

Volume 1 of Appendices
to
Environmental Impact Assessment Report
for
Kilshane Power Generation Station Project
at
Kilshane, Co. Dublin

prepared for: **Kilshane Energy Ltd.**



by: **Environmental Impact Services**

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Revised Version
January 2023

QA Sheet

Document Control	Author/Reviewer	Date
Prepared by	Various contributors as listed in Chapter 1 of EIAR	various dates to 21 December 2022
Reviewed by	Paul Fingleton	06 January 2022
Status of this version	Final	

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APPENDIX TO SECTION 6

BIODIVERSITY

APPENDIX 6.1

Natura 2000 Sites, Natural Heritage Areas and proposed Natural Heritage Areas within 15km of the proposed development site

Appendix 6.1

Natura 2000 Sites, Natural Heritage Areas and proposed Natural Heritage Areas within 15km of the proposed development site in Kilshane (arranged by distance from proposed sites).

Site Code	Site Name	Distance	Site Type
002103	Royal Canal pNHA	4.53	pNHA
000178	Santry Demesne pNHA	5.08	pNHA
000128	Liffey Valley pNHA	6.54	pNHA
001208	Feltrim Hill pNHA	8.85	pNHA
002104	Grand Canal pNHA	9.32	pNHA
000206	North Dublin Bay pNHA	9.38	pNHA
000205	Malahide Estuary SAC	9.48	SAC
000205	Malahide Estuary pNHA	9.48	pNHA
004024	South Dublin Bay and River Tolka Estuary SPA	9.51	SPA
004025	Malahide Estuary SPA	9.57	SPA
001763	Sluice River Marsh pNHA	11.77	pNHA
000206	North Dublin Bay SAC	11.83	SAC
004006	North Bull Island SPA	11.83	SPA
001398	Rye Water Valley/Carton pNHA	11.83	pNHA
001398	Rye Water Valley/Carton SAC	11.84	SAC
000210	South Dublin Bay SAC	12.19	SAC
000210	South Dublin Bay pNHA	12.19	pNHA
000208	Rogerstown Estuary pNHA	12.31	pNHA
000208	Rogerstown Estuary SAC	12.32	SAC
000201	Dolphins, Dublin Docks pNHA	12.36	pNHA
000199	Baldoyle Bay SAC	12.42	SAC
004016	Baldoyle Bay SPA	12.42	SPA
000199	Baldoyle Bay pNHA	12.42	pNHA
004015	Rogerstown Estuary SPA	12.98	SPA
000991	Dodder Valley pNHA	14.54	pNHA
001205	Boosterstown Marsh pNHA	14.77	pNHA

