

Clashavoon – Dunmanway 110kV Project



Description of Constraints Map Legend

PE687-F0193-R193-003-000

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Date: 08 October 2010

Clashavoon – Dunmanway 110kV Project

File Reference: PE687-F0193-R193

Client / Recipient: EirGrid

Project Title: Clashavoon – Dunmanway 110kV Project

Report Title: Description of Constraints Map Legend

Report No.: PE687-F0193-R193-003-000

Rev. No.: 000

Volume 1 of 1

Prepared by: ESB International

Title

APPROVED: ESB International
TITLE:

DATE: 8th October, 2010.

Latest Revision Summary:

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Change History of Report

Date	New Rev	Author	Summary of Change

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1 Introduction

This report accompanies all project maps produced as part of the Clashavoon – Dunmanway 110kV Project. This report gives a high level definition of each type of developmental or environmental constraint identified within the project study area and listed in the map legend or key.

The purpose of this report is to assist the reader in understanding the types of constraint found in the project study area and to assist in viewing the map.

The environmental or developmental constraints were obtained from the latest information from various sources including, National Parks and Wildlife Service (NPWS) of the Department of Environment, Heritage and Local Government (DoEHLG), Archaeological Survey of Ireland (ASI), Geological Survey of Ireland (GSI) and the Cork County Development Plan.

In accordance with the 'Constraint and Route Corridor Maps' key/legend, definitions for the following constraints are provided.

- Scenic Routes and Landscape
- Forestry
- Nature Reserves
- Special Areas of Conservation (SAC)
- Special Protection Areas (SPA)
- Natural (and proposed Natural) Heritage Areas (NHA)
- Sites and Monuments Record
- Existing Infrastructure
- Settlements, Ribbon Developments & One off Housing
- Whooper Swan Constrained Area
- CAHCS Walking Route
- Historical Sites

The identified constraints will show areas of opportunity and areas which should be avoided where possible. This will then form the starting point for identification of potential locations where the proposed infrastructure can be placed.

Some constraints can be considered more significant than others. For example, designations containing EU Habitats Directive Annex I and Annex II species or habitats are also included in the report. These Directives are very important to detect and protect species in the area.

2 Study Area Definitions

2.1 Project Study Area

The Project Study Area is the broad geographical region within which a practical feasible route corridor can expect to be found. In this case it covers an area of approximately 20 x 28km (560 sq km) and can be seen as a red rectangle on the Constraints Map. This study area is deemed to be an appropriately sized study area based on experience and expertise.

3 Constraints Map Legend Description

The Project Study Area Constraints Map can be viewed on the Clashavoon - Dunmanway page of the transmission projects section of the EirGrid website¹. This Constraints Map marks up all of the constraints on one map. These are shown by coloured shading. A key/legend shows which particular colour/shading relates to which particular constraint.

Each constraint is defined by a particular legislation or source. For example some constraints can be considered important on a European level, whilst others would be of national importance and others local. These are listed in Table 1 below.

Constraint	Source	Geographical Importance (Rating)
Scenic Routes and Landscape	Cork Development Plan	County Importance
Forestry	Dept. of Agriculture, Fisheries & Food	No Valuation
Nature Reserves	National Parks and Wildlife Service	National Importance
Special Areas of Conservation	National Parks and Wildlife Service	International Importance
Special Protection Areas	National Parks and Wildlife Service	International Importance
Natural Heritage Areas	National Parks and Wildlife Service	National Importance
Proposed Natural Heritage Areas	National Parks and Wildlife Service	National Importance
National Monuments Protect Structures And other Sites and Monuments Records (SMR)	Archaeological Survey of Ireland (ASI)	National Importance
Existing Infrastructure	Service providers	National Importance
Settlements, Ribbon Developments & One off Housing	Geo – Directory plus OSi mapping	County Importance
Whooper Swan Constrained Area	Environmental Expert	International Importance (SPA)

¹ <http://www.eirgridprojects.com/projects/clashavoondunmanway>

CAHCS	Local Interest	Local/National Importance
Michael Collins Ambush Site	Consultant Historian	National Importance

Table 1: List of Constraints and their Sources

3.1 Scenic Routes and Landscapes

There is a need to protect and conserve views and prospects adjoining public roads and river valleys throughout our countryside as these views are of high amenity value. In conserving views, a development, where permitted, should not seriously hinder or obstruct these views. Careful design and planning is needed to minimise their impact.

An example of a scenic route (dashed green line) and scenic landscape (green shading) can be seen below in Figures 1 and 2.

