APPENDIX I

TO THE

NATURA IMPACT REPORT

IN SUPPORT OF THE

APPROPRIATE ASSESSMENT

OF

VARIATION NO. 2(A)

TO THE

GALWAY COUNTY DEVELOPMENT PLAN 2015-2021

IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 6(3) OF THE EU HABITATS DIRECTIVE

for: **Galway County Council**

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Appendix 1

Background information on European sites considered in the Appropriate Assessment (AA) Natura Impact Report (NIR)

This appendix presents background information relating to all European Sites that are considered in the AA NIR.

The data is presented in a series of tables below as follows:

Table 1 List of European Sites within the ZOI of Variation 2(a) to the Galway County Development Plan 2015-2021; including the Qualifying features (Qualifying Interests or Special Conservation Interests) and Site Vulnerability/Sensitivity

Site Code	Site Name	Distance (km)	Qualifying features (QIs or SCIs)	Site Vulnerability/Sensitivity
000268	Galway Bay Complex SAC	Directly Adjacent	Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoons [1150] Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] Mediterranean salt meadows (Juncetalia maritimi) [1410] Turloughs [3180] Juniperus communis formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210] Alkaline fens [7230] Limestone pavements [8240] Lutra lutra (Otter) [1355] Phoca vitulina (Harbour Seal) [1365]	A main concern is that sewage effluent and detritus of the aquaculture industry could be deleterious to benthic communities. Reef and sediment communities are vulnerable to disturbance or compaction from tractors accessing oyster trestles. The *Paracentrotus lividus* populations have been shown to be vulnerable to overfishing. Extraction of maerl in Galway Bay is a threat. Owing to the proximity of Galway city, shoreline and terrestrial habitats are under pressure from urban expansion and recreational activities. Eutrophication is probably affecting some of the lagoons and is a continued threat. Drainage is a general threat to the turlough and fen habitats. Bird populations may be disturbed by aquaculture activities.
004031	Inner Galway Bay SPA	Directly Adjacent	Bar-tailed Godwit (Limosa lapponica) [A157] Black-headed Gull (Chroicocephalus ridibundus) [A179] Common Gull (Larus canus) [A182] Common Tern (Sterna hirundo) [A193] Cormorant (Phalacrocorax carbo) [A017] Curlew (Numenius arquata) [A160] Dunlin (Calidris alpina) [A149] Golden Plover (Pluvialis apricaria) [A140] Great Northern Diver (Gavia immer) [A003] Grey Heron (Ardea cinerea) [A028] Lapwing (Vanellus vanellus) [A142] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Red-breasted Merganser (Mergus serrator) [A069] Redshank (Tringa totanus) [A162] Ringed Plover (Charadrius hiaticula) [A137] Sandwich Tern (Sterna sandvicensis) [A191] Shoveler (Anas clypeata) [A056] Teal (Anas crecca) [A052] Turnstone (Arenaria interpres) [A169] Wetland and Waterbirds [A999] Wigeon (Anas penelope) [A050]	While there are no imminent threats to the birds, a concern is that sewage effluent and detritus of the aquaculture industry could be deleterious to benthic communities and could affect food stocks of divers, sea duck and other birds. Bird populations may also be disturbed by aquaculture activities. Owing to the proximity of Galway City, shoreline and terrestrial habitats are under pressure from urban expansion and recreational activities
000297	Lough Corrib SAC	4.90	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110] Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [3130]	The main threats to the quality of this site are from water polluting activities resulting from intensification of agricultural activities on the eastern side of the lake, uncontrolled discharge of sewage which is causing localised eutrophication of the lake, and housing and boating