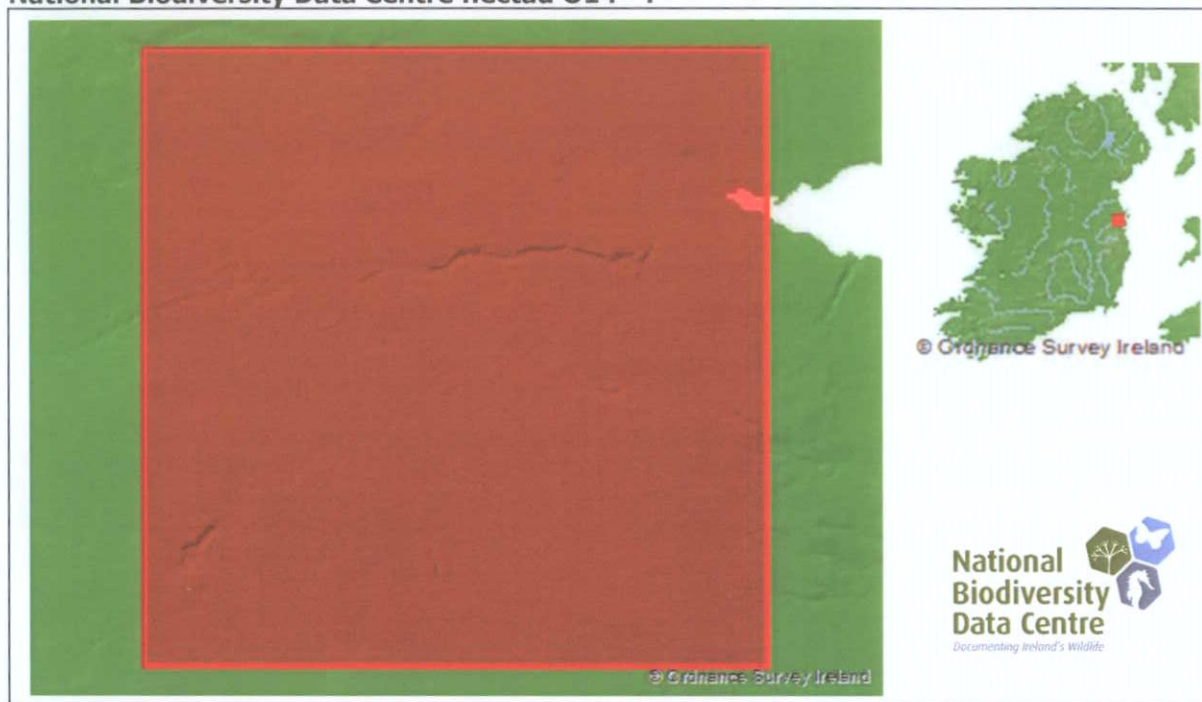
APPENDIX 6.2

National Biodiversity Centre records

Appendix 6.2

The National Biodiversity Centre 10km hectad O14 displayed below, contains the proposed development on the Liffey.

National Biodiversity Data Centre hectad O14^{1,2}.



Invasive species records for the O14 hectad^{1,2}, relevant to the proposed development site.

* Species subject to restrictions (Third Schedule) under Regulation 49 of the European Communities (Birds and Natural Habitats) Regulations, 2011

No invasive species recorded during ecological site visit on 3rd February 2022.

Common name	Scientific name	Record count
Ruddy duck*	<i>Oxyura jamaicensis</i>	1
Arthurdendyus triangulatus	<i>Arthurdendyus triangulatus</i>	1
Australoplana sanguinea	<i>Australoplana sanguinea</i>	1
Butterfly-bush	<i>Buddleja davidii</i>	12
Canadian Fleabane	<i>Conyza canadensis</i>	1
Cherry Laurel	<i>Prunus laurocerasus</i>	7
Common cord-grass*	<i>Spartina anglica</i>	1
Evergreen Oak	<i>Quercus ilex</i>	1
Giant hogweed*	<i>Heracleum mantegazzianum</i>	6
Himalayan Honeysuckle	<i>Leycesteria formosa</i>	3

¹ National Biodiversity Data Centre records. Accessed: 5th September 2022.

² Image: NBDC Maps database

Common name	Scientific name	Record count
Japanese knotweed*	<i>Fallopia japonica</i>	5
Russian-vine	<i>Fallopia baldschuanica</i>	2
Sycamore	<i>Acer pseudoplatanus</i>	9
Three-cornered leek*	<i>Allium triquetrum</i>	2
Wild Parsnip	<i>Pastinaca sativa</i>	1
Jenkins' Spire Snail	<i>Potamopyrgus antipodarum</i>	9
Red-eared Terrapin	<i>Trachemys scripta</i>	1
American mink*	<i>Mustela vison</i>	2
Brown rat* (Offshore Islands Only)	<i>Rattus norvegicus</i>	2
Eastern Grey squirrel*	<i>Sciurus carolinensis</i>	12
European Rabbit	<i>Oryctolagus cuniculus</i>	10

Rare and/or protected species know to occur within the 014 hectad containing the proposed development site (arranged by taxonomic group).