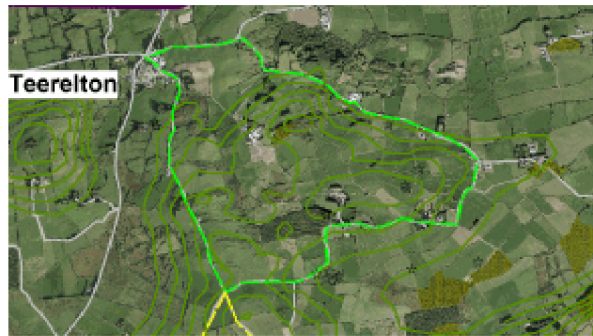


Figure 1: Scenic Route east of Terrelton

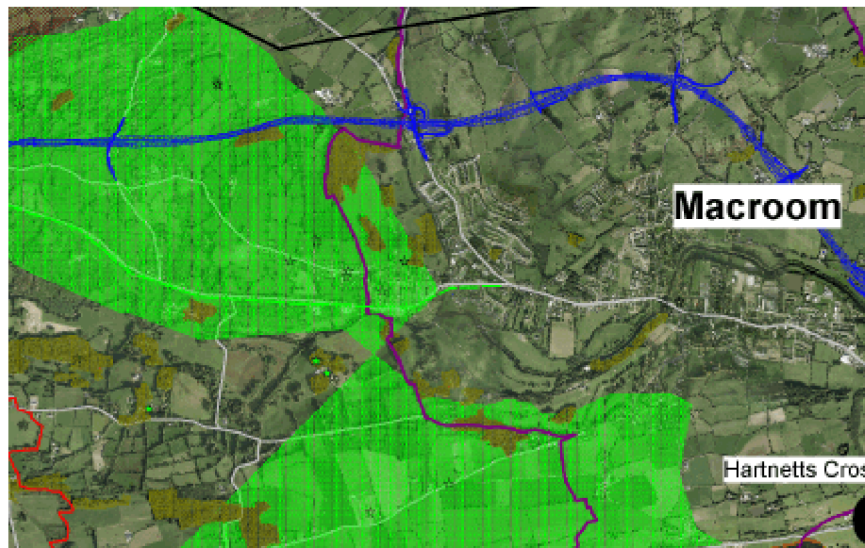


Figure 2: Scenic Landscape west of Macroom

3.2 Forestry

Forestry (including woodland and hedgerows) has economic and recreational potential. The benefits of forests should be maintained and enhanced by

promoting the preservation and enhancement of native and semi-natural woodlands, groups of trees and individual trees. Large hedgerows are also common along the roads and as field boundaries.



Figure 3: Example of Forestry west of the village of Kilmurry

3.3 Nature Reserves

As defined by the NPWS, a Nature Reserve is an area of importance to wildlife, which is protected under Ministerial order. Most are owned by the state, however some are owned by organisations or private landowners.

The only Nature Reserve in the Project Study Area is The Gearagh found to the south west of Macroom. This area is also designated proposed Natural Heritage Area, Special Protection Area and Special Area of Conservation and is therefore protected under EU legislation.

3.4 Special Areas of Conservation (SAC)

Special Areas of Conservation (SAC) are prime wildlife conservation areas in the country, considered to be important on a European as well as Irish level. Most SAC are in the countryside, although a few sites reach into town or city landscapes. The legal basis on which SAC are selected and designated is the EU Habitats Directive, transposed into Irish law in the European Union (Natural Habitats) Regulations, 1997 as amended in 1998 and 2005. The Directive lists certain habitats and species that must be protected within SAC.

Irish Habitats include raised bogs, blanket bogs, turloughs, sand dunes, machair (flat sandy plains on the north and west coasts), heaths, lakes, rivers, woodlands, estuaries and sea inlets. The 25 Irish species which must be afforded protection include Salmon, Otter, Freshwater Pearl Mussel, Bottlenose Dolphin and Killarney Fern.

The areas chosen as SAC in Ireland cover an area of approximately 13,500 square kilometres. Roughly 53% is land, the remainder being marine or large lakes. Across the EU, over 12,600 sites have been identified and proposed, covering 420,000 square kilometres of land and sea, an area the size of Germany.

By far the most important SAC in the study area is The Gearagh which can be seen in Figure 4 (Blue shading).