Site Code	Site Name	Distance (km)	Qualifying features (QIs or SCIs)	Site Vulnerability/Sensitivity
			Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150] Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210] Petrifying springs with tufa formation (Cratoneurion) [7220] Alkaline fens [7230] Limestone pavements [8240] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Bog woodland [91D0] Margaritifera margaritifera (Freshwater Pearl Mussel) [1029] Austropotamobius pallipes (White-clawed Crayfish) [1092] Petromyzon marinus (Sea Lamprey) [1095] Lampetra planeri (Brook Lamprey) [1096] Salmo salar (Salmon) [1106] Rhinolophus hipposideros (Lesser Horseshoe Bat) [1303] Lutra lutra (Otter) [1355] Drepanocladus vernicosus (Slender Green Feather-moss) [1393] Najas flexilis (Slender Naiad) [1833]	development, which is causing the loss of native lakeshore vegetation. The raised bog habitats are susceptible to further degradation and drying out due to drainage and peat cutting and, on occasions, burning. Peat cutting threatens Addergoole Bog and already a substantial area of it has been cut away. Fishing and shooting occur in and around the lake. Introduction of exotic crayfish species or the crayfish fungal plague (*Aphanomyces astaci*) could have a serious impact on the native crayfish population. The bat roost is susceptible to disturbance or development.
004042	Lough Corrib SPA	5.29	Arctic Tern (Sterna paradisaea) [A194] Black-headed Gull (Chroicocephalus ridibundus) [A179] Common Gull (Larus canus) [A182] Common Scoter (Melanitta nigra) [A065] Common Tern (Sterna hirundo) [A193] Coot (Fulica atra) [A125] Gadwall (Anas strepera) [A051] Golden Plover (Pluvialis apricaria) [A140] Greenland White-fronted Goose (Anser albifrons flavirostris) [A395] Hen Harrier (Circus cyaneus) [A082] Pochard (Aythya ferina) [A059] Shoveler (Anas clypeata) [A056] Tufted Duck (Aythya fuligula) [A061] Wetland and Waterbirds [A999]	Any deterioration in water quality of the lake would be of concern for the wintering birds and perhaps the breeding *Melanitta nigra*, though the condition of the lake has been satisfactory in recent years.
002034	Connemara Bog Complex SAC	5.98	Coastal lagoons 1150 Reefs 1170 Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) 3110 Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea 3130 Natural dystrophic lakes and ponds 3160	Adjacent areas of high scientific interest, which would have formerly been included as part of the site, have been damaged as a result of afforestation. There is still a real threat that further areas within the site will be drained and planted with coniferous trees, a process which must be prevented. Widespread grazing by cattle and sheep has damaged parts of the peatland landscape. Peat cutting, by hand and machine, is ongoing within the site but is generally

Site Code	Site Name	Distance (km)	Qualifying features (QIs or SCIs)	Site Vulnerability/Sensitivity
			Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation 3260 Northern Atlantic wet heaths with Erica tetralix 4010 European dry heaths 4030 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) 6410 Blanket bogs (* if active bog) 7130 Transition mires and quaking bogs 7140 Depressions on peat substrates of the Rhynchosporion 7150 Alkaline fens 7230 Old sessile oak woods with Ilex and Blechnum in the British Isles 91A0 Euphydryas aurinia 1065 Salmo salar 1106 Lutra lutra 1355 Najas flexilis 1833	confined to the more accessible areas. Deliberate burning of bog and heath is a further threat.
004181	Connemara Bog Complex SPA	9.09	Common Gull (Larus canus) [A182] Cormorant (Phalacrocorax carbo) [A017] Golden Plover (Pluvialis apricaria) [A140] Merlin (Falco columbarius) [A098]	No known threats recorded
000020	Black Head-Poulsallagh Complex SAC	10.39	Reefs 1170 Perennial vegetation of stony banks 1220 Fixed coastal dunes with herbaceous vegetation (grey dunes) 2130 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation 3260 Alpine and Boreal heaths 4060 Juniperus communis formations on heaths or calcareous grasslands 5130 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) 6210 Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis) 6510 Petrifying springs with tufa formation (Cratoneurion) 7220 Limestone pavements 8240 Submerged or partially submerged sea caves 8330 Petalophyllum ralfsii 1395	The main threats to the site are from agricultural improvement activities to the grassland, heath and scrub habitats. Further land improvements in the Caher River valley should be prevented so as to maintain water quality. Extension to the caravan park at Fanore poses a threat to the presence of *Petalophyllum ralfsii*. The shoreline would be vulnerable to oil spills, and over collection of *Paracentrotus lividus*, although many are below the market size.
001312	Ross Lake And Woods SAC	10.85	Rhinolophus hipposideros 1303 Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. 3140	The lake is vulnerable to water polluting operations from the surrounding agricultural and forestry activities. The main threat to the bat populations would be human disturbance or a change of use of the building, but neither of these seem apparent at present.
001926	East Burren Complex SAC	12.36	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) 91E0 Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. 3140 Turloughs 3180 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation 3260 Alpine and Boreal heaths 4060 Juniperus communis formations on heaths or calcareous grasslands 5130 Calaminarian grasslands of the Violetalia calaminariae 6130	The main threat to this site is from agricultural improvement activities - these involve clearance of limestone pavement and associated habitats (heaths and grassland), subsequent reseeding, fertilisation and then grazing. Heavy grazing pressures is a threat to the lowland areas of the site. The water quality of the various wetlands is vulnerable to run-off from agricultural lands.

