Special Area of Conservation Management Plan

Rea's Wood & Farr's Bay *Nov 2017*

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NATURA 2000

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Preface

At Rea's Wood and Farr's Bay a successive lowering of Lough Neagh has revealed a lake bed with a shoreline as a series of raised ridges with wet, frequently flooded hollows. A diverse woodland has been established with Willow-Alder along the shore, Alder swamp on the hollows, and Alder and Ash woodland on the drier ridges. The combination of these woodland types situated on their topography and hydrology have given a rare and excellent habitat example and is known and classified as Alluvial Forest or Wet Woodland. The biological richness is further recognised by rich flora and fauna assemblages. In response to their ecological significance, both sites are protected through designations as a Special Area of Conservation {SAC], Area of Special Scientific Interest [ASSI} and National Nature Reserves[NNR].

It is envisaged that the Reas Wood/Farrs Bay SAC sites will continue to be managed for its range of biological features and the future management will strive to maintain their "favourable conservation status". This future management will be dependent on a broad range of active or supporting partnerships and a sympathetic public. This includes DAERA, and the Northern Ireland's Forest Service as principle land owner, and Lord O'Neil as part land owner. Other significant partners should include the Antrim and Newtownabbey Borough Council, with adjacent land and access to Rea's Wood, which provides infrastructure for a visiting public and the Lough Neagh Partnership with its strategic area management provision on and around the Lough. A volunteer-based input into site management and work plan delivery will also be encouraged and supported and strong links with the Six Mile Water River Trust and The Conservation Volunteers will be developed

Both sites should remain open to a general public. Rea's Wood especially has a large footfall. Access will continue to be provided and its impacts on the sites features managed sustainably. There will be an increased level of communication about the value and interests of these sites with the general public. Use of the resource for educational and scientific purposes will also be supported.

It is unfortunate that the integrity of conservation features and interests are under pressure from several adverse impacts. These threats include the potential drying out of the sites, a host of invasive plant species, overgrazing by deer and the depositing of large amounts of flotsam and jetsam. Appropriate management of these issues forms a crucial part of the overall vision for the sites in as far as it is practicable to modify or control these threats. These will include maintenance of important hydrology, removal of litter, the suppression and removal of targeted invasive plant species and good monitoring.

Introduction to Conservation

Special Areas of Conservation (SAC) and Special Protection Areas (SPA) are collectively known as Natura 2000 sites and are protected under European legislation for their important wildlife and habitats. In Northern Ireland there are 57 SACs and 16 SPAs collectively covering an area of 169,463.93 ha. The majority of these sites and many others which are of national importance for nature conservation make up the Area of Special Scientific Interest (ASSI) network.

- **What Are Special Areas of Conservation?** SACs are Internationally important nature conservation sites designated for the presence of one or more habitat and or 21 2Qspecies of European importance as defined by the Habitats Directive. These sites are offered strict protection and are required to be managed appropriately to ensure the special habitats and/or species are in healthy condition.
- **What Are Special Protection Areas?** Special Protection Areas (SPAs) are strictly protected sites classified in accordance with Article 4 of the EC Birds Directive. SPAs are selected for a number of rare, threatened or vulnerable bird species listed in Annex I of the Birds Directive, and also for regularly occurring migratory species.
- **What Are Areas of Special Scientific Interest?** ASSIs conserve and protect the best of our wildlife, geological and physiographical heritage for the benefit of present and future generations. The legal designation provides a means of protecting and managing the special features (habitats, species and earth science).

The overall aim of this Reas Wood and Farrs Bay SAC Conservation Plan is to identify and put in place workable and realistic measures at the appropriate scale to deliver the conservation measures of the site to ensure their long-term sustainability. This plan, for the first time, draws together all of the information required to allow all delivery partners to implement the required conservation actions.

1.0 Rea's Wood & Farr's Bay SAC/ASSI Site Vision 2017-27

The vision for the Reas Wood and Farrs Bay SAC is "to maintain, or where necessary restore, the woodland to good condition so that all of its typical and uncommon species are able to sustain themselves in the long-term as part of a naturally functioning ecosystem". Connected and linked to the vision are a number of relevant working objectives. These include:

Objective 1: To maintain or restore the favourable conservation condition of the species in Reas Wood and Farrs Bay.

Objective 2: To maintain or restore the favourable conservation condition of the habitats in Reas Wood and Farrs Bay.

Objective 3) To develop and maintain conservation linkages with areas outside but close to the SAC boundary.

Objective 4: To create and maintain a representative stakeholder forum to help implement the main recommendations of the SAC site plan.

Objective 5: To promote the understanding of the conservation and the health and well-being value of the site to local people and visitors

Objective 6: To identify and download financial resources that will assist stakeholders carry out the necessary actions for the maintenance of the SAC site's favourable status.

2.0 List of Stakeholders

Site Owners – The site is owned by Forestry Service NI

Site Managers – The site is managed by the NIEA

Statutory Nature Conservation Body Representative – NIEA

Rights of Access – There is a right of way on a main path through the middle of the site. The path is managed by the Forestry Service although an out of date cycling agreement has been made between the Forestry Service and the local Council Antrim and Newtownabbey Bough Council

Neighbouring Land – Neighbouring land includes Massereene Golf Club, Antrim and Newtownabbey Borough Council, O Neill Estates, the Northern Ireland Housing Executive and private land owners.

Other Interested Parties. Other interested parties include The Conservation Volunteers, Antrim and Newtownabbey Borough Council, the Six Mile Water Rivers Trust, Making Northern Ireland Beautiful, Antrim Tesco's and the Lough Neagh Partnership.

3.0 Implications of Designation and Conservation Plan for Interested Parties

There are a number of implications stemming from the actual designation of a conservation area for any interested party who is involved by nature of ownership or who wishes to become involved in its management. There are also a number of implications for the actual drawing up of a new conservation plan for a Natura 2000 site and the plan must make reference certain specific issues and follow an agreed format and template the following is a summary of the main implications for both drawing up a conservation plan and then implementing it on the ground based on the different type of designations. This section also touches on the implications for people who use the site for other non-conservation issues such as recreation and well-being and health. Whilst the Reas Wood and Farrs Bay site is mainly owned by the Forestry Service, the responsibility for its conservation lies mainly with the NIEA, through agreed formal and informal partnership agreements with the Forestry Service.

3.1 Special Area of Conservation (SAC)

Reas Wood and Farrs Bay are designated as an SAC. The site has been designated as a Special Area of Conservation (SAC) because it contains habitat types and/or species which are rare or threatened within a European context. The European priority interest within Reas Wood and Farrs Bay is Alluvial forest with Alnus glutinosa and Fraxinus excelsior AIno-Padion, Alnion incanae, Salicion alvae). The site is considered to be one of the best areas in the United Kingdom. SAC sites are subject to a strict protection under the Habitats Directive and are required to be managed so that any special habitats and/or species are in an appropriate condition. Article 6(1) of the Habitats Directive requires that necessary conservation measures are specifically designed for the sites. Furthermore, any statutory, administrative or contractual measures should correspond to the ecological requirements of the natural habitat types in Annex I and species in Annex II present on the sites. These habitats and species should therefore be clearly referenced in the development of any new conservation plan for the area concerned.

Article 6(2), 3(1) and 2(3) of the Habitats regulations require that steps must be taken by an appropriate management body to avoid the deterioration of an area's natural habitats as well as disturbance of the species there, enable the natural habitat types and species concerned to be maintained or, where appropriate, restored to a favourable conservation status and finally that economic, social and cultural requirements and regional and local characteristics of an area should also be considered when managing it. Finally, the Habitat Regulations require that any plan identifying work to be carried out on a Natura site, undergoes appropriate assessment.

3.2 Area of Special Scientific Interest (ASSI)

The Reas Wood and Farrs Bay site is designated an Area of Special Scientific Importance. The present legislation which regulates this designation is The Environment (Northern Ireland) Order 2002. The area was designated because it is of "special interest by reason of its flora, fauna, geological, physiographical or other features and needs to be

protected". Rea's Wood and Farr's Bay were declared and ASSI on 30 November 1992.
Feature Type

The main ASSI feature of the sites are its wet woodland habitat. There is 26 ha in total. However, there are two other features including higher plant assemblage species such as Alisma lanceolatum (3), Butomus umbellatus (1), Chenopodium polyspermum (5), Leucojum aestivum (3), Polygonum mite (3), Prunus padus (2), Cicuta virosa (2), Cardamine amara (5), Rorippa sylvestris (1), Lemna polyrhiza (2), Carex elongata (5), C. strigosa (2) and Scirpus sylvatica (2). The third main feature includes invertebrate assemblage species. The main invertebrate groups present include Nemertea, Mollusca, Diplopoda, Coleoptera, Hemiptera, Lepidoptera, Diptera, Hymenoptera, Crustacea, Opiliones and Odonata.

The drawing up of a new conservation plan for Reas Wood and Farrs Bay must take these three specific features into consideration when drawing up new effective management actions.