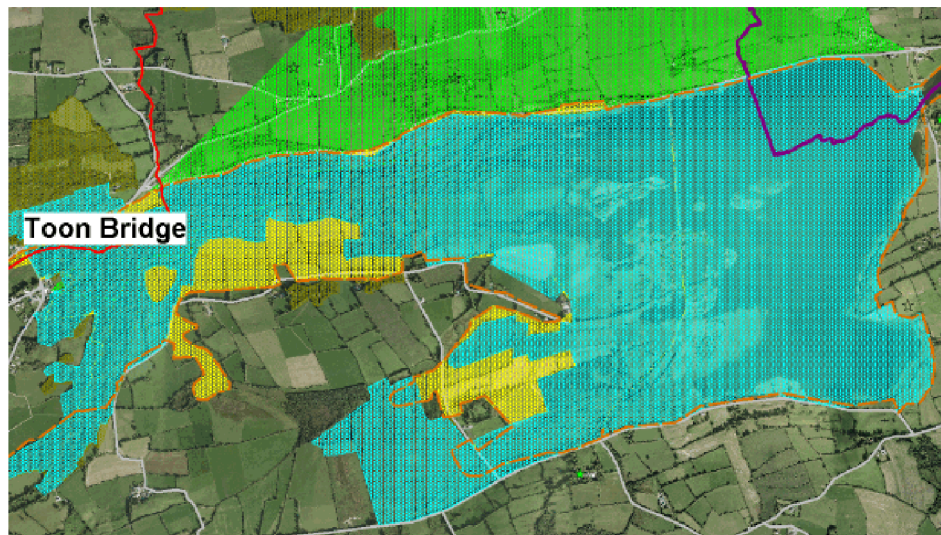


Figure 4: The Gearagh SAC (blue shading)

3.5 Special Protection Areas (SPA)

The EU Birds Directive (79/409/EEC) requires designation of SPAs for:

- Listed rare and vulnerable species such as those mentioned above.
- Regularly occurring migratory species, such as ducks, geese and waders.
- Wetlands, especially those of international importance, which attract large numbers of migratory birds each year. (Internationally important means that 1% of the population of a species uses the site, or more than 20,000 birds regularly use the site.)

121 SPAs have been designated since 1985. 25 other sites enjoy legal protection and will shortly be designated as SPAs. However, further designations are required pursuant to the Birds Directive. The Minister will be publishing his proposals for the designation of additional sites on an on-going basis in autumn 2007 and spring 2008. It should be noted that many existing and future SPAs overlap with SACs. The Irish SPAs join a total of around 3,000 sites across the European Union.

The Gearagh is the only SPA designated site within the study area. As The Gearagh is also an SAC much of the area is common to both. Figure 5 below however shows the areas where SPA (yellow shading) and SAC (blue shading) can be seen to differ.

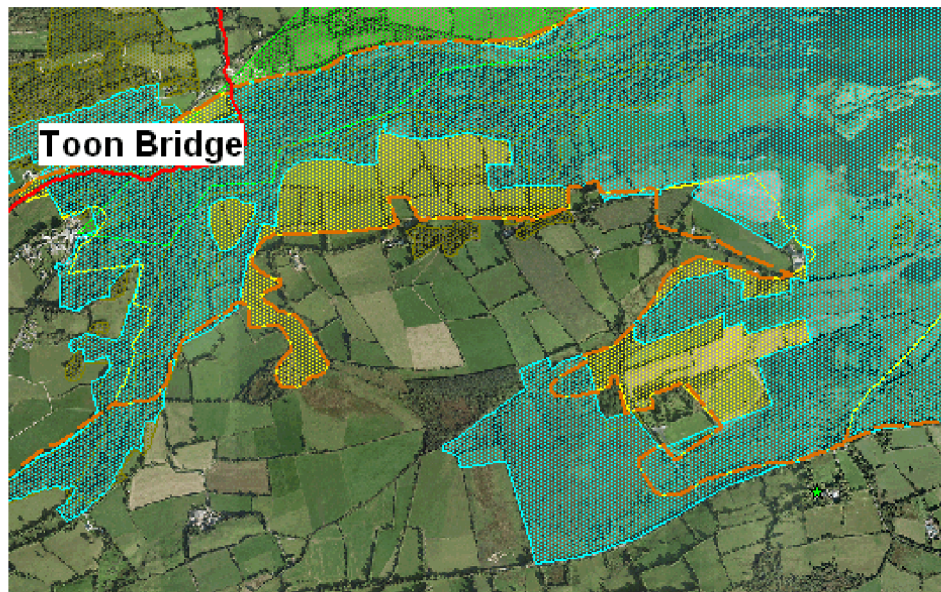


Figure 5: Special Protection Areas (yellow shading)

3.6 Natural (and proposed Natural) Heritage Areas (NHA)

The basic designation for wildlife is the Natural Heritage Area (NHA). A NHA is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection. To date, in Ireland, 75 raised bogs have been given legal protection, covering some 23,000 hectares. These raised bogs are located mainly in the midlands. A further 73 blanket bogs, mainly in the western areas, covering 37,000 hectares, are also designated as NHA's.