Taxonomic group	Common name	Scientific name	Designation	Record count
amphibian	Common Frog	<i>Rana temporaria</i>	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex V Protected Species: Wildlife Acts	9
amphibian	Smooth Newt	<i>Lissotriton vulgaris</i>	Protected Species: Wildlife Acts	3
bird	Barn Owl	<i>Tyto alba</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	5
bird	Barn Swallow	<i>Hirundo rustica</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	28
bird	Bar-tailed Godwit	<i>Limosa lapponica</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	3
bird	Black-headed Gull	<i>Larus ridibundus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	15

Taxonomic group	Common name	Scientific name	Designation	Record count
bird	Black-tailed Godwit	<i>Limosa limosa</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	6
bird	Brent Goose	<i>Branta bernicla</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	3
bird	Common Coot	<i>Fulica atra</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	6
bird	Common Goldeneye	<i>Bucephala clangula</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	2
bird	Common Grasshopper Warbler	<i>Locustella naevia</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	2
bird	Common Greenshank	<i>Tringa nebularia</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	4
bird	Common Kestrel	<i>Falco tinnunculus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	13
bird	Common Kingfisher	<i>Alcedo atthis</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	9
bird	Common Linnet	<i>Carduelis cannabina</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	16
bird	Common Pheasant	<i>Phasianus colchicus</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section I Bird Species	17

Taxonomic group	Common name	Scientific name	Designation	Record count
bird	Common Pochard	<i>Aythya ferina</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	3
bird	Common Redshank	<i>Tringa totanus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	10
bird	Common Sandpiper	<i>Actitis hypoleucos</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	4
bird	Common Shelduck	<i>Tadorna tadorna</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	11
bird	Common Snipe	<i>Gallinago gallinago</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section III Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	5
bird	Common Starling	<i>Sturnus vulgaris</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	38
bird	Common Swift	<i>Apus apus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	16
bird	Common Tern	<i>Sterna hirundo</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	1
bird	Common Wood Pigeon	<i>Columba palumbus</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section I Bird Species	41

Taxonomic group	Common name	Scientific name	Designation	Record count
bird	Corn Crane	<i>Crex crex</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	2
bird	Dunlin	<i>Calidris alpina</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	5
bird	Eurasian Curlew	<i>Numenius arquata</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	7
bird	Eurasian Oystercatcher	<i>Haematopus ostralegus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	6
bird	Eurasian Teal	<i>Anas crecca</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	4
bird	Eurasian Tree Sparrow	<i>Passer montanus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	17
bird	Eurasian Wigeon	<i>Anas penelope</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	2
bird	Eurasian Woodcock	<i>Scolopax rusticola</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section III Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	2

Taxonomic group	Common name	Scientific name	Designation	Record count
bird	European Golden Plover	<i>Pluvialis apricaria</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Protected Species: EU Birds Directive >> Annex II, Section II Bird Species Protected Species: EU Birds Directive >> Annex III, Section III Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	4
bird	Great Black-backed Gull	<i>Larus marinus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	5
bird	Great Cormorant	<i>Phalacrocorax carbo</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	6
bird	Great Crested Grebe	<i>Podiceps cristatus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	2
bird	Greater Scaup	<i>Aythya marila</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section II Bird Species Protected Species: EU Birds Directive >> Annex III, Section III Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	2
bird	Grey Partridge	<i>Perdix perdix</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	2
bird	Grey Plover	<i>Pluvialis squatarola</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	2
bird	Hen Harrier	<i>Circus cyaneus</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	1
bird	Herring Gull	<i>Larus argentatus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	10

Taxonomic group	Common name	Scientific name	Designation	Record count
bird	House Martin	<i>Delichon urbicum</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	24
bird	House Sparrow	<i>Passer domesticus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	37
bird	Lesser Black-backed Gull	<i>Larus fuscus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	6
bird	Little Egret	<i>Egretta garzetta</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species	7
bird	Little Grebe	<i>Tachybaptus ruficollis</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	13
bird	Little Gull	<i>Larus minutus</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species	2
bird	Mallard	<i>Anas platyrhynchos</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section I Bird Species	19
bird	Mediterranean Gull	<i>Larus melanocephalus</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	1
bird	Mew Gull	<i>Larus canus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	6
bird	Mute Swan	<i>Cygnus olor</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	26
bird	Northern Goshawk	<i>Accipiter gentilis</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	1

