possible.</p> <p>There are no important habitats or known important ex situ feeding or roosting grounds along the GCR; therefore, no disturbance to ex situ birds possible; pathway screened out.</p>	N	None
Ridge Road, SW of Rapemills SAC	IE0000919	Semi-natural dry and grasslands	International	5.38km	There is no hydrological	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
		scrubland facies on calcareous substrates (Festuco-Brometalia) * important orchid sites [6210]			connectivity between the GCR and this SAC. The habitat for which the SAC is designated is not groundwater dependant. Therefore, there is no connectivity.		
All Saints Bog and Esker SAC	IE0000566	Bog woodland [91D0], Active raised bogs [7110], Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) * important orchid sites [6210], Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the Rhynchosporion [7150]	International	6.42km	Downstream hydrological connectivity exists via the Rapemills River (c.7.5km instream distance. The grid connection route will not interfere with the groundwater body. Additionally, the SAC comprises raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
					<p>regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.</p> <p>No Greenland white-fronted geese were recorded during site surveys and no functionally-linked land or other ecological connectivity to the qualifying feature species was identified. The mobile species pathway is screened out.</p>		
All Saints Bog SPA	IE0004103	Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>)	International	6.55km	Downstream hydrological connectivity exists	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
		[A395]			<p>via the Rapemills River (c.7.5km instream distance), and a hydrogeological linkage occurs through the shared Banagher groundwater body.</p> <p>However, the grid connection route will not interfere with the groundwater body, and SPA comprises raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed</p>		

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
					<p>development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.</p> <p>No Greenland white-fronted geese were recorded during site surveys and no functionally-linked land or other ecological connectivity to the qualifying feature species was identified along the GCR. The mobile species pathway is screened out.</p>		
Island Fen SAC	IE0002236	Juniperus communis formations on heaths or calcareous grasslands [5130], Alkaline fens [7230]	International	7.11km	<p>There is no ecological or hydrological connection between this SAC and the GCR.</p> <p>There is no hydrogeological connectivity that could present a potential impact</p>	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
					pathway to the alkaline fen habitat as they lie within different groundwater bodies and the GCR will not interfere with the groundwater body.		
River Little Brosna Callows SPA	IE0004086	Teal (<i>Anas crecca</i>) [A052], Whooper Swan (<i>Cygnus cygnus</i>) [A038], Lapwing (<i>Vanellus vanellus</i>) [A142], Pintail (<i>Anas acuta</i>) [A054], Black-tailed Godwit (<i>Limosa limosa</i>) [A156], Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395], Golden Plover (<i>Pluvialis apricaria</i>) [A140], Wigeon (<i>Anas penelope</i>) [A050], Shoveler (<i>Anas clypeata</i>) [A056], Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179], Wetland and Waterbirds [A999]	International	7.16km	<p>No downstream hydrological connectivity exists. However, River Little Brosna Callows SPA SCI bird species are likely to utilise Middle Shannon Callows SPA on an ex-situ basis, which does have a downstream hydrological connection, and so indirect effects on ex situ wetlands used by River Little Brosna Callows SPA birds cannot be excluded.</p> <p>The SPA and GCR are in different groundwater bodies; therefore, no pathway for effects.</p>	Y	Waterborne pollution to ex situ foraging grounds in the adjacent Middle Shannon Callows SPA

