NATURA IMPACT REPORT: APPENDIX I

IN SUPPORT OF THE

APPROPRIATE ASSESSMENT

OF THE

PROPOSED MATERIAL ALTERATIONS (NO. 1, 2, 3 AND 11)

TO THE

DRAFT TUAM LOCAL AREA PLAN 2018-2024

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

for: **Galway County Council**

Aras an Chontae,

Prospect Hill,

Galway

by: **CAAS Ltd.**

1st Floor,

24-26 Ormond Quay,

Dublin 7

AUGUST 2018

Appendix I

Background information on European sites considered in the Natura Impact Report

This appendix presents background information relating to all European sites that are considered in the Natura Impact Report.

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

Table 1 List of European Sites within the Zone Of Influence of Proposed Material Alterations to the Draft Tuam Local Area Plan; including the Qualifying features (Qualifying Interests or Special Conservation Interests) and Site Vulnerability/Sensitivity

Site Code	**Site Name**	**Distance (km)**	**Qualifying Features** (Qualifying Interests and Special Conservation Interests)	**Site Vulnerability**
000297	Lough Corrib SAC	Within	Active raised bogs [7110] Alkaline fens [7230] Austropotamobius pallipes (White-clawed Crayfish) [1092] Bog woodland [91D0] Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150] Drepanocladus vernicosus (Slender Green Feather-moss) [1393] Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] Lampetra planeri (Brook Lamprey) [1096] Limestone pavements [8240] Lutra lutra (Otter) [1355] Margaritifera margaritifera (Freshwater Pearl Mussel) [1029] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] Najas flexilis (Slender Naiad) [1833] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [3130] Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110] Petrifying springs with tufa formation (Cratoneurion) [7220] Petromyzon marinus (Sea Lamprey) [1095] Rhinolophus hipposideros (Lesser Horseshoe Bat) [1303] Salmo salar (Salmon) [1106] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]	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 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.
000295	Levally Lough SAC	7.05	Turloughs [3180]	There is some grazing on the margins of the turlough, most significantly around the north-east corner. Pollution of the system with organic effluent from around the site would threaten the quality of this site. Drainage would also pose a threat to the hydrology of the site.
000525	Shrule Turlough SAC	12.88	Turloughs [3180]	No site-specific threats were identified by the NPWS.

Site Code	**Site Name**	**Distance (km)**	**Qualifying Features** (Qualifying Interests and Special Conservation Interests)	**Site Vulnerability**
002197	Derrinlough (Cloonkeenanode) Bog SAC	13.53	Degraded raised bogs still capable of natural regeneration [7120]	Current landuse within the site consists of conservation management with the removal of conifer plantations and the blocking of drains both on the high bog and on the cutover. A large area of coniferous forestry has been clear-felled and drain-blocked as part of the Coillte EU LIFE Project Demonstrating Best Practice in Raised Bog Restoration in Ireland. The restoration of these previously afforested areas will, in the longer term, improve the ecological connectivity of the adjoining bog areas and will also help to maintain or improve the hydrology of the adjoining areas. The colonization by Downy Birch and conifers poses an ongoing threat to the drier high bog areas which have been recently cleared of conifers and will require some ongoing management to avoid impacts to sensitive areas. No Conservation objectives have been set by the NPWS as on January 2018.
004042	Lough Corrib SPA	13.71	Gadwall (Anas strepera) [A051] Shoveler (Anas clypeata) [A056] Pochard (Aythya ferina) [A059] Tufted Duck (Aythya fuligula) [A061] Common Scoter (Melanitta nigra) [A065] Hen Harrier (Circus cyaneus) [A082] Coot (Fulica atra) [A125] Golden Plover (Pluvialis apricaria) [A140] Black-headed Gull (Chroicocephalus ridibundus) [A179] Common Gull (Larus canus) [A182] Common Tern (Sterna hirundo) [A193] Arctic Tern (Sterna paradisaea) [A194] Greenland White-fronted Goose (Anser albifrons flavirostris) [A395] Wetland and Waterbirds [A999]	No site-specific threats were identified by the NPWS.
000503	Greaghans Turlough SAC	14.78	Turloughs [3180]	No site-specific threats were identified by the NPWS.

Table 2: List of all Qualifying Interests of SACs that have undergone Assessment including Summaries of Current Threats and Sensitivity to Effects

Qualifying Interests	Current threats to Qualifying Interests	Sensitivity of Qualifying Interests
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
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.
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
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
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
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
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
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.

Qualifying Interests	Current threats to Qualifying Interests	Sensitivity of Qualifying Interests
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. Overgrazing; erosion; invasive species, particularly common cordgrass (*Spartina anglica*); infilling and reclamation.	Changes in management. Changes in nutrient or base status. Moderately sensitive to hydrological change Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion
Turloughs	Grazing, pollution from sources such as organic effluent and drainage.	Ground water dependent, highly sensitive to hydrological change, pollution and land use activities.
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
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
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 Special Conservation Interest of SPAs that have undergone Assessment including Summaries of Current Threats and Sensitivity to Effects

Special Conservation Interests	Vulnerabilities of Special Conservation Interests
Gadwall (Anas strepera) [A051] Shoveler (Anas clypeata) [A056] Pochard (Aythya ferina) [A059] Tufted Duck (Aythya fuligula) [A061] Common Scoter (Melanitta nigra) [A065] Hen Harrier (Circus cyaneus) [A082] Coot (Fulica atra) [A125] Golden Plover (Pluvialis apricaria) [A140] Black-headed Gull (Chroicocephalus ridibundus) [A179] Common Gull (Larus canus) [A182] Common Tern (Sterna hirundo) [A193] Arctic Tern (Sterna paradisaea) [A194] Greenland White-fronted Goose (Anser albifrons flavirostris) [A395]	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. 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 SPA's identified within the ZOI were used to identify any specific prey sensitivies. Availability of nesting/roosting habitat. Particularly for the Hen Harrier. Vegetation composition, structure and functionality.
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 SPA's 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.