Taxonomic group	Common name	Scientific name	Designation	Record count
bird	Northern Lapwing	<i>Vanellus vanellus</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	16
bird	Northern Wheatear	<i>Oenanthe oenanthe</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	1
bird	Peregrine Falcon	<i>Falco peregrinus</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species	5
bird	Pink-footed Goose	<i>Anser brachyrhynchus</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section II Bird Species	1
bird	Red Kite	<i>Milvus milvus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	2
bird	Red Knot	<i>Calidris canutus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	4
bird	Red-breasted Merganser	<i>Mergus serrator</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section II Bird Species	2
bird	Rock Pigeon	<i>Columba livia</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species	18
bird	Ruddy Duck	<i>Oxyura jamaicensis</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> EU Regulation No. 1143/2014 Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)	1
bird	Ruff	<i>Philomachus pugnax</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	4
bird	Sand Martin	<i>Riparia riparia</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	5

Taxonomic group	Common name	Scientific name	Designation	Record count
bird	Short-eared Owl	<i>Asio flammeus</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	2
bird	Sky Lark	<i>Alauda arvensis</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	11
bird	Slavonian Grebe	<i>Podiceps auritus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	1
bird	Snowy Owl	<i>Bubo scandiaca</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	1
bird	Spotted Flycatcher	<i>Muscicapa striata</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	6
bird	Stock Pigeon	<i>Columba oenas</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	17
bird	Tufted Duck	<i>Aythya fuligula</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section I Bird Species Protected Species: EU Birds Directive >> Annex III, Section II Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	10
bird	Twite	<i>Carduelis flavirostris</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	1
bird	Velvet Scoter	<i>Melanitta fusca</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex II, Section II Bird Species	2
bird	Water Rail	<i>Rallus aquaticus</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	2
bird	White-tailed Eagle	<i>Haliaeetus albicilla</i>	Protected Species: Wildlife Acts	1

Taxonomic group	Common name	Scientific name	Designation	Record count
bird	Whooper Swan	<i>Cygnus cygnus</i>	Protected Species: Wildlife Acts Protected Species: EU Birds Directive Protected Species: EU Birds Directive >> Annex I Bird Species Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	3
bird	Wood Lark	<i>Lullula arborea</i>	Protected Species: Wildlife Acts	1
bird	Yellowhammer	<i>Emberiza citrinella</i>	Protected Species: Wildlife Acts Threatened Species: Birds of Conservation Concern Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	21
bony fish (Actinopterygii)	European Eel	<i>Anguilla anguilla</i>	Threatened Species: OSPAR Convention Threatened Species: Critically Endangered	2
Flatworm (Turbellaria)	Arthurdendyus triangulatus	<i>Arthurdendyus triangulatus</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species	1
flatworm (Turbellaria)	Australoplana sanguinea	<i>Australoplana sanguinea</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species	1
flowering plant	Blue Fleabane	<i>Erigeron acer</i>	Threatened Species: Endangered	1
flowering plant	Butterfly-bush	<i>Buddleja davidii</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species	12
flowering plant	Canadian Fleabane	<i>Conyza canadensis</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species	1
flowering plant	Cherry Laurel	<i>Prunus laurocerasus</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species	7
flowering plant	Common Cord-grass	<i>Spartina anglica</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)	1
flowering plant	Evergreen Oak	<i>Quercus ilex</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species	1
flowering plant	Giant Hogweed	<i>Heracleum mantegazzianum</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)	6
flowering plant	Himalayan Honeysuckle	<i>Leycesteria formosa</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species	3