3.3 Special Protection Areas

Special Protection Areas (SPAs) are strictly protected sites classified in accordance with Article 4 of the **EC Birds Directive**. SPAs are selected for a number of rare, threatened or vulnerable bird species listed in Annex I of the Birds Directive, and also for regularly occurring migratory species. Lough Neagh SPA forms a close association and boundary with the Farr's Bay and Rea's Wood SACs. The adjacent open water of both sites and the lagoons of Farr's Bay although not part of the site NNR designation, fall within the Lough Neagh SPA and are integral to the management of both sites. The torpedo platform which is again within the SPA but near enough to the SAC site could also be considered as integral to the sites management. A new conservation plan for the site must therefore take into consideration the main bird features associated with the SPA designation.

3.4 Lough Neagh Ramsar site

Lough Neagh Ramsar also forms a close association and boundary with the Farr's Bay and Rea's Wood SACs. The Ramsar convention recognises wetlands as ecosystems where they are extremely important for biodiversity conservation in general and for the well-being of human communities. The adjacent open water of both sites and the lagoons of Farr's Bay and teh adjacent torpedo platform although not part of the SPA designation, fall within the Lough Neagh Ramsar and are therefore linked to the management of both sites.

3.5 Nature Reserve Context

Statutory Nature Reserves in Northern Ireland were declared under the provisions of the Amenity Lands Act (Northern Ireland) 1965. The current enabling legislation for establishing and managing both NRs and NNRs in Northern Ireland is the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 as amended 1989, 2002 & 2013 (NCALO)

This introduced the concept of National Nature Reserves (NNRs) for sites of "national importance" while retaining the nature reserve (NR) designation. Farr's Bay Nature Reserve was declared on the 1 June 1976 and Rea's Wood [N] Nature Reserve was declared on June 1976. Randalstown Forest NR was declared on September 1970. Again, the requirements of this designation should be considered when drawing up a new conservation plan for the area.

3.6 Other Indirect Implications of actual designations and the drawing up of a new conservation plan for the site

a. Recreational Value.

Whilst the Reas Wood and Farrs Bay site is designated primarily for its conservation value, the site also has a strong recreational value and attracts walkers and cyclists along its main central path. This has implications for the conservation value of the site and refence must be made on how users of the path area managed. The physical path itself also has implications for the management of the water levels of the site and this should be taken into consideration when drawing up the new plan.

b. Health and well-being

Research has confirmed the mental and physical health benefits of being in nature and walking in such sites. (The designation of the site will therefore have implications in improving the health and well-being of local people who use the site and these benefits should be considered when drawing up the new conservation plan.

c. Volunteering

The designation of the site and a new conservation plan could have implications for new management arrangements and in particular the need for more volunteering work on the site. The Conservation Volunteers already are involved in managing in invasive species on the site and a large litter life project involving Volunteers occurred in 2016. Any new volunteering arrangements should be considered when drawing up a new conservation plan for the site.

d. Future Management and Partnership

The site is presently managed by NIEA but the drawing up of a new conservation plan could have implications for future management arrangements. Because of budgetary and staff restrictions it has been hard for NIEA to provide the resources that are needed to fully monitor and manage the site. New partnership arrangements and new resources could therefore be considered for the future management of the site.

4.0 Socio- Economic Assessment

In developing this Conservation Management Plan, it is important that social, economic and cultural considerations are taken account of. The following is a summary of these considerations.

Socio-Economic Sector	Qualitative Assessment	Quantitative Assessment	Overall Impact
Agriculture	The main industry around the shores of the Lough is farming. Farms are generally small although there is also a large farm estate which is part of the SAC sites. It is the farming practices on the land around the shoreline which have had the greatest impact on the shaping of the Lough Neagh shoreline habitats and they would be the main driving group of stakeholders who could start to improve the conservation status of the SAC sites and the wider Lough.	There are a number of farms bordering SE corner of Reas wood (Approx. 1400m boundary) and this could have implications for managing water quality run off and water levels. Also, an active farm/estate which is included in Farrs Bay SAC boundary. In past there has been some issues with tree felling within the site.	Could have impact on quality of SAC status particularly in Farrs Bay.
Silviculture	Forestry Service own the SAC sites but have associated forestry bordering the Reas Wood and Farrs Bay site. Rea's Wood although significantly contiguous with Forest Service plantation is generally not considered to be important from a forest productivity aspect.	Forestry Service have future management plans in and surrounding the site and these could have implications for the SAC status	Future felling could have negative impact on site. Adjacent sites could also hold invasive species
Urbanisation / Buildings	There is a small housing development to the north of the Reas Wood	The immediate housing development site is approximately 200 ha and borders Reas Wood for about 400m. In a wider sense Reas Wood is within the boundary of Antrim Town which has a population of 20,000.	Large adjacent population attracts significant number of visitors. Large amount of rubbish deposited from surrounding lough towns
Mineral Extraction/ Mining	The largest industry in the Lough Neagh SPA/ASSI area is the sand trading industry.	The sand industry has five operators employing over 300 people with two large processing businesses reliant on Lough Neagh sand. The industry extracts up to 1.7 million tonnes per annum. Sand is not extracted close to site but on west side of Lough	No major impact as extraction occurs on other side of Lough but could have impact on SPA status
Local Business/ Industry	There is no immediate adjacent business beside the designated site however there is a lot of rubbish and shopping bags	Recent litter lifts in 2016 collected a lot of plastic bags and hospital rubbish.	Impact of rubbish significant

	accumulated from local shops and businesses and domestic		impact on SAC status
Tourism/ Recreation	There is a considerable amount of access in particular to Rea's Wood with its adjacent car park and other facilities provided through Antrim and Newtownabbey Borough Council. Close by is also the Six Mile Water Caravan Park. On-site facilities include a modern toilet and shower block, fully equipped laundry room, hard stands with 37 electric hook-up pitches and 8 tent sites, café, visitor information services, a TV lounge and games room overlooking Lough Neagh. Randallstown forest park borders Farrs Bay with access and car parking facilities. The recreational interests in or around Farr's Bay include forest rides and trails for walking and cycling within the forest, and a bird hide is situated on the lough shores in Farr's Bay itself. Neighbouring the site is a facility known as the World of Owls which provides its visitors with the opportunity to experience owls and raptors on display. Antrim Boat club is close to the site on the other side of the Six Mile Water	The site at north of Reas Wood borders on Maseereene Golf Club for approx. 600 metres. The club wishes to keep their side as dry as possible The car park allows for approximately 100 vehicles, has public toilet facilities, a café/restaurant and links immediately to the track/path network of Rea's Wood	Border with golf club could have impact of water level management. Increase in numbers visiting the site could have future negative impact if not managed. Local Recreational facilities particularly the Golf Club should be engaged with positively
Hunting/ Fishing	The Lough Neagh Eel fishery operates around the shores of the Lough. A small wildfowling operates a sconce of the southern shores of Reas Wood. Antrim and District Angling Club reserve fishing rights on the adjacent Six Mile Water. The club has a membership and day permit scheme for visitors.	The Eel fishery is the largest remaining *commercial wild eel fishery in Europe, producing 16% of total EU landings and supplying 3.6% of the entire EU market in 2007., O Neill Estates operates the shooting rights within 6 acres of the Fars Bay site. One sconce exits in southern shore of Reas Wood.	Shooting and fishing has little impact on SAC status. Indeed, possible argument to investigate formal culling arrangements for deer in Farrs Bay
Scientific research	Both NIEA and the Forestry Service have carried out formal condition surveys	Condition surveys in 2005 and 2003 respectively. These are now out of date. A new habitat condition survey was carried out in 2017 as part of drawing up this plan	Little historic data on condition of site and little habitat mapping for future management

5.0 Site Summary

The following is an overall summary of the main aspects and designations associated with the site.

5.1 Farrs Bay

Site Name	Farr's Bay, Lough Neagh National Nature Reserve
Location	West of the River Main, north-east shore Lough Neagh. County Antrim A6 south west from Randalstown 1 km, left onto Staffordstown Road, follow Forest Service signs, take Mount Shalgus Lane to FS car park. 1.4 km forest track south through forest to boundary with Farrs Bay reserve Grid Reference J089872 entrance to reserve

Declarations

National Nature Reserve	Randalstown Forest 4/9/1970' Farr's Bay 1/6/1976
Area of Special Scientific Interest	30/11/1992
Part of Ramsar	05/01/1976
Part of Special Protection Area	01/04/1999
Part of SAC Area	24/5/200, 13 ha
Ownership	Forest Service 7 ha Shane' castle Estate Lord O'Neil 6 ha
Local Authority	Antrim Borough Council
District Planning Officer	Ballymena Planning Office
Map references	OSNI 1:50000 No: 14 OSNI 1:10000 No: 95 OSNI 1:2500 No: 95

5.2 Reas Wood

Site Name	Rea's Wood, Lough Neagh National Nature Reserve
Location	To the immediate south of the entrance of the Sixmilewater River into the lough, on north-east shore Lough Neagh. County Antrim Situated next to the marina at Antrim, access to the reserve is from the car park. A public footpath runs the entire length of the wood parallel to the shore. Access also from the car park at the former old Deer Park Hotel. Grid Reference J135865 entrance to reserve