Under the Wildlife Amendment Act (2000), NHA's are legally protected from damage from the date that they are formally proposed for designation.

In addition to the NHA there are 630 proposed Natural Heritage Areas (pNHA) in Ireland. These were published on a non statutory basis in 1995, but have not since been statutorily proposed or designated. These sites are of significance for wildlife and habitats. Some of the pNHA are tiny, such as a roosting place for rare bats. Others are large- a woodland or a lake, for example. The pNHA cover approximately 65,000 hectares and according to the NPWS, designation will proceed on a phased basis over the coming years.

Prior to statutory designation, pNHA are subject to limited protection, in the form of:

- Rural Environment Protection Scheme (REPS) plans which require conservation of pNHA and operate for a period of 5 years;
- Forest Service requirement for NPWS approval before they will pay afforestation grants on pNHA lands;
- Recognition of the ecological value of pNHA by Planning and Licensing Authorities.

There are no NHAs in the study area however a number of proposed Natural Heritage Areas do occur. For this project these proposed areas of designation have been given the same level of importance as fully designated sites.

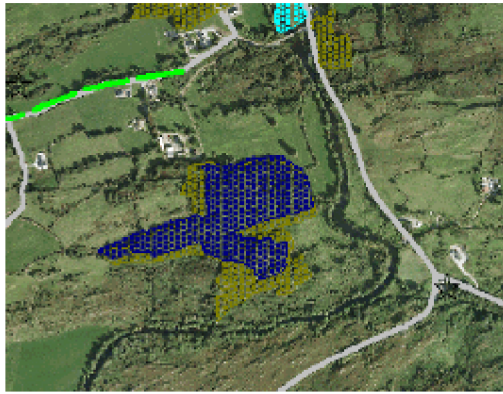


Figure 6: Boylegrove Wood, a proposed Natural Heritage Area (dark blue shading) south west of Macroom

3.7 Sites and Monuments Record (SMR)

The purpose of the Archaeological Survey of Ireland (ASI) is to compile an inventory of archaeological monuments. Its archive contains records of all known or possible monuments predating 1700 AD that have been brought to its attention and also includes a selection of monuments from the post-1700 AD period. Recorded Monuments are protected under the National Monuments Acts, and anyone planning to carry out work of any kind at these sites, must give two months prior notice to the Minister for the Environment, Heritage and Local Government.

For this project sites and monuments can be separated into;

1. National Monuments

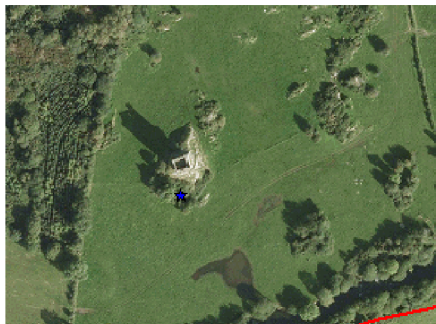


Figure 7: Carrigaphoooca Castle, an example of a National Monument (Blue Star)

2. Protected Structures



Figure 8: Crossmahon House, an example of a protected structure (Green Star)

3. Other sites and Monuments



Figure 9: An example of other sites and monuments e.g. fulacht fia, holy wells etc. shown in black star outline.

3.8 Existing Infrastructure

There is a significant amount of existing infrastructure within the Project Study Area including a good network of regional and rural roads, the N22.

The Project Study Area hosts several transmission lines at 220kV and 110kV. Distribution lines at 38kV as well as MV, LV and telecom lines run throughout area. Furthermore, there is an underground gas pipeline within the Project Study Area.

Consideration must be given to existing ESB and Bord Gais infrastructure within the Project Study Area. This infrastructure is a constraint in that the route of any proposed electrical corridor will have to take due consideration of the location of these existing services and mitigate the impact on same in so far as is reasonably practicable.