Taxonomic group	Common name	Scientific name	Designation	Record count
flowering plant	Japanese Knotweed	<i>Fallopia japonica</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)	5
flowering plant	Meadow Barley	<i>Hordeum secalinum</i>	Threatened Species: Endangered	7
flowering plant	Russian-vine	<i>Fallopia baldschuanica</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species	2
flowering plant	Smooth Brome	<i>Bromus racemosus</i>	Threatened Species: Vulnerable	1
flowering plant	Sycamore	<i>Acer pseudoplatanus</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species	9
flowering plant	Three-cornered Garlic	<i>Allium triquetrum</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)	2
flowering plant	Wild Parsnip	<i>Pastinaca sativa</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species	1
insect - beetle (Coleoptera)	Bagous	<i>Hydronomus alismatis</i>	Threatened Species: Critically Endangered	1
insect - beetle (Coleoptera)	Gyrinus urinator	<i>Gyrinus urinator</i>	Threatened Species: Near threatened	1
insect - beetle (Coleoptera)	Nebrioporus	<i>Nebrioporus depressus</i>	Threatened Species: Data deficient	1
insect - butterfly	Grayling	<i>Hipparchia semele</i>	Threatened Species: Near threatened	1
insect - butterfly	Marsh Fritillary	<i>Euphydryas aurinia</i>	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex II Threatened Species: Vulnerable	1
insect - butterfly	Wall	<i>Lasiommata megera</i>	Threatened Species: Endangered	2
insect - hymenoptera	Andrena	<i>Melandrena nigroaenea</i>	Threatened Species: Vulnerable	3
insect - hymenoptera	Bombus	<i>Bombus magnus</i>	Threatened Species: Data deficient	1
insect - hymenoptera	Large Red Tailed Bumble Bee	<i>Bombus melanobombus lapidarius</i>	Threatened Species: Near threatened	14

Taxonomic group	Common name	Scientific name	Designation	Record count
insect - hymenoptera n	Moss Carder-bee	<i>Bombus Thoracombus muscorum</i>	Threatened Species: Near threatened	4
insect - hymenoptera n	Red-tailed Carder Bee	<i>Bombus Thoracombus ruderarius</i>	Threatened Species: Vulnerable	2
insect - mayfly (Ephemeroptera)	Ephemerella notata	<i>Ephemerella notata</i>	Threatened Species: Endangered	1
liverwort	Fairy Beads	<i>Microlejeunea ulicina</i>	Threatened Species: Least concern	1
liverwort	MacKay's Pouncewort	<i>Marchesinia mackaii</i>	Threatened Species: Least concern	1
liverwort	Minute Pouncewort	<i>Cololejeunea minutissima</i>	Threatened Species: Least concern	1
liverwort	Rock Pouncewort	<i>Cololejeunea calcarea</i>	Threatened Species: Least concern	1
liverwort	Rossetti's Pouncewort	<i>Cololejeunea rossettiana</i>	Threatened Species: Least concern	2
liverwort	Toothed Pouncewort	<i>Drepanolejeunea hamatifolia</i>	Threatened Species: Least concern	1
mollusc	Jenkins' Spire Snail	<i>Potamopyrgus antipodarum</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species	9
mollusc	Lake Orb Mussel	<i>Musculium lacustre</i>	Threatened Species: Vulnerable	1
mollusc	Mauge's Shelled Slug	<i>Testacella Testacella mauei</i>	Threatened Species: Near threatened	1
mollusc	Moss Chrysalis Snail	<i>Pupilla Pupilla muscorum</i>	Threatened Species: Endangered	1
moss	Archangelic Thread-moss	<i>Bryum archangelicum</i>	Threatened Species: Least concern	1
moss	Bird's-claw Beard-moss	<i>Barbula unguiculata</i>	Threatened Species: Least concern	1

Taxonomic group	Common name	Scientific name	Designation	Record count
moss	Bryum dichotomum	<i>Bryum dichotomum</i>	Threatened Species: Least concern	1
moss	Common Cord-moss	<i>Funaria hygrometrica</i>	Threatened Species: Least concern	1
moss	Common Extinguisher-moss	<i>Encalypta vulgaris</i>	Threatened Species: Near threatened	2
moss	Common Feather-moss	<i>Eurhynchium praelongum</i>	Threatened Species: Least concern	1
moss	Common Pottia	<i>Tortula truncata</i>	Threatened Species: Least concern	1
moss	Crimson-tuber Thread-moss	<i>Bryum rubens</i>	Threatened Species: Least concern	1
moss	Field Forklet-moss	<i>Dicranella staphylina</i>	Threatened Species: Least concern	1
moss	Intermediate Screw-moss	<i>Syntrichia intermedia</i>	Threatened Species: Least concern	1
moss	Lateral Cryphaea	<i>Cryphaea heteromalla</i>	Threatened Species: Least concern	1
moss	Lesser Bird's-claw Beard-moss	<i>Barbula convoluta</i>	Threatened Species: Least concern	1
moss	Pea Bryum	<i>Bryum ruderale</i>	Threatened Species: Least concern	1
moss	Pill Bryum	<i>Bryum violaceum</i>	Threatened Species: Least concern	1
moss	Pink-fruited Thread-moss	<i>Pohlia melanodon</i>	Threatened Species: Least concern	1
moss	Pointed Spear-moss	<i>Calliergonella cuspidata</i>	Threatened Species: Least concern	1
moss	Raspberry Bryum	<i>Bryum klinggraeffii</i>	Threatened Species: Least concern	1