Declarations

National Nature Reserve	Rea's Wood,1/6/1976	
Area of Special Scientific Interest	30/11/1992	
Part of Ramsar	05/01/1976	
Part of Special Protection Area	01/04/1999	
Part of Special Area Conservation	24/5/2002	
Area	26 ha	
Ownership	Forest Service 24 ha, Shaftesbury Estates 1.1ha,	
Local Authority	Antrim Borough Council	
District Planning Officer	Ballymena Planning Office	
Map references	OSNI 1:50000	No: 14
	OSNI 1:10000	No: 95
	OSNI 1:2500	No: 95 -1544

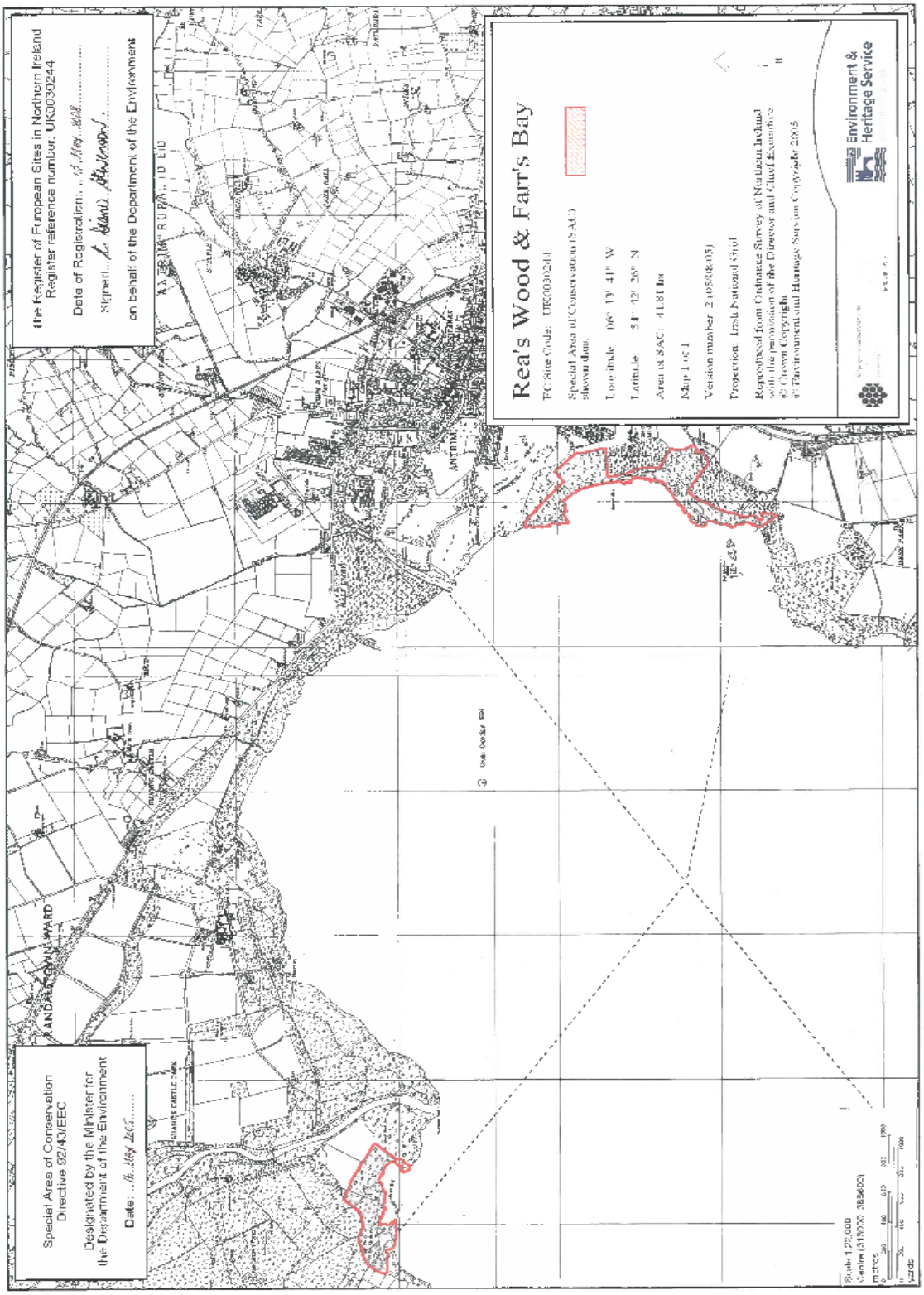
5.3 Boundary Rational

The overall SAC boundary encompasses all of Rea's Wood NNR and Farr's Bay NR, and part of Randalstown Forest NR. It has been drawn to include good examples of swamp woodland, in addition to other semi-natural habitats that form part of the natural transition, such as inundation zones, Ash woodland, swamp and fen vegetation. The site boundary uses permanent boundary features where possible; however, at the eastern side of Farr's Bay the NR boundary was used.

Rea's Wood is situated at Antrim on the north-east shores of Lough Neagh and is to the immediate south of the river Sixmilewater. The boundaries correspond to the shores of the Lough and internally with an inland path which goes through the wood from the former site of the Deerpark Hotel. The path exits at the northern end of the reserve which is marked by a drain and fence which separates the wood from the golf club. To the southern boundary the reserve is established against a former shoreline marked by a change to steeper topography.

Farr's Bay is situated 3 kilometres south of Randalstown along a 1 kilometre length of shore of Lough Neagh on a former old lake bed. The northern boundary is marked by a steep rise in topography once a previous shoreline, this fenced boundary divides the reserve from Randalstown Forest and an open agricultural field. The east and west boundaries correspond to the boundary of the Randalstown NR boundary

Rea's Wood and Farr's Bay Boundary Map and Location



5.5 Natura 2000 – Standard Data Form and SAC features

Each Natura 2000 site in the United Kingdom has its own Standard Data Form containing site-specific information. The data form for the Reas Wood and Farrs Bay site has been generated from the Natura 2000 Database submitted to the European Commission on 22/12/2015. See Annexe 5.5 for complete Standard Data Form.

The standard data form describes the site as having a habitat class of 95% “Broad-leaved deciduous woodland” and 5% “Bogs, Marshes, Water fringed vegetation, Fens”. It describes other terrestrial soil and geological characteristics as “alluvium,sand,neutral,nutrient-rich” and the overall geomorpholy as “lowland” The habitat is described as important because of presence of Alluvial forest with Alnus glutinosa and Fraxinus excelsior.

The sites Conservation status habitat is described as “good”. This is an expert judgement of the overall value of the site for the conservation of the relevant Annex I habitat. Sites have been graded A, B or C and Reas Wood and Farrs Bay as well as being described as good has also been graded as a B status. i.e. “Sites holding excellent stands of the habitat, significantly above the threshold for SSSI/ASSI notification but of somewhat lower value than grade A sites.”

5.6 ASSI Features

The SAC designation has one main feature which is the wet woodland habitats. The three main ASSI features are wet woodland habitat, higher plant assemblage and invertebrate assemblage. These are detailed below.

Feature Type	Feature	Size/ extent/ population
Habitat	Wet Woodland	6 ha
Species	Higher Plant Assemblage. Alisma lanceolatum (3), Butomus umbellatus (1), Chenopodium polyspermum (5), Leucojum aestivum (3), Polygonum mite (3), Prunus padus (2), Cicuta virosa (2), Cardamine amara (5), Rorippa sylvestris (1), Lemna polyrhiza (2), Carex elongata (5), C. strigosa (2) and Scirpus sylvatica (2)	ABC Score 36
Species	Invertebrate Assemblage Survey at these two sites has amassed an extensive inventory of the various invertebrate groups present. A number of these groups are extremely rich in species, which include a large number of rare or very	Further research required and the need to set firm selection criteria for invertebrate assemblages.

	locally distributed individual species that have been recorded. Major groups recorded include Nemertea, Mollusca, Diplopoda, Coleoptera, Hemiptera, Lepidoptera, Diptera, Hymenoptera, Crustacea, Opiliones and Odonata Further	

5.7 ASSI Views On Management

These VAMs are sourced from the ASSI citation for the site in February 2008.

a) Hydrology

The extent of inundation is dependent on the level of Lough Neagh during the winter months. This level is regulated at the Toome Weir, which controls flow down the Lower Bann. Winter inundation of the marginal woodland supplies a renewable source of water borne seeds including exotics. Lough Neagh, already a major source of water for NI, will come under greater pressure from continual increase in demand for water resources

b) Changes in Water Level

The past series of lowering Lough Neagh's water levels has had a fundamental impact on the marginal habitats, including woodland. Each lowering of the water level has resulted in a successional series of shoreline colonisation. Wet woodland which has developed on previously exposed lake bed has changed to dryer woodland community types, with the increasingly elevated shoreline, after each lowering of the loughs water level. The lowering of water levels also creates newly exposed beds which are subsequently colonised by new wet woodland. Proposals to increase water extraction from the Lough will lower the summer water level again but is unlikely to affect winter levels.