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
					The GCR will be buried underground, so no direct mortality impacts to ex situ birds are possible. There are no important habitats or known important ex situ feeding or roosting grounds along the GCR; therefore, no disturbance to ex situ birds possible; pathway screened out.		
Lisduff Fen SAC	IE0002147	Geyer's whorl snail (<i>Vertigo geyeri</i>) [1013], Alkaline fens [7230], Petrifying springs with tufa formation (Cratoneurion) [7220]	International	8.82km	<p>There is no ecological or hydrological connection between this SAC and the GCR.</p> <p>There is no hydrogeological connectivity that could present a potential impact pathway to the alkaline fen habitat as they lie within different groundwater bodies and the GCR will not interfere with the</p>	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
					<p>groundwater.</p> <p>The distance and lack of suitable ecological corridor between the GCR and the SAC mean there is no suitable pathway for Geyer's whorl snail.</p>		
River Shannon Callows SAC	IE0000216	<p>Alkaline fens [7230], Lowland hay meadows (<i>Alopecurus pratensis</i>, <i>Sanguisorba officinalis</i>) [6510], Limestone pavements [8240], Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>) [6410], Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) [91E0], Otter (<i>Lutra lutra</i>) [1355]</p>	International	9.06km	<p>There is a hydrological connection between the GCR and the SAC via Rapemills river which runs parallel to the GCR.</p> <p>Otter have a range in Ireland of ca. 7 km (females) and ca. 13km (males 13 km) with some known to have expanded their range from 10 km to 20 km. Therefore, there is potential for the QI population to be present in the Rapemills river.</p> <p>Alkaline fen is a QI for this SAC and is a groundwater-</p>	Y	Potential for negative effects on water quality, prey availability for otter, and negative impacts on riparian habitats.

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
					<p>dependant habitat. The SAC lies within the same groundwater body as the GCR (Banagher). However, the GCR will not interfere with the groundwater body.</p> <p>There is an ecological and hydrological connection to the SAC.</p>		
Ballyduff/Clonfinane Bog SAC	IE0000641	Bog woodland [91D0], Active raised bogs [7110], Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the Rhynchosporion [7150]	International	9.98km	<p>The SAC is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Additionally, there</p>	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
					<p>will be no interference between the GCR and the groundwater body. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.</p> <p>The distance between the site and lack of ecological corridor mean there is no pathway for impacts on the bog woodland habitat.</p>		
Slieve Bloom Mountains SAC	IE0000412	Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010], Blanket bogs * if active bog [7130], Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion	International	10.18km	The SAC is designated for blanket bog habitat which is ombrotrophic and receives its water supply principally from precipitation.	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
		incanae, Salicion albae) [91E0]			There is no hydrological connectivity, nor is there an ecological connection between the habitats and the GCR. As such, there is no pathway for impacts.		
Sharavogue Bog SAC	IE0000585	Active raised bogs [7110], Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the Rhynchosporion [7150]	International	10.91km	The SAC is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
					affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.		
Clonaslee Eskers and Derry Bog SAC	IE0000859	Geyer's whorl snail (<i>Vertigo geyeri</i>) [1013], Alkaline fens [7230]	International	12.16km	<p>There is no ecological or hydrological connection between this SAC and the GCR.</p> <p>There is no hydrogeological connectivity that could present a potential impact pathway to the alkaline fen habitat as they lie within different groundwater bodies.</p> <p>The distance and lack of suitable ecological corridor between the GCR and the SAC mean there is no suitable pathway for Geyer's whorl snail.</p>	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
Slieve Bloom Mountains SPA	IE0004160	Hen harrier (<i>Circus cyaneus</i>) [A082]	International	8.5km	<p>No hydro(geo)logical connectivity to SPA, as SPA located in different groundwater body to GCR.</p> <p>The GCR will be buried underground, so no direct mortality impacts to ex situ birds are possible.</p> <p>There are no important habitats or known important ex situ feeding or roosting grounds along the GCR; therefore, no disturbance to ex situ birds possible; pathway screened out.</p>	N	None
Redwood Bog SAC	IE0002353	Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the Rhynchosporion [7150], Active raised bogs [7110]	International	12.83km	The SAC is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
					water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lagg zone. The GCR will not interfere with groundwater. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.		
Moyclare Bog SAC	IE0000581	Degraded raised bogs still capable of natural regeneration [7120], Active raised bogs [7110], Depressions on peat substrates of the Rhynchosporion [7150]	International	13.4km	The SAC is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation.	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
					The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.		
Arragh More (Derrybreen) Bog SAC	IE0002207	Degraded raised bogs still capable of natural regeneration [7120]	International	13.86km	The SAC is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
					perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.		
Middle Shannon Callows SPA	IE0004096	Black-headed Gull (Chroicocephalus ridibundus) [A179], Lapwing (Vanellus vanellus) [A142], Golden Plover (Pluvialis apricaria) [A140], Wigeon (Anas penelope) [A050], Black-tailed Godwit (Limosa limosa) [A156], Wetland and	International	14.05km	Direct downstream hydrological connection. No hydrogeological connection as SPA and GCR in different groundwater bodies. The GCR will be buried underground, so no	Y	Waterborne pollution to wetland SCI habitat