Site Code	Site Name	Distance (km)	Qualifying features (QIs or SCIs)	Site Vulnerability/Sensitivity
			Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) 6210 Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis) 6510 Calcareous fens with Cladium mariscus and species of the Caricion davallianae 7210 Petrifying springs with tufa formation (Cratoneurion) 7220 Alkaline fens 7230 Limestone pavements 8240 Caves not open to the public 8310 Euphydryas aurinia 1065 Rhinolophus hipposideros 1303 Lutra lutra 1355	
004142	Cregganna Marsh SPA	12.88	Greenland White-fronted Goose (Anser albifrons flavirostris) [A395]	The main threat to the geese at this site is disturbance from existing developments and potential developments in the surrounding areas, reflecting the proximity of the site to Galway City. Any attempts at draining the remaining wetland vegetation (marsh and wet grassland) could make the site less attractive for feeding geese.
000054	Moneen Mountain SAC	12.92	Euphydryas aurinia 1065 Rhinolophus hipposideros 1303 Turloughs3180 Alpine and Boreal heaths 4060 Juniperus communis formations on heaths or calcareous grasslands 5130 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) 6210 Petrifying springs with tufa formation (Cratoneurion) 7220 Limestone pavements 8240	Agriculture activities in the form of fertilizer application, inappropriate grazing regimes and land reclamation pose the greatest threats to the future of the site. The colony of *Rhinolophus hipposideros* is subject to periodic disturbance due to human presence. Also, the building used by the bats is in poor condition.
001271	Gortnandarragh Limestone Pavement SAC	14.99	Limestone pavements 8240	The site is vulnerable to scrub invasion through lack of grazing and to land reclamation and quarrying. The two last-named activities have both occurred to a small extent within the site.
000996	Ballyvaughan Turlough SAC	15.00	Turloughs3180	The site seems to be largely unaffected by intensive pastures at the western end but is obviously susceptible to eutrophication. It is one of five wetlands in a small area so bird disturbance by hunting is not likely to be significant.

Table 2: List of all QIs of SACs that have undergone assessment including summaries of current threats and sensitivity to effects