c) Drainage of Swamp Woodland

A series of foreshore ridges, created during past lowering of water levels, previously acted as a natural barrier to drainage resulting in impoundment of water. The impounded areas remained flooded throughout the year, supporting much of the best swamp woodland. A study of the changes in the vegetation of Rea's Wood between 1984 and 1991 by Rachel Shepperson and Brian Rushton, (Applied Ecology Research Group, UUC) found there has been a shift in the composition of the woodland flora in general from characteristic wetland species to those preferring drier conditions. No reasons for this vegetation community shift were proposed during the study. However, it was noted, woodland adjacent to drains that have been cut through these ridges, show pronounced signs of drying out.

c) Woodland Clearance

Removal of woodland would lead to a reduction in diversity. No recent significant broadleaved woodland clearance has been recorded, although ad hoc clearance continues.

e) Dead Wood Removal

Dead wood should be left in situ if safe or practical to do so. This provides valuable habitat for fungi, invertebrates etc. Removal of wood or fire-wood should be discouraged.

f) Invasion by Exotics

Exotic species are widespread particularly in Rea's Wood, varying in their degree of impact and threat they pose. Very invasive species such as Sycamore Acer pseudoplatanus, Indian Balsam Impatiens glandulifera, Pick–a-Back Plant Tolmiea menziesii, Dogwood Cornus sanguinea, Japanese Knotweed Fallopia japonica, Salmon Berry Rubus spectabilis, Skunk Cabbage Lysichiton americanus and Giant Hogweed Heracleum mantegazzianum are seen as posing a current threat. Other invasives not seen as an immediate threat due to their limited occurrence, include Horse Chestnut Aesculus hippocastanum, Rhododendron Rhododendron ponticum, Bamboo Bambosoideae, Monkey Flower Mimulus guttatus, Common Comfrey Symphytum officinale, Monk's-hood Aconitum napellus, Ostrich fern Matteuccia struthiopteris, Hop Humulus lupulus, Cherry Laurel Prunus laurocerasus, Black Current Ribes nigrum or slow rate of spread Beech Fagus sylvatica. Other species which have been established for a long time on the site such as Keeled Garlic Allium carinatum, Summer Snowflake Leucojum aestivum, Confused Michaelmas-daisy Aster x salignus, are not seen as a threat**.**

It is noted that in recent years The Conservation Volunteers have undertaken some control of scrub and ground flora invasives. This input should continue and it is recommended that a link with Six Mile Water volunteers be developed who have invasive species training

g) Fly-tipping

Water borne material is the major source of rubbish deposited onto the shore line wood, during winter flooding or storms. A regular litter pick up regime needs to be implemented

5.8 Past and Current Management Agreements

There have been a number of management arrangements between NIEA and the Forestry Service who own the site. These are detailed below.

Rea's Wood	Farr's Bay	Combined Sites
Rea's Wood Forest NNR Management Plan	1977 Randalstown Forest NNR Management Plan to Accompany Management Agreement	2004 Rea's Wood and Farr's Bay SAC Conservation Objectives
	1990-95	2005

Management Plan 2007-13	Minimum Management Plan for Lough Neagh NNR –Farr's Bay	Rea's Wood and Farr's Bay SAC Condition Assessment Report
	1994-99 Management Plan for Lough Neagh NNR – Farr's Bay	

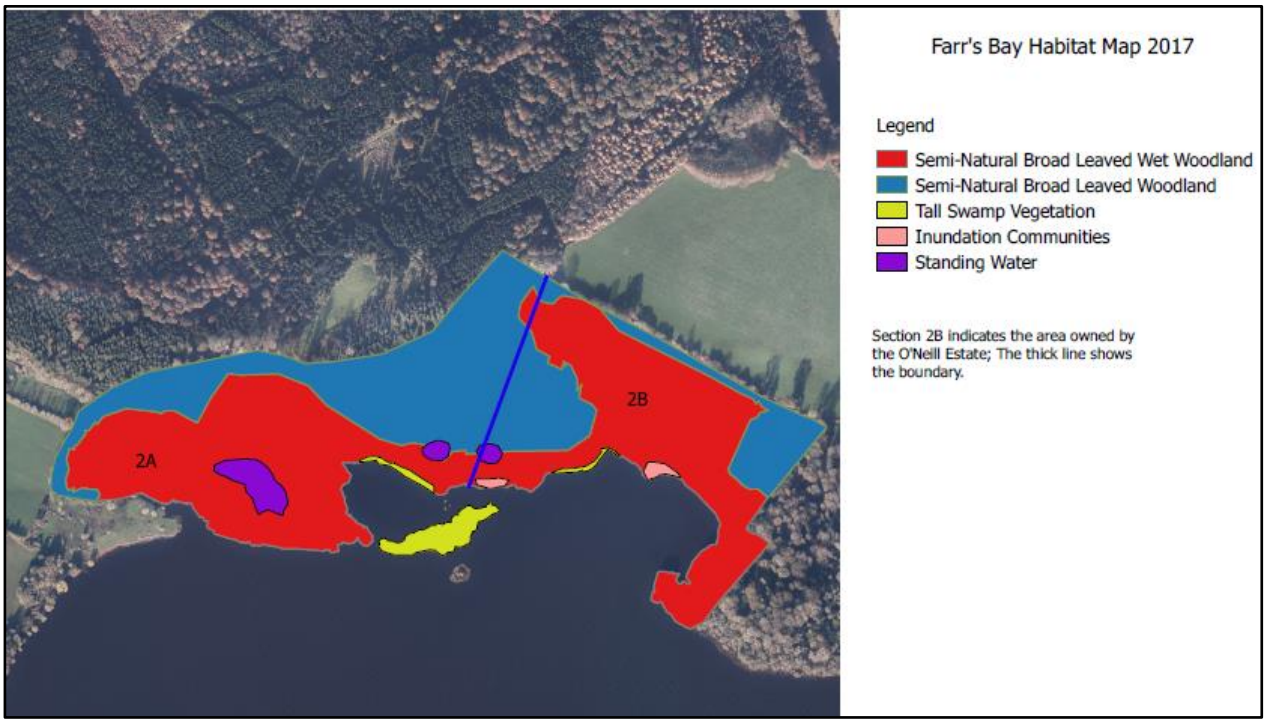
The site has for the most part been managed by NIEA with an agreement with the Forestry Service, although part of the site in Farrs Bay is managed by O Neil Estates. Management in general has been scarce with little condition assessment since 2005 and little past active removal of invasive species or flotsam and jetsam. There is deer present in Farrs Bay and there has been a general lack of management of this species which has had a negative impact on the condition of the wood. There is a cycle access arrangement between the Forestry Service and Antrim Borough Council, now Antrim and Newtownabbey Borough Council but this has now relapsed. In the last two years TCV have got agreements with Forestry Service and NIEA to remove some invasive species and in 2016 a major joint effort between a large number of parties was made to remove substantial amounts of flotsam mid jetsam form the shore.

5.9 Management Units

The plan area has been divided into management units to enable practical communication about features, objectives, and management. This will also allow us to differentiate between the different designations where necessary. A map showing the main habitat and feature management units referred to in this plan is shown below:

Reas Wood Unit Habitat Map

Farrs Bay Unit Habitat Map



The following table confirms the relationships between the management units and the designations covered**:**

UNIT NUMBER	SAC	ASSI	SPA	NNR
REAS				
1	X	X	X	X
2	X	X	X	X
3	X	X	X	X
4	X	X	X	X
5	X	X	X	X
FARRS				
1	X	X	X	X
2	X	X	X	X
3	X	X	X	X
4	X	X	X	X
5	X	X	X	X

5.10 Site Conservation Prioritisation Matrix

LEVEL	Feature Type	Feature Name	Extent/ Population	Current Condition	Comments
1	Habitat SAC/ASSI	Alluvial forests with Alnus glutinosa and Fraxinus excelsior AIno-Padion, Alnion incanae, Salicion alvae)	@@ ha	Alluvial forest and wet woodland is in unfavourable condition	Need for strong intevention

2	Species SAC /ASSI	Higher Plant Assemblage. Alisma lanceolatum (3), Butomus umbellatus (1), Chenopodium polyspermum (5), Leucojum aestivum (3), Polygonum mite (3), Prunus padus (2), Cicuta virosa (2), Cardamine amara (5), Rorippa sylvestris (1), Lemna polyrhiza (2), Carex elongata (5), C. strigosa (2) and Scirpus sylvatica (2)	@@ ha	Plant assemblage is largely favourable with the exception of tall swamp vegetation habitat	Need for better maintenance and management
3	Species SAC/ASSI	Invertebrate Assemblage. Species include a large number of rare or very locally distributed individual species that have been recorded. Major groups recorded include Nemertea, Mollusca, Diplopoda, Coleoptera, Hemiptera, Lepidoptera, Diptera, Hymenoptera, Crustacea, Opiliones and Odonata Further	@@ha	Invertabrate assemblage is largely favourable with the exception of tall swamp vegetation habitat.	Need for beter maintenance and management
4	Species SPA	Species and Bird Assemblage	@@ha	Bird assemblage for winter wildfowl is unfavourable	Need for intervention on shoreline habitats for common tern, and grebe

6.0 Conservation Objectives

6.1 In terms of the SAC status this section will attempt to describe the feature for which the designation exists, their relative importance, and the identified Conservation Objectives for each feature. The most recent condition assessment classification of the feature is also shown.