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
		Waterbirds [A999], Whooper Swan (Cygnus cygnus) [A038], Corncrake (Crex crex) [A122]			direct mortality impacts to ex situ birds are possible. There are no important habitats or known important ex situ feeding or roosting grounds along the GCR; therefore, no disturbance to ex situ birds possible; pathway screened out.		
Kilcarren-Firville Bog SAC	IE0000647	Active raised bogs [7110], Depressions on peat substrates of the Rhynchosporion [7150], Degraded raised bogs still capable of natural regeneration [7120]	International	14.58km	The SAC is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
					pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.		
Ferbane Bog SAC	IE0000575	Degraded raised bogs still capable of natural regeneration [7120], Depressions on peat substrates of the Rhynchosporion [7150], Active raised bogs [7110]	International	15.16km	The SAC is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
					proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.		
Liskeenan Fen SAC	IE0001683	Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210]	International	16.77km	There is no ecological or hydrological connection between this SAC and the GCR. There is no hydrogeological connectivity that could present a potential impact pathway to the fen habitat as they lie within different groundwater bodies.	N	None
River Suck Callows SPA	IE0004097	Golden Plover (Pluvialis apricaria) [A140], Whooper Swan (Cygnus cygnus) [A038], Wetland and Waterbirds [A999], Greenland White-	International	19.05km	No hydro(geo)logical connectivity. SPA and GCR in different groundwater bodies. The GCR will be	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
		fronted Goose (Anser albifrons flavirostris) [A395], Wigeon (Anas penelope) [A050], Lapwing (Vanellus vanellus) [A142]			<p>buried underground, so no direct mortality impacts to ex situ birds are possible.</p> <p>There are no important habitats or known important ex situ feeding or roosting grounds along the GCR; therefore, no disturbance to ex situ birds possible; pathway screened out.</p>		
Fin Lough (Offaly) SAC	IE0000576	Geyer's whorl snail (Vertigo geyeri) [1013], Alkaline fens [7230]	International	19.42km	<p>There is no ecological or hydrological connection between this SAC and the GCR.</p> <p>There is no hydrogeological connectivity that could present a potential impact pathway to the alkaline fen habitat as they lie within different groundwater bodies.</p>	N	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Considered further in screening [Y/N]	Potential Effects
					The significant distance and lack of suitable ecological corridor between the GCR and the SAC mean there is no suitable pathway for Geyer's whorl snail.		