Taxonomic group	Common name	Scientific name	Designation	Record count
moss	Rigid Aloe-moss	<i>Aloina rigida</i>	Threatened Species: Regionally Extinct	1
moss	Rough-stalked Feather-moss	<i>Brachythecium rutabulum</i>	Threatened Species: Least concern	1
moss	Rusty Feather-moss	<i>Sciurohypnum plumosum</i>	Threatened Species: Least concern	1
moss	Sausage Beard-moss	<i>Didymodon tomaculosus</i>	Threatened Species: Vulnerable	2
moss	Schreber's Forklet-moss	<i>Dicranella schreberiana</i>	Threatened Species: Least concern	1
moss	Shaw's Bristle-moss	<i>Orthotrichum striatum</i>	Threatened Species: Least concern	1
moss	Silver-moss	<i>Bryum argenteum</i>	Threatened Species: Least concern	1
moss	Small Hairy Screw-moss	<i>Syntrichia laevipila</i>	Threatened Species: Least concern	1
moss	Swartz's Feather-moss	<i>Oxyrrhynchium hians</i>	Threatened Species: Least concern	1
moss	Variable Forklet-moss	<i>Dicranella varia</i>	Threatened Species: Least concern	1
reptile	Red-eared Terrapin	<i>Trachemys scripta</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species Invasive Species: Invasive Species >> EU Regulation No. 1143/2014	1
terrestrial mammal	American Mink	<i>Mustela vison</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)	2
terrestrial mammal	Brown Long-eared Bat	<i>Plecotus auritus</i>	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts	3
terrestrial mammal	Brown Rat	<i>Rattus norvegicus</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)	2
terrestrial mammal	Daubenton's Bat	<i>Myotis daubentonii</i>	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts	24

Taxonomic group	Common name	Scientific name	Designation	Record count
terrestrial mammal	Eastern Grey Squirrel	<i>Sciurus carolinensis</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> EU Regulation No. 1143/2014 Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)	12
terrestrial mammal	Eurasian Badger	<i>Meles meles</i>	Protected Species: Wildlife Acts	8
terrestrial mammal	Eurasian Pygmy Shrew	<i>Sorex minutus</i>	Protected Species: Wildlife Acts	3
terrestrial mammal	Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	Protected Species: Wildlife Acts	1
terrestrial mammal	European Otter	<i>Lutra lutra</i>	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex II Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts	14
terrestrial mammal	European Rabbit	<i>Oryctolagus cuniculus</i>	Invasive Species: Invasive Species Invasive Species: Invasive Species >> Medium Impact Invasive Species	10
terrestrial mammal	Lesser Noctule	<i>Nyctalus leisleri</i>	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts	26
terrestrial mammal	Natterer's Bat	<i>Myotis nattereri</i>	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts	2
terrestrial mammal	Pine Marten	<i>Martes martes</i>	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex V Protected Species: Wildlife Acts	4
terrestrial mammal	Pipistrelle	<i>Pipistrellus pipistrellus sensu lato</i>	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts	22
terrestrial mammal	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex IV Protected Species: Wildlife Acts	15
terrestrial mammal	West European Hedgehog	<i>Erinaceus europaeus</i>	Protected Species: Wildlife Acts	45

APPENDIX 6.3

Site habitat type details



Appendix 6.3

Habitat characteristics and descriptions from the ecological site visit to the proposed site at Kilshane. These habitat types were identified and categorised following the Fossitt (2000)¹ classification system for Ireland. Given the extent of the site, lack of habitat diversity and dominance of one habitat type (arable crops – BC1), these habitat types are given a brief text description, followed by a table listing all plants found in those habitats and supported by the habitat maps replicated below.