SAC Feature	**Global Status** **Importance** **Condition**	**Component Objective**
Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion alvae	High	Maintain and expand the extent of existing swamp woodland. (There is an area of wetland and damp grassland which have the potential to develop into carr woodland)
		Maintain and enhance swamp woodland species diversity and structural diversity
		Maintain the diversity and quality of habitats associated with the swamp woodland, e.g. fen, swamp, especially where these exhibit natural transition to swamp woodland.
		Seek nature conservation management over adjacent forested areas outside the SAC/ASSI where there may be potential for woodland rehabilitation
		Seek nature conservation management over suitable areas immediately outside the SAC/ASSI where there may be potential for woodland expansion

6.2 Area of Special Scientific Interest [ASSI] Features

In terms of ASSI designation this section describes the features for which the designation exists, their relative importance and the identified Conservation Objectives for each feature. The most recent condition assessment classification of the feature is shown if available

Feature	Importance	Component Objective
Wet Woodland	High	Maintain and expand the extent of existing swamp woodland. (There is an area of wetland and damp grassland which have the potential to develop into carr woodland)
		Maintain and enhance swamp woodland species diversity and structural diversity
		Maintain the diversity and quality of habitats associated with the swamp woodland, e.g. fen, swamp, especially where these exhibit natural transition to swamp woodland.
		Seek nature conservation management over adjacent forested areas outside the ASSI where there may be potential for woodland rehabilitation
		Seek nature conservation management over suitable areas immediately outside the ASSI where there may be potential for woodland expansion

6.3 Additional ASSI Selection Features

Feature	Importance	Component Objective
Individual rare and notable plant species	High Thirteen individual rare and notable plant species: *Alisma lanceolatum, Butomus umbellatus, Chenopdium polyspermum, Leucojum aestivum, Polygonum mite, Prunus padus, Cicuta virosa, Cardamine amara, Rorippa sylvestris, Lemna polyrhiza, Carex elongata, Carex strigosa, Scirpus sylvatica*	Map location of rare species
		Maintain abundance and distribution and if feasible enhance populations
		Establish the status of these species and if appropriate draw up further conservation priorities for given species
Notable invertebrate assemblage	High There is an extensive inventory of the various invertebrate groups, a number of which are rich in species which include a large number of rare or very locally distributed individual species. Major groups include Nemerta, Mollusca, Diplopoda, Coleoptera, Hemiptera, Lepidoptera, Diptera, Hymenoptera, Crustacea, Opiliones, Odonata	Map location of rare species
		Maintain abundance and distribution and if feasible enhance populations
		Establish the status of these species and if appropriate draw up further conservation priorities for given species

6.4 Special Features by Unit

It is important to identity the main basic units of land which will be surveyed and their condition assessed. This table is produced to display where relevant the features spatially across the site and show any variation in condition. The site is divided into sub units. Where a feature is categorised unfavourable this condition does not necessarily pertain across the whole site.

6.5 Special Features Condition by Unit

Having identified the main units and sub units for assessment it is also important to record the condition of each unit. In particular it is important to collate any survey information and record the reasons satisfactory or unsatisfactory condition, ie. why the feature is not considered to be in favourable condition and where possible to indicate known current and past management. The information may be obtained from Condition Assessment results, field assessments and discussion with land managers.

7.0 Identified Pressures and Threats on Conservation Interests

7.1 It is also important to identify and assess the pressures and threats on the conservation interests of the Reas Wood and Farrs Bay site**s**. A list of primary pressures and threats is therefore outlined in Annex 9

8.0 Macro Management Measures/Actions

Within a conservation plan it is important to consider and outline the wider macro management measures and actions to address each of the main conservation issues. The table 8.1 and table 8.2 identify the main actions at a site and off-site level and table 8.3 details these actions together with costings on a unit and sub unit level based on a division between the sites Rea's Wood and Farr's Bay.

Table 8.1 Whole Site Action Measures

The unit level is based on a division between the sites Rea's Wood and Farr's Bay. A sub-unit level is also applicable where further divisions may be based on criteria such as ownership, different management practices internal to the sites.

An excel spread sheet has been developed [too large to embed here hence its attachment as an annexe]

The management actions show timescales, costings. Some actions may be policy or administrative whilst others be physical actions referred to as Capital Works Requirement.
Management actions are rated:
A: Essential and Immediate Conservation Action in response to actual or real threat of deterioration of a European feature
B: Necessary Conservation measure designed to maintain or restore a European feature to favourable condition
C: Conservation Measures to improve the condition of an ASSI feature [non N2k] other European habitat or feature of importance
D: Conservation Measure relating to other biodiversity on site
E; Engagement activities such as signage, public relations etc which are likely to relate to other management actions
M; Monitoring or research actions which may relate to pre/during/post implementation of other measures, can include Condition Assessment monitoring

Issue	Potential/Identified Cause	Current/Required Measures
Alluvial Forest Wet Woodland		
Negative changes to tree species composition	Non-native tree species increase in area & composition	Planned thinning & removal of non-native invasive tree species to favour predominance of native tree species Remove non-native tree species as saplings
Suppression of natural tree recruitment	Non-native shrub **species** increase in area & composition	Planned removal of non-native invasive shrub species
Loss of native tree species	Plant Diseases e.g. Chalara [Hymenoscyphus fraxineus.]	Monitor for any disease and loss. Potential for planting plan with alternative native species
Damage to trees and reduction in natural recruitment	Grazing, Poaching at Farr's Bay by grazing animals [deer)	Set threshold for damage levels. Manage deer pressure if necessary with Forestry Service and O Neill Estates Monitor for use of sites
Serial succession - transition from wet to dry woodland communities	Lowered water table	Investigate the potential to influence hydrology by control of water level in drainage ditches [Rea's Wood] Work with Masserene Golf Club and other partners regarding drying out of areas bordering the two sites
Notable Plant Assemblage		
Suppression/Loss of native flora	Non-native shrub species increase in area and composition	Develop agreed plan with TCV, LNP, ANDC and NIEA to eradicate all invasive shrub species Monitor annually for extent of invasive shrub spread and suppression.
Suppression/Loss of native flora	Non-native invasive flora increases in area and composition	Develop agreed plan with TCV, LNP, ANDC and NIEA to eradicate priority non-native flora species and cover. eradicate invasive non-native flora where practical Monitor annually for extent of invasive
Suppression/Loss of notable species	Lowered water table	Investigate the potential to influence hydrology by control of water level in drainage ditches [Rea's Wood] Due regard to be given to Forest Service and golf Course in any plans to raise water table

		Undertake the installation of simple sluices across the drainage ditches within the SAC particularly Rea's Wood] to raise the water table Monitor water levels
Notable Invertebrate Assemblage		
Reduction/Loss of habitat for notable invertebrates	Removal of dead wood by public	Leave felled/fallen timber for dead wood invertebrates /fungi. Identify sites for timber stacking On site information made available to public
Reduction habitat for some Invertebrate species	Undesirable human activities Damage through public access	Maintain current formal access provision with signage to stay on path. Provide more information signage on vertebrate and plant assemblage in woods Monitor informal trails, both current and for any future expansion.
Removal of habitat for some species	Smothering of habitat by litter – water borne as flotsam	Undertake at least bi-annual litter clearances of water borne material. Utilise volunteer groups where possible Research sources of litter
Suppression/Loss of notable species	Lowered water table at standing water sites	Investigate the potential to influence hydrology by control of water level in drainage ditches [Rea's Wood] Due regard to be given to Forest Service and `golf Course in any plans to raise water table Undertake the installation of simple sluices across the drainage ditches within the SAC particularly Rea's Wood to raise the water table Monitor water levels

8.2 Table of Off Site Measures

Table 8.2 documents the off-site pressures and threats likely to cause damage at the whole site level with a view to remedy or reduce the impacts. These threats or pressures occur

within the wider Lough Neagh land and or water catchment or from immediate neighbouring lands and activities.