Table 4 International Sites - UGL

National Sites - UGL

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Carry forward (Yes/No)	Potential Effects
Lough Coura pNHA	909	In-filled lake transitioned to dry fen	National	1.88	<p>No ecological connection as the qualifying interests are habitats remote from the GCR.</p> <p>There is no surface waterbody connectivity.</p> <p>The site synopsis mentions fen which is a groundwater-dependant terrestrial habitat; while the GCR and this pNHA lie within the same groundwater bodies (i.e. Banagher and Birr Gravels groundwater bodies) there will be no interaction with groundwater as part of the GCR installation.</p>	No	None
Woodville Woods	927	Estate woodland with	National	2.43	No hydro(geo)logical connection due to lack of downstream hydrological connection and fact that	No	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Carry forward (Yes/No)	Potential Effects
pNHA		peripheral lake/wetland; Pine Marten, Red Squirrel and Badger. Snipe			<p>pNHA and proposed development are in separate groundwater bodies.</p> <p>No direct mortality impacts to snipe are possible as the GCR will be buried underground. No evidence the GCR represents an important ex situ breeding, foraging or roosting resource for snipe based on surveys and desk study; therefore, no pathways for effects.</p> <p>No evidence of pine marten, red squirrel, or badger were recorded during surveys and more suitable habitat (woodlands) in the wider area which are more likely to be utilised by the mammal populations within this pNHA.</p>		
Ross And Glenns Eskers pNHA	920	Esker ridge, hazel scrub, yew, white willow, bee orchid, marsh helleborine	National	3.91	There is a lack of ecological and hydrological connectivity between this pNHA and the GCR.	No	None
Dovegrove Callows pNHA	10	Overlaps Dovegrove Callows SPA	National	4.63	See Table 6	See Table 6	See Table 6
Derrykeel Meadows pNHA	897	Overlaps SAC of same name	National	5.08	See Table 6	See Table 6	See Table 6
Ridge Road, SW	919	Overlaps SAC	National	5.39	See Table 6	See Table 6	See Table 6

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Carry forward (Yes/No)	Potential Effects
Of Rapemills pNHA		of same name					
Birr (Domestic Dwelling No. 2, Occupied) pNHA	568	Leisler's bat nursery roost	National	5.98	No connectivity as this is beyond the core sustenance zone for this species (i.e. 3km)	No	None
Birr (Domestic Dwelling No.1, Occupied) pNHA	569	Leisler's bat nursery roost	National	6.07	No connectivity as this is beyond the core sustenance zone for this species (i.e. 3km)	No	None
All Saints Bog And Esker pNHA	566	Overlaps SAC and SPA of same name	National	6.42	See Table 6	See Table 6	See Table 6
Bracken's Dwelling, Near Whiteford pNHA	2058	Leisler's bat nursery roost	National	6.57	No connectivity as this is beyond the core sustenance zone for this species (i.e. 3km)	No	None
Kinnitty (Domestic Dwelling, Occupied) pNHA	579	Brown eared long-bat roost	National	6.67	No connectivity as this is beyond the core sustenance zone for this species (i.e. 3km)	No	None