Habitat types within the project boundary of the site

Arable Crops (BC1)

This is the dominant habitat type within the proposed site. This area was harvested at the time of both site visits, leaving only stalks on bare rotated soil, but the crop is most likely some type of cereal. It is a monoculture, grown industrially and managed thus.

Agricultural Grassland (GA1)

This habitat type occurs in two smaller areas of the proposed site where previously agricultural monocultural grassland was most likely utilised for grazing, but has been left unused for several years resulting in matted overgrowth of tussocks – mainly perennial ryegrass. These fields which have not been recently sown or grazed, are overgrown and left fallow with significant scrub encroachment from the field boundary.

Scientific name	Common name
<i>Lolium perenne</i>	Perennial Ryegrass
<i>Urtica dioica</i>	Nettle
<i>Epilobium hirsutum</i>	Willowherb
<i>Arrhenatherum elatius</i>	False Oat Grass
<i>Potentilla spp.</i>	Cinquefoil
<i>Cornus spp.</i>	Dogwood
<i>Fraxinus excelsior</i>	Ash
<i>Rubus fruticosus</i>	Bramble
<i>Geranium robertianum</i>	Herb Robert
<i>Carex spp.</i>	Willow

Scrub (WS1)

Area of scrub to the north of the proposed site where bramble is the dominant species showing signs of no management and significant overgrowth of one dominant species. Butterfly bush was recorded here, but is not a scheduled invasive, and is thus not subject to management requirements for this proposed development.

Scientific name	Common name
<i>Rubus fruticosus</i>	Brambles
<i>Lolium perenne</i>	Perennial Ryegrass
<i>Buddleja davidii</i>	Butterfly Bush

Hedgerows (WL1)

The majority of hedgerows around the site all have similar composition and are thin and sparse. The hedgerow to the north of the site is more mature and of a higher ecological value. The dominant species in the hedgerows are hawthorn and bramble.

Scientific name	Common name
<i>Rubus fruticosus</i>	Brambles
<i>Hedera helix</i>	Ivy
<i>Crataegus spp.</i>	Hawthorn
<i>Fraxinus excelsior</i>	Ash
<i>Acer pseudoplatanus</i>	Sycamore
<i>Pinus sylvestris</i>	Scots Pine

¹ Fossitt, J.A., 2000. *A guide to habitats in Ireland*. Heritage.

Scientific name	Common name
<i>Heracleum mantegazzianum</i>	Hogweed
<i>Epilobium hirsutum</i>	Willowherb
<i>Urtica dioica</i>	Nettle
<i>Buddleja davidii</i>	Butterfly Bush
<i>Asplenium scolopendrium</i>	Hart's Tongue Fern

Treeline (WL2)

The treelines within the proposed site are mature and in bad condition overall. The treelines are dominated by cypress.

Scientific name	Common name
<i>Cupressus sempervirens</i>	Cypress
<i>Hedera helix</i>	Ivy
<i>Sambucus nigra</i>	Elder

Buildings and Artificial Surfaces (BL3)

An area of residential buildings in the northwest of the proposed site and is surrounded by an area of scrub (WS1) and hedgerow (WL1).

Spoil and Bare Ground (ED2)

Strip of spoil and bare ground in the north of the proposed site contained within an area of agricultural grassland (GA1).

Habitat types outside of the proposed development site

Habitat types surrounding the proposed site in Kilshane were viewed at the landscape scale using satellite imagery due to the expanse of the site. The majority of the habitat is surrounded by agricultural grassland (GA1), accompanied by hedgerows (WL1) with areas of buildings and artificial surfaces (BL3) south and east of the proposed site, with pockets to the north that were not recorded on the habitat map. The habitat types in the surrounding area are typical of areas such as Kilshane whose main habitats such as agricultural grassland (GA1) and buildings and artificial surfaces (BL3) are not of ecological significance.