Table 8.2 Off site Measures

Issue	Potential/Identified Cause	Current/Required Measures
Alluvial Forest Wet Woodland		
Seral succession - transition from wet to dry woodland communities at some parts site	Lowered water table through reduction in level of Lough Neagh	Raise water level through bunging and drainage ditches to impound water and raise water table within standing water parts of site Coordinate with "upstream" neighbours as potential impact on hydrology off-site
Loss of tree habitat	Felling in O Neill Estate	Link with O Neill Estates at Farrs Bay and encourage take up of EFS grant. Develop working relationship through help with litter lift
Impact on Features	Forestry Operations impacting on features of the sites.	Minimise and restrict forestry operations to prevent unnecessary damage to the site and its features. Examine future planting of native species in nearby Forestry sites
Suppression/Loss of native fauna & flora	Off Site Non-native invasive flora species providing undesirable source of contamination	Monitor for external nearby sources of undesirable species. Negotiate reduction in threat of contamination where practical
Notable Plant & Invertebrate Assemblage		
Reduction/Loss of habitat for notable flora and or invertebrates	Inundation of woodland floor by deposition of litter/flotsam – water borne material	Investigate sources of litter contamination and in partnership endeavour to encourage improvement of containment of litter sources

		Develop clean-up programme in other sites particularly O Neill Estates. Establish links with LNP Litter Research Landscape Project, KNIB, Rivers Trust
Negative impact on soil chemistry	Offsite chemical applications to agricultural lands of Fertilisers, Herbicides Deposition of atmospheric Nitrogen in excess of critical loads	Encourage new Environmental Farm Scheme applications in surrounding sites and develop nitrate plans Link sites into new Lough neagh Environmental Farm Scheme
Insufficient Management on site	There are only limited practical works being resourced mainly carried out by Conservation Volunteers, Rivers Trust Need for increased input /presence of site managers or delegated agent	Define, plan and attract appropriate funding/resources to engage contractors and or volunteers as appropriate to complete works on the sites Good works are being undertaken by volunteers but needs increase in effort Set up new management committee with NIEA, Forestry Service, LNP and TCV at core with other partners as necessary.
No local and wider stakeholder input	Mix of principal and secondary authorities, agents and interested parties mostly operating separately to one another	An integrated association of relevant interests should be formed into a partnership/forum as a site management committee. This will require a lead organisation to service the forum. Appropriate resources will be required to support administrative, fund raising, public relations by this forum

Low input and engagement of local communities and volunteers in the care and maintenance of sites	Need active lead in finding/coordinating potential community and volunteer involvement Appropriate levels of communication, engagement, resourcing and training are required Need a bank of volunteers	Develop links with established, current and other potential volunteers – including Rivers Trust, TCV, KNIB, Local Council and LNP volunteers LNLP has developed a range of Project Plans which could have great benefit to the sites if deployed These include Litter Less Campaign, River Environment Management Project, Six Mile Water River Clean and Audio Projects, Cryptic Wood White and nesting Barn Owl Projects, Conservation Apprenticeship Programme A Partnership Forum dedicated to the site could expand on these engagements with volunteers and assist in sourcing appropriate funding, resources and training. Use LNP Volunteers Coordinator post as agent for vol bank development
SPA Bird Species and Habitats		
Poor condition of small islets off Farrs Bay and Reas Wood	Lack of Management of Site	Improve habitat of shoreline and islets off shore for terns and grebes

8.3 Management Actions at the Unit Level

The previous chapter detailed the more wholistic and strategic measures needed on a whole site and off-site basis. However, there is a need to provide a more detailed site. unit and sub unit based assessment of what actions are needed to improve the conservation of the site features and improve the overall favourability of the site. Annex 10 provides this detail.

8.4 Up to date condition survey

An up to date condition survey was carried out in both sites in Jul 2017 whereby standard quadrats were identified and the condition of habits and species within them were noted. All major invasive species were also identified and located using GPS. This information can be found in Annexe 8 and the survey data was used to feed into the management actions and management matrix identified in the following pages.

9.0 Potential Future Threats on Conservation Interests

In an attempt to future proof the plan it is important to identify and where possible mitigate against impacts that could affect site features in the future. The table below identifies these possible future issues. Estimates have been made to the scale of the issues on each of the woodland sites either through measurement or expert opinion.

Issues on Reas and Farrs Sites	Likely Cause	Scale
Negative impact on hydrology/inundation through long term elevated flooding. Woodland, flora and fauna features altered	Raised levels of Lough Neagh through global warming and increased water levels	Medium
Negative change to woodland tree composition	Additional Invasive non-native species	High
Loss of notable flora composition	Additional Invasive non-native species	High
Loss of notable invertebrate assemblage	Additional Invasive non-native species	Medium
Negative changes to soil chemistry	Agricultural intensification from surrounding farms Atmospheric Nitrogen inputs	Low
Loss of habitat - fen carr, minerotropic open fen, typha swamp, sandy beach	Encroachment by scrub, or change in sand disposition	Medium
Lack of appropriate on-site management and supervision	Insufficient management by owners, agents or occupiers of the site on a regular basis. Need for regular meetings of stakeholders at least twice a year	High
No on site practical works for good Site Protection No Survey and monitoring	Need for integrated management team and coordination of partners	High
No quality interpretation of site and education of public	Need for more quality information at site and why it's such a special and important site.	Medium

	Need for regular walks and talks on site to raise awareness of its importance	
Lack of appropriate funding and resources	Insufficient public funding to assist with management and need for leading body to apply for funds from variety of sources	High
Accumulation of litter on shoreline	Insufficient pick up of litter on an annual basis	High
Long term effects of winter flooding and climate change effect	Increased wetter winters due to climate change	Medium
Increase in nitrate and phosphate Levels	Possible indirect effect on fly numbers and wintering wildfowl food source	Medium
Issue Rea's Wood		
Loss of woodland, dead wood	Woodland clearance, dead wood removal	Low
Fragile woodland floor	Recreational pressure through increase in trampling by human access	Low
Change in surrounding land use – building development	Increase footfall, impacts through drain discharge	Low
Issue Farr's Bay		
Negative change in woodland tree composition	Felling form Forestry Service and O Neil estates	Medium
Damage to trees, suppression of saplings	Grazing by Deer	High
Poaching of woodland floor, damage to flora	Grazing by Deer	High

10.0 Advise on operations likely to damage to Farrs Bay and Reas Wood

10.1 Operations that could damage site

This chapter identifies those activities that have the potential to cause damaging impacts on the two sites, what the damage might be and the mechanisms to control the activities.
There is a legal list of potentially damaging activities that require the consent of DAERA/NIEA and are contained within the citation document for each site designation.
The following operations and activities appear to be likely to damage the flora, fauna, geological and physiographical features of the site area. Those relevant to Farr's Bay/Rea's Wood have been extracted from the overall citation.

Note that consented operations are usually made to an agent or individual with interests in a designated site and plan to undertake activities which might cause damage to site features. When the Department undertakes operations on site's it owns or is managing, then an assent is required. Planning permission is usually regarded for building works and any material movement of significant scale.

Table 10.1 Operations with potential to damage inside and out with the site

Issue Whole Site Potentially Damaging Operation	What impact on site	Control Mechanism
Any activities to subsurface of the land through reclamation, extraction of sand or gravel	Damage to biological site features. Negative Impact on hydrology.	Consent
The application of herbicides, fungicides or other chemicals deployed to kill any form of wild plant, other than plants listed as	Application of herbicides and other chemicals to non-targeted species likely to cause collateral damage to site feature interests. Ground flora in particular	Assent

being noxious in the Noxious Weeds (NI) Order 1977.		
The storage or dumping, spreading or discharge of any material not specified.	Damage to wet woodland floor, notable flora and fauna	Assent Consent
The release into the area of any animal (other than in connection with normal grazing practice) or plant. 'Animal' includes birds, mammals, fish, reptiles, amphibians and invertebrates; 'Plant' includes seed, fruit or spore	This is a semi-natural ecosystem already impacted by invasive non-native species No further introductions normally permitted	Consent
Burning	Would damage woodland floor ground flora and invertebrates	Assent Consent
Changes in tree or woodland management, including afforestation, planting, clearing, selective	Would change species composition and distribution Potential to damage ground floor	Assent Consent

felling and coppicing.		
Construction, removal or disturbance of any permanent or temporary structure including building, engineering or other operations	Would physically impact on woodland and damage flora and fauna interests	Planning permission Consent
Alteration of natural or man-made features, the clearance of boulders or large stones and grading of rock faces.	Would physically impact on woodland and damage flora and fauna interests	Consent
Operations or activities which would affect wetlands (including marsh, fen, bog, rivers, streams and open water) e.g. Change in the structure of watercourse; lowering of the water table	Could have adverse impacts on hydrology Cause alterations to habitat, flora and fauna assemblages	Assent There is potential here to have indirect impact off site when drainage patterns are altered
The killing or taking of any animal in a manner likely to affect the continued	Could reduce/remove some species from the sites	Assent Consent

existence of the species within the area		
The following activities which may damage or disturb the wildlife of the area: (i) Educational activities; (ii) Research activities; (iii) Recreational activities; (iv) Exercising of animals	Potential to cause physical damage to the sites by trampling, destruction and or removal of flora and fauna	Consent
Changes in game, waterfowl or fisheries management or fishing or hunting practices.	Could have direct. indirect impact on game	Consent

10.2 Other Potential Damaging Issues

Water Levels and Hydrodymanics

Water levels are currently regulated and controlled in Lough Neagh within a specified range, that is 12.450 meters to 12.600 meters Ordnance Datum, as defined in the Lough Neagh Levels Scheme (1955) Act (as amended). This is achieved through the operation of sluice gates at Toome but recent winter storms have resulted in major flooding at the Reas wood and Farrs Bay site, since the exit of water through Toome was insufficient to lower levels within the defined statutory levels. This increase in water level also brought additional flotsam and jetsam in the wooded areas of both sites and caused further damage. There is therefore a possibility that the site will become more wetter and for longer periods during the winter period due to the possible long-term effects of global warming and this impact should be monitored in the long term.