River Little Brosna Callows NHA	564	Peatlands [4] Birds [12]	National	7.07	Peatland is rainfed. Therefore, there is no connectivity between this NHA and the peatland habitat for which the site is designated. No direct mortality impacts to any the named bird species in the site synopsis are possible as the GCR will be buried underground. No evidence the GCR represents an important ex situ breeding, foraging or roosting resource for NHA birds based on surveys and	No	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Carry forward (Yes/No)	Potential Effects
					desk study; therefore, no pathways for effects.		
Banagher (Domestic Dwelling, Occupied) pNHA	567	Brown long-eared bat roost	National	7.47	GCR is outside the core sustenance zone for this species (i.e. 3km). Therefore, there is a lack of connectivity to this pNHA.	No	None
Killeen Bog NHA	648	Peatlands [4]	National	8.23	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lagg zone.	No	None
Lough Boora pNHA	1365	Drained lake, fen and bog habitats	National	9.06	The pNHA is located upstream of the GCR. It is in a different groundwater body to the GCR. Therefore, there is no pathway for impacts on the fen habitat. There is also a lack of hydrological connectivity to the pNHA. Therefore, there is no ecological or hydrological connection between the pNHA and the GCR.	No	None
River Shannon Callows pNHA	216	Overlaps SAC of same name	National	9.06	See Table 6	See Table 6	See Table 6
Ballyduff/Clonfinane Bog pNHA	641	Overlaps SAC of same name	National	9.98	See Table 6	See Table 6	See Table 6
Camcor Wood	889	Woodland with wet marshy	National	10.18	The habitats listed are remote from the site and not groundwater dependant.	No	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Carry forward (Yes/No)	Potential Effects
pNHA		areas			There is also no ecological or hydrological connection between the pNHA and the GCR.		
Grand Canal pNHA	2104	Otter, smooth newt, opposite-leaved pondweed	National	10.36	The pNHA is located upstream of the GCR and there is a lack of hydrological connectivity to the pNHA. Therefore, there is no ecological or hydrological connection between the pNHA and the GCR.	No	None
Slieve Bloom Mountains pNHA	412	Overlaps SAC and SPA of same name	National	10.18	See Table 6	See Table 6	See Table 6
Sharavogue Bog pNHA	585	Overlaps SAC of same name	National	10.91	See Table 6	See Table 6	See Table 6
Cloghanbeg pNHA	2059	Leisler's bat nursery roost	National	11.14	GCR is outside the core sustenance zone for this species (i.e. 3km). Therefore, there is a lack of connectivity to this pNHA.	No	None
Clonaslee Eskers And Derry Bog pNHA	859	Overlaps SAC of same name.	National	12.16	See Table 6	See Table 6	See Table 6
Redwood Bog pNHA	654	Overlaps SAC of same name.	National	12.84	See Table 6	See Table 6	See Table 6
Arragh More Bog NHA	640	Peatlands	National	13.39	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is	No	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Carry forward (Yes/No)	Potential Effects
					functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.		
Moyclare Bog pNHA	581	Overlaps SAC of same name	National	13.40	See Table 6	See Table 6	See Table 6
Kilnaborris Bog NHA	284	Peatlands	National	13.41	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.	N	None
Kilcarren-Firville Bog pNHA	647	Overlaps SAC of same name	National	14.58	See Table 6	See Table 6	See Table 6
Ferbane Bog pNHA	575	Overlaps SAC of same name	National	15.15	See Table 6	See Table 6	See Table 6