QIs	Current threats to QIs	Sensitivity of QIs
Active raised bogs	Deterioration of the hydrological conditions caused by peat cutting, drainage, forestry and burning. Arterial drainage, water abstraction, Inappropriate management e.g. overgrazing, forestry Peat extraction Agricultural reclamation	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management
Alkaline fens	Peat mining activities, land drainage; infilling; fertiliser pollution and eutrophication	Groundwater dependant. Highly sensitive to hydrological changes. Changes in nutrient or base status
Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	Inappropriate grazing levels; invasive species; and clearance for agriculture or felling for timber	Surface and groundwater dependent. Highly sensitive to hydrological changes. Changes in management.
Alpine and Boreal heaths	Abandonment; overgrazing; burning; outdoor recreation; quarries; communication networks; and wind farm developments.	Changes in management. Changes in nutrient or base status. Moderately sensitive to hydrological change
Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	Overgrazing; erosion; invasive species, particularly common cordgrass (*Spartina anglica*); infilling and reclamation.	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion
Blanket bog (active only)	Land reclamation, peat extraction; afforestation; erosion and landslides triggered by human activity; drainage; burning and infrastructural development.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management
Bog woodland	Drainage, peat cutting, burning and development;	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management
Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*	Peat or turf cutting, arterial drainage, local drainage and agricultural reclamation, infilling of sites with building waste, dumping of household refuse, afforestation, water pollution and urban expansion.	Groundwater dependent. Highly sensitive to hydrological changes. Changes in nutrient or base status.
Caves not open to the public	Human habitation adjacent to the cave system; disposal of household waste; road development; speleology (which leads to the disturbance of bats); vandalism; and inundation.	Human disturbance. Pollution
Coastal lagoons	Drainage for agricultural and safety reasons; natural siltation; Water pollution in the form of excessive nutrient enrichment	Surface, ground and marine water dependent. Highly sensitive to hydrological changes. Highly sensitive to pollution. Changes in salinity and tidal regime
Degraded raised bogs still capable of natural regeneration	Changes in agricultural practices; afforestation and general forest management; burning; peat extraction; drainage; and the introduction of invasive species.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management
Depressions on peat substrates of the *Rhynchosporion*	Drainage; burning; peat extraction; overgrazing; afforestation; erosion; and climate change.	Surface and groundwater dependent. Low sensitivity to hydrological changes. Erosion, land-use changes
European dry heaths	Afforestation, overburning, over-grazing, under-grazing and bracken invasion.	Moderately sensitive to hydrological change. Changes in management. Changes in nutrient status
Fixed coastal dunes with herbaceous vegetation (grey dunes)	Recreation; overgrazing and undergrazing: non-native plant species, particularly sea buckthorn (*Hippophae rhamnoides*),	Overgrazing, and erosion. Changes in management.
Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp	Nutrient enrichment arising from intensification of agriculture and urban developments.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Highly sensitive to pollution
Juniperus communis formations on heaths or calcareous grasslands	Overgrazing; fire; agricultural expansion; invasion by alien species particularly *Rhododenron ponticum*; and poor regeneration.	Onset of inundation or waterlogging Inappropriate management
Large shallow inlets and bays	Aquaculture, fishing, dumping of wastes and water pollution.	Surface and marine water dependent. Low sensitivity to hydrological changes. Aquaculture, fishing and pollution.
Limestone pavements	Quarrying, reclamation for agriculture and reduced farming activity which has facilitated the spread of scrub over some areas. Intensive agriculture and domestic/municipal waste sources in the vicinity of pavement may also threaten groundwater.	Physical removal. Scrub encroachment