Lough Neagh is extremely exposed. This, combined with its shallow nature and the strong south-westerly winds characteristic of the region, ensure that a large water column can push in the direction of the wind again leaving large amounts of litter in the Reas Wood and Farrs Bay shoreline.

Nitrate and Phosphate Levels

Any lake with a phosphorus concentration over 35 micrograms per litre is classed as eutrophic (over enriched). In 2000, Lough Neagh had an average phosphorus concentration

of 145 micrograms per litre and by 2010 had a concentration of over 200. It is therefore classified as hypertrophic although since the introduction of the EU nitrates directive limiting the amount of fertiliser and slurry that can be spread onto farmland and requiring farms to have nutrient management plans, this level has now begun to slowly fall. It is thought that the large populations of Lough Neagh flies may be a result of the hypertrophic condition of the Lough and that the slow reduction in phosphate in recent years has had an impact of reducing the food source for wintering wildfowl and thus the SPA designation. Again, this possible long-term effect should be monitored.

11.0 Links to a Wider Landscape

Designated sites and their special features do not exist in isolation and are inextricably linked to the environment that surrounds them, which can bring both positive and negative impacts and influences. In turn, these sites can act as a significant element within networks of other important nature conservation sites, with the potential as reservoirs for the exchange of biodiversity. An assessment of the linkage to the wider countryside can be very helpful in maintaining or improving the delivery of a site's nature conservation potential.

11.1 Rea's Wood and Farr's Bay within Forestry Policy Northern Ireland

Forest Services' policy approach for forest management is based on a publication NI Forestry "A Strategy for Sustainability and Growth" [2006]. This outlines the policies around sustainable management of existing woods and forests, coupled with an expansion of forest cover to increase the many diverse benefits that forest provide. It includes a specific aim to maintain access arrangements and to realise the outdoor recreation potential of public forests. Since 2000 all public forests have been externally certified as being sustainably managed.

The Forest Service plan for Antrim Forests of which Rea's Wood and Farr's Bay includes objectives such as support for the enhancement of biological diversity and the identification of opportunities to develop partnerships with operational providers to improve the quality and range of services and visitor experiences. These opportunities should be taken up by a new management forum for the site so that a new closer working relationship with Forestry is developed.

11.2) Specific Wider Links

There is a recommendation that the Rea's Wood and Farr's Bay site's management be achieved in the future through a new forum that would bring a wider body of organisations interested in the welfare and care of the sites. Forest Service and NIEA would be a principal leader in such a forum as landowners and managers, with expertise in woodland and tree management and broad experience from its operations across Northern Ireland forests.
There would be opportunities to explore sources of funding for the sites that could be enhanced by Forest Service and NIEA's integral involvement in this forum.

There are other on or near -site opportunities in which Forest Service could make important contributions to management, ranging from invasive species control on their adjacent lands out with the designated sites and consideration of enhancement projects to maintain or extend a wet woodland feature which is contiguous with the Rea's Wood designation.

11.3 Rea's Wood and Farr's Bay within the area of Antrim and Newtownabbey Local Development Plan 2030

This document forms part of work on a new Local Development Plan for the Borough which will look forward to 2030. The purpose of the new Plan will be to inform the public, statutory authorities, developers and other interested parties of how the Borough should develop in the years ahead. Local Development Plans contain policies and proposals that are used when determining planning applications. A good plan will lead to decisions that are consistent and people will know what to expect in terms of change, and the locations where development will be encouraged.

A new management forum for the site should work with the Antrim and Newtownabbey Borough Council and other Councils around the Lough to develop the highest planning protection designation for the whole of the Lough.

11.4 Specific Wider Links

There are also some current environmental improvement projects involving the Antrim and Newtownabbey District Council that will have some bearing on the management of Rea's Wood and immediate area. In particular the Gateway Centre, Lough Neagh Beach Project, Litter Less Project. These are of varying scale and intention but all have the potential to bring more visitors to the Rea's Wood area especially. For example the Gateway Centre as part of a corporate plan of Antrim and Newtownabbey District Council [ANDC] and the NITB will be a significant "honey pot" at the entrance of the wood. At another level but important by way of local involvement and partnerships with other organisations, the council will cooperate with the Rivers Trust and Six Mile Water Trust as part of an initiative driven by the Lough Neagh Partnership to improve the environment of local rivers.

As part of these current initiatives there is a new opportunity for local council representation on a proposed new management forum for the Rea's Wood and Farr's Bay sites. This could give the council through its local biodiversity team opportunities to engage more closely with the management of the designated conservation sites .

11.5 HLF Landscape Scheme and Lough Neagh Shoreline Management Plan 2015-20

A new five-year Shoreline Management Plan funded by the Northern Ireland Environment Agency builds on the recent Heritage Lottery Fund Landscape Partnership Scheme which was recently awarded to the Lough Neagh Partnership. The Heritage Lottery Landscape scheme focussed primarily on the conservation of publicly owned land around the shores of Lough Neagh and to help demonstrate successful habitat restoration, management of natural features and influence wider landscape-scale conservation. The Shoreline Management Plan also builds on that approach focussing on privately owned land around the immediate shores of Lough Neagh, aiming to improve the SPA and ASSI features through working with farmers, sand traders, landowners, shooting clubs and fishermen and other interested parties and individuals.

One of the fundamental aspects of this plan has been the creation of a forum of stakeholders who will act as a driver for the plan. The forum is made up of land-owners, farmers, sand traders, farmer representatives, shooting and conservation clubs and Lough Neagh fishermen. More importantly the forum has influencers who will provide some strong leadership and help persuade people who work or own the shoreline to consider the importance of conserving our important wetland habitats and species.

It is the intention of the Lough Neagh Partnership to work closely with the new Department of Agriculture, Environment and Rural affairs to help target the new Environmental Farming Scheme (EFS) from the new Rural Development Programme. This scheme has the potential to provide positive action for environmental maintenance and enhancements. Within a lough shore context there is scope to look for the possibilities to of making links in the "wider landscape" which could improve the ability of natural systems to form closer networks along and adjacent to a common shore. It is also the intention to use the forum to create a Lough Neagh farming based body so that environmental farm investment can be targeted appropriately around the shores of Lough Neagh on a whole Landscape basis.

Through the Lough Neagh Landscape Partnership there are some new and innovative projects developed with the intention of achieving environmental and biodiversity gains around the Lough Neagh area. These projects are specific and centred around the involvement of local agencies, communities and individuals in their delivery. They include projects that could have particular benefit to the Farr's Bay and Rea's Wood sites.

The projects range from a Litter Less Campaign involving local council, KNIB, Rivers Trust, Six Mile Water Trust; Cryptic Wood White Butterfly survey involving local council and Butterfly Conservation NI and volunteers; a Surface Tension Audio Project involving Six Mile Water Trust; a Lough Neagh Landscape Partnership/Heritage Lottery Fund Environmental Conservation Apprenticeship Programme which could assist with practical management of the SAC sites; Rivers Trust Training Project which will up skill trainees in river assessment and survey techniques. These new projects if integrated to the immediate area would enhance the relevance and general appreciation of the wider context within which the SAC exists; furthermore complementing the already established valuable contribution The Conservation Volunteers have already committed to necessary practical works on site.

11.6 Ramsar and SPA

Lough Neagh is a designated Ramsar site and is of special value for maintaining the genetic and ecological diversity of Northern Ireland because of the quality and peculiarities of its flora and fauna. A large number of plants and animal species are confined or almost confined to this area within Northern Ireland.

The site qualifies under Criterion 5 regularly supporting over 20,000 waterfowl in winter including nationally and internationally important numbers. There is great potential for developing the conservation value of this landscape as Ramsar, through proactive landscape-scale conservation such as the creation of wildlife corridors or wildfowl refuges linked to the Reas Wood and Farrs Bay site.

The Lough also has an SPA designation due to the number of specific bird species and in particular wintering wildfowl. Common tern, greater crested grebe and whooper swans are also included. It is therefore important for the site plan to consider how it could improve the favourable status of some of the SPA features that are on the shore or off the shore of the Farrs Bay and Reas Wood sites. Consideration should therefore be given to the provision or improvement of habitat on small islands and the torpedo platforms off the shore for common terns and grebes and other birds which are SPA features.

12.0 Awareness Raising and Improving Knowledge

The development of these Conservation Management Plans provides a very useful opportunity to inform a wider population base of the valuable position these nature conservation sites provide in terms of their biodiversity, ecosystem services, social and economic and health benefits.

This SAC plan should incorporate and develop a communications strategy that would promote an understanding of the benefits of the site. The means of doing so are extensive and include on site signage and public events, web and social platforms, local and national press and media, links through other organisations public communications.

Public participation in the monitoring, protection and management of designated sites has been shown to improve the delivery of objectives and reduce conflicts specific to the site.

There are several significant organisations which would have an important role in the promotion of the values of the sites to a nearby and broader community. These include the Antrim and Newtownabbey District Council, Forest Service, DAERA/NIEA, Lough Neagh Landscape Partnership.