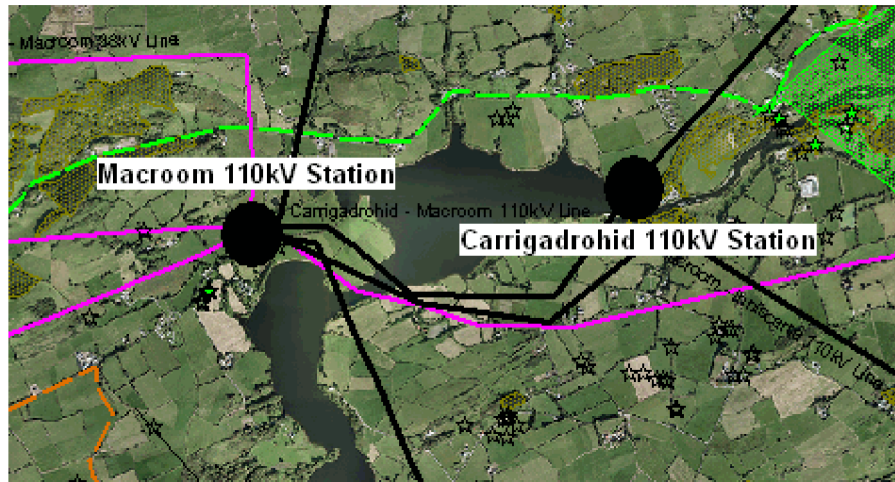


Figure 10: Existing electrical infrastructure. The pink line shows the 38kV Overhead Line Network and Black shows the 110kV Network.



Figure 11: Existing electrical infrastructure the green line shows the 220kV Network.



Figure 12: Proposed Macroom Bypass

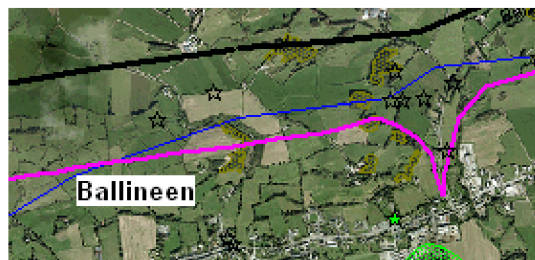


Figure 13: Gas pipeline shown in blue line.

3.9 Settlements and One Off Housing

The main settlements in the area outside Macroom and Dunmanway are Ballineen, Coppeen, Castletown, Johnstown, Killnamatery, Kilmichael Kilmurry, Lissarda, Murragh, Newcestown, Teerelton, Tooms and Toon Bridge.

All of these villages have associated housing development. The area is also peppered with one off housing and farmsteads.

3.10 Whooper Swan Constrained Area

It was identified from the initial environmental review of the study area that whooper swans roosted and nested in the area around The Gearagh. This area is also a Special Protection Area.

Whooper Swans are listed on Annex 1 of the EU Birds Directive (EU 79/409/EEC). EU Member states are required to maintain populations of rare and migratory bird species that are listed under Annex 1 by establishing designated areas – Special Protection Areas (SPA's) – for the conservation of these species. Whooper Swans are further protected as they are listed under Annex II of the Berne Convention on the conservation of wildlife and natural habitats; they are also amber listed in 'Birds of Conservation Concern in Ireland' (Newton et al 1999; Lynas et al 2007) as internationally important numbers of Whooper Swan over-winter in Ireland.

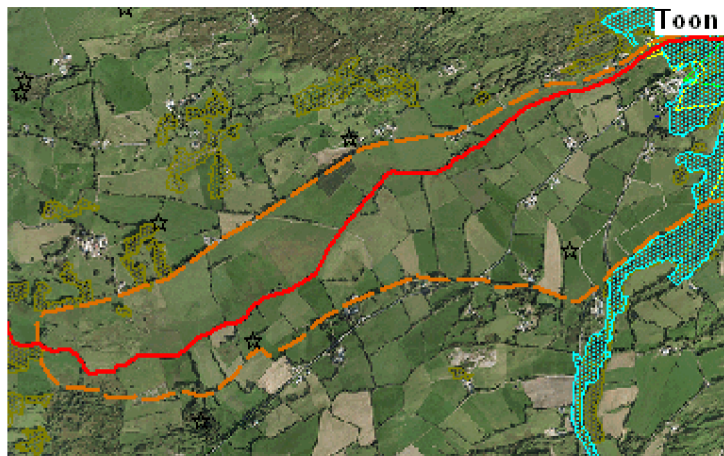


Figure 14: Orange dashed line defines the area constrained by the presence of the Whooper Swan

3.11 Coppeen Archaeological, Historical and cultural Society (CAHCS) designated walks

The area on the map seen in Figure 15 below shows the walking route outlined by CAHCS as being of local and national significance.