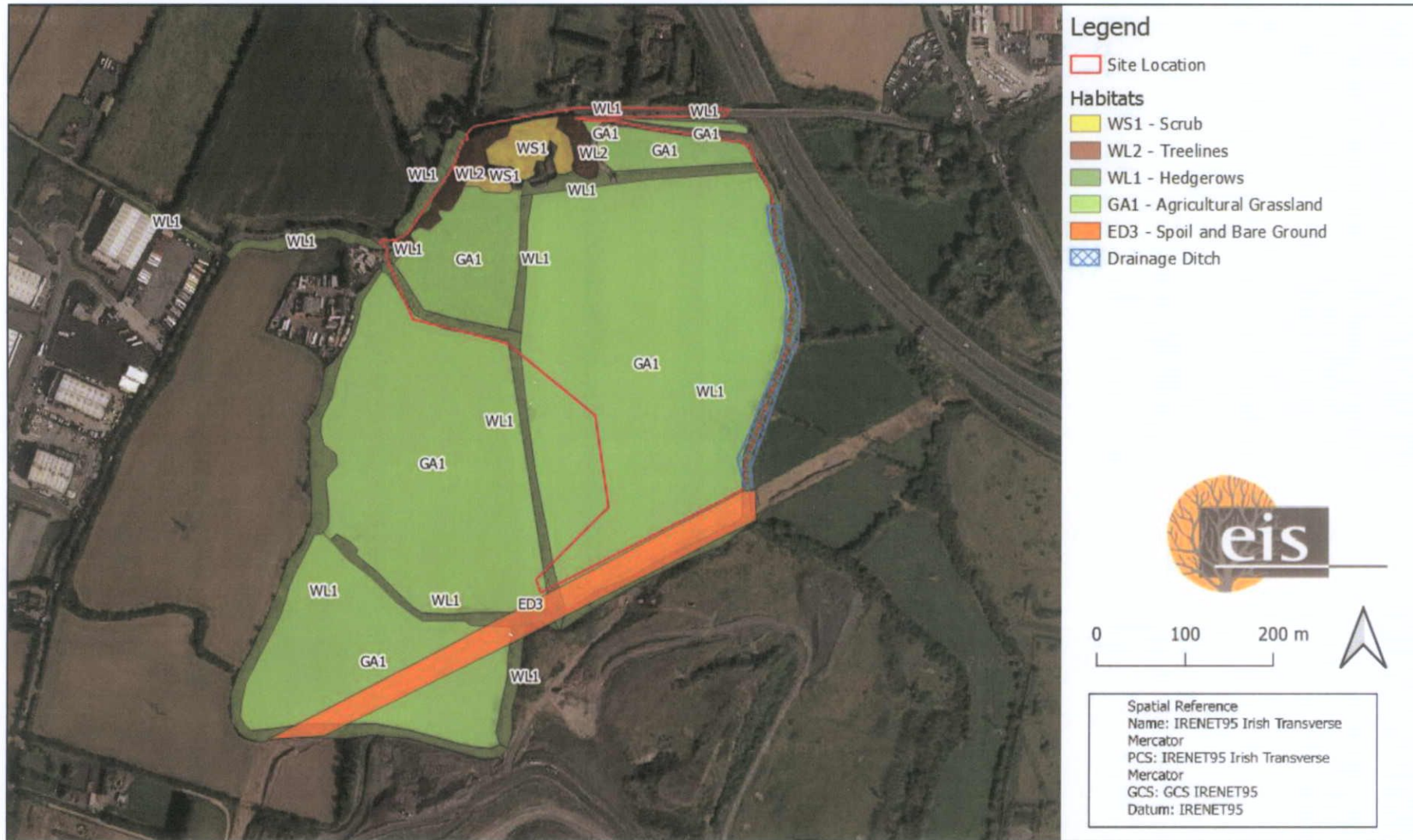


Figure 1 Habitat map of the prosed site in Kilshane as of February 2022; using Fossitt coding for habitats