Rea's Wood and Farr's Bay have management partnerships principally between DAERA-NIEA and Forest Service. Other minor but important working agreements involve Shaftsbury Estates, Lord O'Neil, local hunting clubs and more recently The Conservation Volunteers and The Rivers Trust.

With regards to raising awareness and improving the knowledge of these sites with a general public, educational sector and others, there are a variety of means that can be achieved by the "site managers". These include on site information panels, leaflets and web site/on line access to information.

A much broader approach allowing for a strategic placement of the Rea's Wood and Farr's Bay sites in wider landscape context could be achieved through the offices of the Lough Neagh Partnership.

The Lough Neagh Partnership has a full time marketing and promotion officer for the Lough who can assist in the promotion of the Shoreline Management Plan and specific projects within it. The service will also be responsible for the communication and promotion of a Lough Neagh Northern Peripheries project on assessing water quality

Specific communication actions that would be carried out by the Lough Neagh Partnership include.

- Working in partnership with others, produce an agreed Communications Plan that promotes a shared vision using key messages
- Get bank of quality photographs on farming environmental theme
- Produce a bi annual press releases to raise awareness of plan
- Creation of social media Facebook and twitter page
- Work closely with DAERA staff and link in with their information events and promotion
- Organisation of a series of walks and talks over the three-year period to high-light the work that's being done and best practice

- Targeting of NI farming papers and journalists and draw articles to encourage uptake of environment al farm schemes
- Use 2/3 best practice farms and hold regular events
- Create Lough Neagh environmental blog and regularly update
- Supporting public participation in the monitoring, protection and management of designated sites

13.0 Protocols for Monitoring, Recording and Review of the Rea's Wood and Farr's Bay SAC/ASSI

13.1 The Legal context of this Conservation Plan, protocols for monitoring, reporting and review

Natura 2000 sites are designated by each Member State in the framework of two European directives: the "Birds" Directive 79/409/CEE of 2 April 1979 for the conservation of wild birds, and the "Habitats, Fauna and Flora" Directive 92/43/CEE of 21 May 1992 for the conservation of natural habitats and wild fauna and flora. Special Protection Areas (SPAs) are sites designated under the Birds Directive, while Special Areas of Conservation (SACs) are those resulting from the Habitats, Flora and Fauna Directive.

- Article 6(1) of the Habitats Directive requires that Member States shall establish the necessary conservation measures specifically designed for the sites and statutory, administrative or contractual measures which correspond to the ecological requirements of the natural habitat types in Annex I and species in Annex II present on the sites.

- Article 6(2) requires that Member States shall with SACs take appropriate steps to avoid the deterioration of the natural habitats and habitats of species as well as disturbance of the species for which the areas have been designated, in so far as disturbance could be significant in relation to the objectives of the Directive.

- Article 3(1) requires that the SACs designated by a Member State shall enable the natural habitat types and the species, habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range.
- Article 2(3) requires that measures taken pursuant to the Directive shall take account of economic, social and cultural requirements and regional and local characteristics.

Both European and UK "Nature Conservation " legislation drives the protocols for Monitoring and Recording the status of the habitat and species features relating to the sites.

Under Article 11 of the EU Habitats Directive it states that: "Member States shall undertake surveillance of the conservation status of the natural habitats and species referred to in Article 2 with particular regard to priority natural habitat types and priority species."

With regard to these assessments the competent authority needs to assess the status of the habitat /species against a measurement of condition. The ideal always being to maintain or improve the condition of the site features. This assessment is based over the set period of the conservation management plan

Under Article 17 of the EU Habitats Directive it states that: "Every six years from the date of expiry of the period laid down in Article 23, Member States shall draw up a report. This report shall include in particular information concerning the conservation measures referred to in Article 6(1) as well as evaluation of the impact of those measures on the conservation status of the natural habitat types of Annex I and species in Annex ll.

Monitoring of SPA/SAC features will refer to a EU baseline of Common Standards Monitoring (CMS) for assessing the Favourable Conservation Status (FCS) The norm is to

make this assessment on a six-year cycle. This provides for a standard way of reporting condition of features at all SPA/SAC.

Under a UK legislation the Northern Ireland Government is required through The Conservation (Natural Habitats, Etc.) (Amendment) Regulations (Northern Ireland) 2009 that it undertakes appropriate assessments.

The Northern Ireland Regulations oblige the existing and new Department to under-take surveillance and also to monitor incidental capturing and killing.
The Department under Regulation 3 (surveillance of conservation status of habitats and species), inter alia, is required to:
(a) Assess how and to what extent surveillance of the conservation status of each relevant habitat and species needs to be carried out, having regard to:
(i) Whether a habitat or species is a priority natural habitat type or priority species; and
(ii) The conservation status of the habitat or species; and
(b) Ensure that the necessary surveillance is carried out on an ongoing basis.
Surveillance for the purpose of this regulation may be carried out by—
(a) The Department; or
(b) Any other person acting pursuant to, and in accordance with, an agreement with the Department.

13.2 Other Monitoring, Recording and Review requirement
Invasive alien/non-native species

Both Rea's Wood and Farr's Bay have non-native species. The greater non-native assemblage with likelihood of a significantly more negative impact is within Rea's Wood.
However both sites require careful monitoring and recording of location and abundance of each known non-native. Tree non-natives can be dealt with through management control over the mid – longer term time period. Shrub and Herbaceous non-native species require a more immediate plan of action and control

13.3 Health and Safety Regulations

Both sites allow for public access which is facilitated with footpaths; information material is available which can encourage this access; a Bird Hide is provided at Farr's Bay. Both sites have maturing trees. Regular inspections and monitoring of the upkeep and safety of this access is required under Health and Safety Regulations. Risk Assessments relevant to the sites and the potential hazards are a compliance requirement.

13.4 Occupiers' Liability Act (Northern Ireland) 1957

This Act requires that an occupier has a common duty of care towards 'visitors' on their land. It legislates that the occupier will take care to see that the visitor will be reasonably safe for the reason that he or she is visiting their land.

13.5 Monitoring, Reporting and Review Plan

The following details suggestions for the monitoring of the Reas Wood/Farrs Bay site.

Legal Driver / Obligation	Responsible Authority	Delivery	Plan Period
SAC Features	DEARA /Natural Environment	Site Condition Assessment	On 6 year cycle Immediate requirement
ASSI Features	DEARA /Natural Environment	Site Integrity Monitoring	Annual
		Habitat Survey Phase II	2018
		Notable Plant Survey	2018 repeat 6 years
		Notable Invertebrate Survey	2018-19 repeat 6 years
		Invasive Species Survey Trees Shrubs Ground Flora	2018 repeat every 3 years
		Scrub Encroachment targeted areas[Typha swamp, open water]	On 3 year cycle
Site Features	Management Steering Group	Litter /Inundation Line	X 1 per annum
		Recreational Impact on access, removal of dead wood , sandy beaches	X 1 per annum
		Implementation of SAC Conservation Management Plan	Annual
		Information/Presentation/Promotion of site	Annual
Health and Safety [Occupiers Liability]	Partners: Forest Service/Natural Environment	Inspection of site to monitor any Health & Safety risks	Monthly

14.0 Conservation Plan Implementation and Arrangements Rea's Wood and Farr's Bay SAC/ASSI

14.1 Key Site Manager

Currently the site manger operates out of a NIEA Peatlands Park base for the sectional area. This plan assumes this will continue. It is important that the manager is supported by established "in house" infrastructure which provides resources around legal advice/conservation protection, site integrity, biological monitoring and condition assessment, health and safety procedures, practical works input on site, site promotional materials." This person should be involved in any future management structure that is agreed for the site.

14.2 Establishment of Control Structures, Responsibilities and Liabilities

Clearly there are two significant interests or partners with regard to any provision of responsibility and liability for the site, these include Forest Service as land owner and NIEA with regard to designation and responsibility for delivery of appropriate environmental condition.

Other interests are live and real with respect to additional land ownership such as Lord O'Neil. There are also sporting rights over part of shared lands with Shaftsbury Estates, and Lord Massereene. The local Antrim and Newtownabbey Borough Council share common interest with the sites as they fall within the immediate Council area and significant infrastructure is provided for a public who in particular interface with the Rea's Wood site. The Lough neagh Partnership has also been responsible for drawing up the new SAC plans and has identified future resources for projects within the HLF Landscape Scheme.

It would seem advisable that the site requires a new management structure and forum which brings together the above mentioned interested parties and other groupings or individuals who collectively could represent the intentions of the SAC Conservation Management Plan. In these intentions a collective dialogue could prevail and bring balance and practicality to the purposes of the plan.

A new and active management forum is therefore proposed. This would bring the aforementioned parties together on a formal and regular basis. Other important partners would include the Conservation Volunteers, Six Mile Water Rivers Trust, Ulster Wildlife, Sporting Clubs, individual expert naturalists, Antrim and Newtownabbey and representation of community or voluntary groupings.

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Ownership Boundary

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Species Survey /Data

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TCV Invasive Species Management Plan and Report for Reas Wood

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Annexe 9 Pressures and Threats

Annexe 10 Measures and Actions