QIs	Current threats to QIs	Sensitivity of QIs
Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	Agricultural intensification; drainage; abandonment of pastoral systems and the associated encroachment of rank vegetation and scrub.	Surface and groundwater dependent. Moderately sensitive to hydrological change. Changes in management. Changes in nutrient status
Mediterranean salt meadows (*Juncetalia maritimi*)	Over-grazing by cattle or sheep; infilling and reclamation.	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Coastal development and reclamation.
Molinia meadows on calcareous, peaty or clavey-silt-laden soils (*Molinion caeruleae*)	Agricultural intensification; drainage; abandonment of pastoral systems	Surface and groundwater dependent. Moderately sensitive to hydrological change. Changes in management. Changes in nutrient status
Mudflats and sandflats not covered by seawater at low tide	Aquaculture, fishing, bait digging, removal of fauna, reclamation of land, coastal protection works and invasive species, particularly cord-grass; hard coastal defence structures; sea-level rise.	Surface and marine water dependent. Moderately sensitive to hydrological change. Moderate sensitivity to pollution. Changes to salinity and tidal regime. Coastal development
Natural dystrophic lakes and ponds	Peat cutting, overgrazing and afforestation of peatland habitats.	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution
Natural euthrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation	Nutrient enrichment; overgrazing; afforestation and general forest management; introduction of invasive species; and increased pressures from human activities.	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.
Northern Atlantic wet heaths with *Erica tetralix*	Reclamation, afforestation and burning; overstocking; invasion by non-heath species; exposure of peat to severe erosion.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management
Old sessile oak woods with *Ilex* and *Blechnum* in British Isles	The introduction of alien species; sub-optimal grazing patterns; general forestry management; increases in urbanisation and human habitation adjacent to oak woodlands; and the construction of communication networks through the woodland.	Changes in management. Changes in nutrient or base status. Introduction of alien species.
Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)	Nutrient enrichment; afforestation; waste water; invasive alien species; sport and leisure activities.	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution
Perennial vegetation of stony banks	Disruption of the sediment supply, owing to the interruption of the coastal processes, caused by developments such as car parks and coastal defence structures including rock armour and sea walls. The removal of gravel.	Marine water dependent. Low sensitivity to hydrological changes. Coastal development, trampling from recreational activity and gravel removal.
Petrifying springs with tufa formation (*Cratoneurion*)	Peat or turf cutting; arterial drainage; local drainage; water abstraction and agricultural reclamation.	Groundwater dependent. Highly sensitive to hydrological changes. Changes in nutrient or base status.
Reefs	Professional fishing; taking for fauna; taking for flora; water pollution; climate change; and change in species composition.	Sensitive to disturbance and pollution.
Salicornia and other annuals colonizing mud and sand	Invasive Species; erosion and accretion	Marine water dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Infilling, reclamation, invasive species
Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*)(important orchid sites)	The main threats to this habitat include the abandonment of traditional agricultural practices and reclamation.	Changes in management. Changes in nutrient or base status. Moderately sensitive to hydrological change
Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco Brometalia*)(important orchid sites)	Overgrazing; erosion; invasive species, particularly common cordgrass (*Spartina anglica*); infilling and reclamation.	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion
Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)	Removal of beach material and interference with the supply of sand; construction of coastal defences; sand compaction caused by vehicles and trampling.	Overgrazing, and erosion. Changes in management
Submerged or partly submerged sea caves	Water pollution	Pollution
Transition mires and quaking bogs	Drainage, infilling, reclamation and pollution.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management
Turloughs	Nutrient enrichment and inappropriate grazing; drainage, peat cutting; marl extraction and quarrying.	Surface and Groundwater dependent. Highly sensitive to hydrological changes. Changes in nutrient or base status.

QIs	Current threats to QIs	Sensitivity of QIs
Vegetated sea cliffs of the Atlantic and Baltic coasts	Erosion; grazing; recreational pressures; development of golf courses and housing; dumping; cutting of peat; coastal protection works; climate change	Coastal development. Erosion, over-grazing and recreation
Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	Eutrophication; overgrazing, excessive fertilisation; afforestation; and the introduction of invasive alien species.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Highly sensitive to pollution.
Austropotamobius pallipes	Introduction of diseases transmitted by introduced American crayfish.	Surface water dependent Highly sensitive to hydrological change. Very highly sensitive to pollution
Drepanocladus vernicosus	Fertilization; abandonment of pastoral systems; undergrazing; afforestation; water pollution; and drainage.	Highly sensitive to hydrological changes. Highly sensitive to pollution.
Euphydryas aurinia	Abandonment of traditional pastoral systems; infrastructure developments and increased urbanisation	Changes in management. Habitats are sensitive to hydrological changes. Changes in nutrient base status.
Lampetra planeri	Channel maintenance, barriers, passage obstruction, gross pollution and specific pollutants.	Surface water dependent Highly sensitive to hydrological change
Lutra lutra	Decrease in water quality: Use of pesticides; fertilization; vegetation removal; professional fishing (including lobster pots and fyke nets); hunting; poisoning; sand and gravel extraction; mechanical removal of peat; urbanised areas; human habitation; continuous urbanization; drainage; management of aquatic and bank vegetation for drainage purposes; and canalization or modifying structures of inland water course.	Surface and marine water dependent. Moderately sensitive to hydrological change. Sensitivity to pollution
Margaritifera margaritifera	Poor substrate quality due to increased growth of algal and macrophyte vegetation as a result of severe nutrient enrichment, as well as physical siltation.	Surface water dependent. Highly sensitive to hydrological change. Very highly sensitive to pollution
Najas flexilis	Fertilization; disposal of household waste; water pollution; eutrophication; and invasion by alien species.	Highly sensitive to hydrological changes. Highly sensitive to pollution.
Petalophyllum ralfsii	Agricultural improvement and fertilisation; overgrazing; changes in agricultural practices i.e. land abandonment & undergrazing; drainage; erosion and drying out.	Changes in management. Changes in nutrient or base status. Sensitive to hydrological change
Petromyzon marinus	Obstructions to movement; pollution	Surface water dependent. Highly sensitive to hydrological change
Phoca vitulina	Continued by-catch in fishing gear; occasional illegal culling; competition for prey resources with fisheries and disturbance at key breeding and moulting haul-out sites.	Marine water dependent. Sensitive to changes in food supply.
Rhinolophus hipposideros	Loss of suitable summer and winter roosting sites; loss of commuting routes linking roosts to foraging sites, and loss of suitable foraging sites.	Disturbance. Changes in Management.
Salmo salar	Numerous threats impact upon this species. Some of these include: cultivation, pesticides; fertilization; pollution; water pollution; biocenotic evolution; accumulation of organic material; eutrophication; over-fishing; forest related pressures; parasites.	Surface water dependent. Highly sensitive to hydrological change