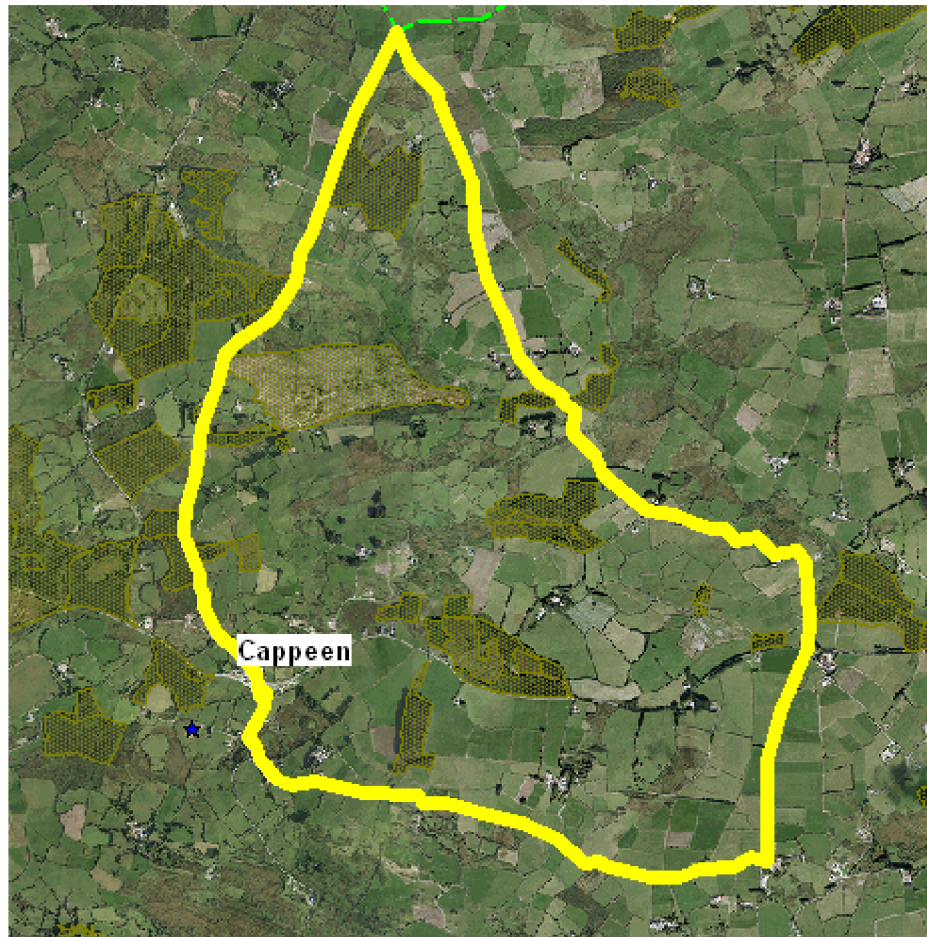


Figure 15: CAHCS designated walk (yellow line)

3.12 Michael Collins Ambush Site

A historical review of the study area identified particular sites of national historical importance. Most notable is ambush site and memorial of Michael Collins. This is identified on the map as seen in Figure 16.

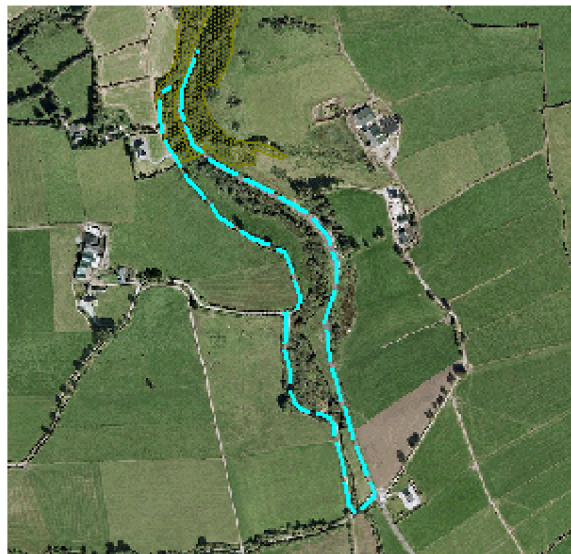


Figure 16: Michael Collins Ambush Site