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Carry forward (Yes/No)	Potential Effects
Kilcormac Esker pNHA	906	Esker ridge supporting woodland	National	15.27	There is no hydrological or ecological pathway between this pNHA and the Project site.	No	None
Lorrha Bog NHA	1684	Peatlands	National	15.75	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.	No	None
Golden Grove Woods pNHA	903	Beech plantation and woodland	National	15.91	There is no hydrological or ecological pathway between this pNHA and the Project site	No	None
Cangort Bog NHA	890	Peatlands	National	16.19	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lagg zone.	No	None
Ballymacegan	642	Peatlands	National	16.21	The NHA is designated for raised bog	No	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Carry forward (Yes/No)	Potential Effects
Bog NHA					habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/catotelm structure and marginal lagg zone. Consequently, no viable impact pathway exists whereby the proposed development could affect the supporting habitat of the qualifying interest species. The hydrological and hydrogeological pathways are screened out.		
Drumakeenan, Eagle Hill And Perry's Mill pNHA	900	Blue moor-grass; nettle-leaved bellflower	National	16.23	There is no hydrological or ecological pathway between this pNHA and the Project site	No	None
Cangort Bog NHA	890	Peatlands	National	16.62	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lagg zone.	No	None
Liskeenan Fen pNHA	1683	Overlaps SAC of same name	National	16.76	See Table 6	See Table 6	See Table 6
Clonfert Cathedral pNHA	244	Brown long-eared bat	National	16.84	Project site is outside the core sustenance zone for this species (i.e. 3km). Therefore, there is a lack of	No	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Carry forward (Yes/No)	Potential Effects
		colony			connectivity to this pNHA.		
Clonllyn Glebe Bog pNHA	893	Domed bog	National	16.94	The pNHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lagg zone.	No	None
Drumakeenan National School pNHA	2064	Brown eared long-bat colony	National	17.06	Project site is outside the core sustenance zone for this species (i.e. 3km). Therefore, there is a lack of connectivity to this pNHA.	No	None
Pallas Lough pNHA	916	Mallard, teal, wigeon, marsh harrier	National	17.40	<p>No hydro(geo)logical connection due to lack of downstream hydrological connection and fact that pNHA and proposed development are in separate groundwater bodies. Pathways scoped out.</p> <p>No direct mortality impacts to pNHA birds are possible as the GCR will be buried underground.</p> <p>No evidence the GCR represents an important ex situ breeding, foraging or roosting resource for pNHA birds based on surveys and desk study; therefore, no pathways for effects.</p>	No	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Carry forward (Yes/No)	Potential Effects
Lough Nahinch (Tipperary) pNHA	936	Redshank, snipe, water rail	National	17.51	<p>No hydro(geo)logical connectivity; both pNHA and GCR in separate groundwater bodies.</p> <p>No direct mortality impacts to pNHA birds are possible as the GCR will be buried underground.</p> <p>No evidence the GCR represents an important ex situ breeding, foraging or roosting resource for pNHA birds based on surveys and desk study; therefore, no pathways for effects.</p>	No	None
Annaghmore Lough Fen (Offaly) pNHA	413	Woodland with wet marshy areas	National	17.71	The habitats listed are remote from the site and not groundwater dependant. There is also no ecological or hydrological connection between the pNHA and the Project site.	No	None
Mount St. Joseph Woods pNHA	913	Esker woodland	National	18.14	The habitats listed are remote from the site and not groundwater dependant. There is also no ecological or hydrological connection between the pNHA and the GCR.	No	None
Meeneen Bog NHA	310	Peatlands	National	18.31	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and	No	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Carry forward (Yes/No)	Potential Effects
					<p>marginal lagg zone.</p> <p>There is also a lack of hydrological connectivity.</p>		
St. Joseph's, Mountheaton pNHA	2063	Brown long-eared bat colony	National	18.38	GCR is outside the core sustenance zone for this species (i.e. 3km). Therefore, there is a lack of connectivity to this pNHA.	No	None
Fiagh Bog pNHA	932	Calcium-rich fen, raised bog, <i>Vertigo geyeri</i>	National	18.44	<p>Fen is a groundwater dependant habitat. However, the GCR is in a different groundwater body to the pNHA, and installation will not interfere with groundwater.</p> <p>The distance and lack of suitable ecological corridor between the GCR and the pNHA mean there is no suitable pathway for Geyer's whorl snail.</p> <p>The pNHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lagg zone.</p>	No	None
Roscrea Bog pNHA	583	Fen, <i>Vertigo genesii</i> , snipe and curlew	National	18.53	No hydro(geo)logical connectivity; both pNHA and GCR in separate groundwater bodies.	No	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Carry forward (Yes/No)	Potential Effects
					<p>No direct mortality impacts to pNHA birds are possible as the GCR will be buried underground.</p> <p>No evidence the GCR represents an important ex situ breeding, foraging or roosting resource for pNHA birds based on surveys and desk study; therefore, no pathways for effects.</p>		
Screggan Bog NHA	921	Peatlands	National	18.85	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and marginal lagg zone.	No	None
Friar's Lough pNHA	933	Lake, woodland, alder buckthorn	National	18.87	No ecological or hydrological connection.	No	None
Suck River Callows NHA	222	Peatlands [4] Birds [12]	National	19.05	See Table 6	See Table 6	See Table 6
Monaincha Bog/Ballaghmore Bog NHA	652	Peatlands	National	19.16	The NHA is designated for raised bog habitat which is ombrotrophic and receives its water supply principally from precipitation. The raised bog water table is perched and is functionally separated from the regional groundwater regime by the acrotelm/ catotelm structure and	No	None