Table 3 List of all SCIs of SPAs that have undergone assessment including summaries of current Threats and sensitivity to effects

SCIs	Vulnerabilities of SCIs
Arctic Tern (Sterna paradisaea) [A194]	Bird species are particularly vulnerable to direct disturbance due to noise and/or vibration. These effects are localised and disturbance effects are foreseen to be low at distances beyond 2km. Direct habitat loss is a serious concern for bird species, as well as the reduction in habitat quality. Habitat degradation could occur through effects such as local enrichment due to agricultural practices or damage to habitat through activities such as trampling. Land use change is an issue for bird species such as the *Crex crex*, which require the cover of tall vegetation throughout their breeding cycle and are strongly associated with meadows which are harvested annually, where they nest and feed. Annual cutting of these meadows creates a sward which is easy for the birds to move through. Changes in agricultural practices could affect the species due to their dependence on management practices for habitat availability. Prey species diversity and availability is a key element of species conservation. Community dynamics and ecosystem functionality are complex concepts and require site specific information. The site synopsis and conservation objectives for the SPAs identified within the ZOI were used to identify any specific prey sensitivities. Availability of nesting/roosting habitat. Vegetation composition, structure and functionality.
Bar-tailed Godwit (Limosa lapponica) [A157]	
Black-headed Gull (Chroicocephalus ridibundus) [A179]	
Common Gull (Larus canus) [A182]	
Common Scoter (Melanitta nigra) [A065]	
Common Tern (Sterna hirundo) [A193]	
Coot (Fulica atra) [A125]	
Cormorant (Phalacrocorax carbo) [A017]	
Curlew (Numenius arquata) [A160]	
Dunlin (Calidris alpina) [A149]	
Gadwall (Anas strepera) [A051]	
Golden Plover (Pluvialis apricaria) [A140]	
Great Northern Diver (Gavia immer) [A003]	
Greenland White-fronted Goose (Anser albifrons flavirostris) [A395]	
Grey Heron (Ardea cinerea) [A028]	
Hen Harrier (Circus cyaneus) [A082]	
Lapwing (Vanellus vanellus) [A142]	
Light-bellied Brent Goose (Branta bernicla hrota) [A046]	
Merlin (Falco columbarius) [A098]	
Pochard (Aythya ferina) [A059]	
Red-breasted Merganser (Mergus serrator) [A069]	
Redshank (Tringa totanus) [A162]	
Ringed Plover (Charadrius hiaticula) [A137]	
Sandwich Tern (Sterna sandvicensis) [A191]	
Shoveler (Anas clypeata) [A056]	
Teal (Anas crecca) [A052]	
Tufted Duck (Aythya fuligula) [A061]	
Turnstone (Arenaria interpres) [A169]	
Wigeon (Anas penelope) [A050]	
Wetland and Waterbirds [A999]	Sensitivity and threats vary on a site to site basis. Direct land take is a common vulnerability to all sites; as well as significant water quality effects. The conservation objective of all SPAs designated for Wetland and Waterbirds [A999] is to maintain the favourable conservation condition of the wetland habitat as a resource for the regularly-occurring migratory waterbirds that utilise it.