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Carry forward (Yes/No)	Potential Effects
					marginal lagg zone.		
Miltown, Shinrone pNHA	2065	Natterer's bat winter roost	National	19.43	GCR is outside the core sustenance zone for this species (i.e. 4km). Therefore, there is a lack of connectivity to this pNHA.	No	None
Fin Lough (Offaly) pNHA	576	Overlaps SAC of same name	National	19.44	See Table 6	See Table 6	See Table 6
Delour River Near Lacca Manor pNHA ²	864	Oak/birch woodland, River, Wet grassland	National	19.45	There is no hydrological connectivity, nor is there an ecological connection between these qualifying interests and the GCR. As such, there is no pathway for impacts.	No	None
Clorhane Wood pNHA	894	Overlaps River Shannon Callows SAC	National	20.02	See Table 6	See Table 6	See Table 6
Clonfinlough Esker pNHA	892	Species-rich glacial ridge	National	20.03	No ecological or hydrological connection.	No	None
Lough Nanag Esker pNHA	910	Esker, peatland lake and wetland	National	20.28	No ecological or hydrological connection.	No	None
Lough Derg pNHA	11	Overlaps Lough Derg north-east	National	20.46	See Table 6	See Table 6	See Table 6

² Formal site synopsis is not available. Data has instead been taken from the Laois County Development Plan 2021-2027, and Report On Areas of Scientific interest In County Laois (Farrell, 1972).

Site Name	Code	Qualifying Interests	Value	Distance (km) from GCR	Connectivity	Carry forward (Yes/No)	Potential Effects
		shore SAC					
Mongan Bog pNHA	580	Overlaps SPA of same name	National	20.75	See Table 6	See Table 6	See Table 6

Table 5 National Sites - GCR

Designated Site	Distance (km)	Overlapping European Site
Dovegrove Callows pNHA (000010)	4.63	Dovegrove Callows SPA
Ridge Road, SW of Rapemills pNHA (000919)	5.39	Ridge Road, SW of Rapemills SAC
All Saints Bog And Esker pNHA (000566)	6.42	All Saints Bog and Esker SAC; All Saints Bog SPA
River Little Brosna Callows NHA	7.07	River Little Brosna Callows SPA
River Shannon Callows pNHA (000216)	9.06	River Shannon Callows SAC; Middle Shannon Callows SPA
Ballyduff/Clonfinane Bog pNHA (000641)	9.98	Ballyduff/Clonfinane Bog SAC
Slieve Bloom Mountains pNHA (000412)	10.18	Slieve Bloom Mountains SPA
Slieve Bloom Mountains pNHA (000412)	10.18	Slieve Bloom Mountains SAC
Sharavogue Bog pNHA (000585)	10.91	Sharavogue Bog SAC
Clonaslee Eskers And Derry Bog pNHA (000859)	12.16	Clonaslee Eskers and Derry Bog SAC
Redwood Bog pNHA (000654)	12.84	Redwood Bog SAC
Moyclare Bog pNHA (000581)	13.40	Moyclare Bog SAC
Kilcarren-Firville Bog pNHA	14.58	Kilcarren-Firville Bog SAC
Ferbane Bog pNHA	15.15	Ferbane Bog SAC
Liskeenan Fen pNHA (001683)	16.76	Liskeenan Fen SAC
Suck River Callows NHA	19.05	River Suck Callows SPA

Designated Site	Distance (km)	Overlapping European Site
Fin Lough (Offaly) pNHA (000576)	19.44	Fin Lough (Offaly) SAC
Delour River Near Lacca Manor	19.45	Slieve Bloom Mountains SPA; River Barrow and River Nore SAC
Clorhane Wood pNHA (000894)	20.02	River Shannon Callows SAC; Middle Shannon Callows SPA
Lough Derg pNHA (000011)	20.46	Lough Derg, North-east Shore SAC
Mongan Bog pNHA (000580)	20.75	Mongan Bog SAC; Mongan Bog SPA (004017)

Table 6 National Sites that Overlap with European Sites - GCR