



LOUTH COUNTY COUNCIL

APPROPRIATE ASSESSMENT SCREENING REPORT

FOR

PROPOSED PLAYGROUND,

ARDEE ROAD, COLLON, CO. LOUTH

VOLUME I. REPORT

24th July 2023

DOCUMENT ISSUE STATUS

REPORT ISSUE	REFERENCE NO.	DATE		
FINAL	409-01	24/07/2023		
TITLE	NAME	POSITION	SIGNATURE	DATE
AUTHOR	Leanne Tuohy	Staff Ecologist		19/07/2023
MANAGING DIRECTOR	Padraic Mulroy	Project Director		24/07/2023

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	Project Background	1
1.2	Proposed Playground Description	2
1.3	Site Description	2
1.4	Planning Background	5
1.5	Appropriate Assessment Screening Report	6
2	SCREENING	7
2.1	Site History	7
2.2	Closest Designated Protected Sites.....	8
2.3	Topography	9
2.4	Existing Municipal Foulwater & Stormwater Drainage	9
2.5	Site Hydrology	10
2.5.1	<i>Regional Hydrology</i>	10
2.5.2	<i>Local Hydrology</i>	10
2.6	Site Geology	11
2.6.1	<i>Introduction</i>	11
2.6.2	<i>Soil</i>	11
2.6.2.1	Soil (Top Horizon).....	11
2.6.2.2	Subsoil (Quaternary) Geology	12
2.6.2.3	Site Specific Soil & Subsoil Detail	12
2.6.3	<i>Geology</i>	13
2.6.3.1	Regional Bedrock Geology	13
2.6.3.2	On-site Bedrock Geology.....	13
2.6.4	<i>Hydrogeology</i>	13
2.6.4.1	General Hydrogeological Classification	13
2.6.4.2	Groundwater Vulnerability	13
2.6.4.3	Groundwater Source Protection	14
2.7	Site Ecology	15
2.7.1	<i>On-site Ecology</i>	15
2.7.1.1	Overview.....	15
2.7.1.2	Methodology	15
2.7.1.3	Habitat Descriptions.....	16
2.7.2	<i>Surrounding Ecology</i>	20
3	IDENTIFICATION OF NATURA 2000 SITES	22
4	DESCRIPTION OF NATURA 2000 SITES	22
4.1	River Boyne and River Blackwater SPA (004232)	23
4.2	River Boyne and River Blackwater SAC (002299).....	23
4.3	Boyne Estuary SPA (004080).....	24
4.4	Boyne Coast & Estuary SAC (001957).....	24
4.5	Stabannan – Braganstown SPA	25
4.6	Dundalk Bay SAC	25
4.7	Dundalk Bay SPA	26

5	CONSERVATION OBJECTIVES, QUALIFYING INTERESTS, VULNERABILITY AND CONSERVATION STATUS OF NATURA 2000 SITES	27
5.1	Sources of Contamination	27
5.2	Pathways for Off-site Migration to Natura 2000 Receptors	27
5.3	Potential Natura 2000 Receptors	27
5.4	Other Sensitive Ecological Receptors	27
6	ASSESSMENT OF LIKELY EFFECTS ON THE ECOLOGY OF RIVER BOYNE AND RIVER BLACKWATER SPA/SAC	28
7	SCREENING CONCLUSION AND STATEMENT	28

LIST OF FIGURES

FIGURE NO.	FIGURE DESCRIPTION	SCALE	SIZE
1	Nature Conservation sites located within a 15km of Site Location	A3	1:200,000
2	Nature Conservation sites located within a 15km of Site Location	A3	1:100,000
3	Regional Hydrology & Surrounding Site Location	A3	1:10,000
4	Local Hydrology & Proximity of Site to River Mattock & Local Stream	A3	1:5,000
5	Local Hydrology & Proximity of Site to River Mattock & Local Stream	A3	1:2,500
6	Site Location & Local Hydrology	A3	1:2,000
7	Site Location & Surrounding Property	A3	1:1,000
8	Habitat Map	A3	1:500

LIST OF TABLES

TABLE NO.	TABLE DESCRIPTION
1	Nature Conservation Sites within 15 km of Proposed Playground Site, Ardee Road, Collon, Co. Louth (information obtained from www.npws.ie in July 2023)
2	Groundwater Vulnerability Mapping Guidelines
3	DAFOR Abundance Rating
4	Plant Species identified in WL2 - Treeline Habitat at Proposed Site for Playground, Collon, County Louth
5	Plant Species identified in WD1 - Broadleaved Woodland Habitat at Proposed Site for Playground, Collon, County Louth
6	Plant Species identified in WL2 (2) - Treeline Habitat east of the Parish Hall, beside the Proposed Site for Playground, Collon, County Louth
7	Natura 2000 sites within 15km of the Proposed Playground Site, Ardee Road, Collon, Co. Louth

LIST OF APPENDICES

APP. NO.	DESCRIPTION
1	Desk Study Information on Topsoils, Subsoils, Geology, Hydrogeology, Hydrology, Borehole Drilling Data and Historical Data from EPA, OSI, www.catchment.ie .
2	<i>NPWS (2021) Conservation Objectives: River Boyne and River Blackwater SAC 002299. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.</i> <i>NPWS (2022) Conservation objectives for River Boyne and River Blackwater SPA [004232]. First Order Site-specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage</i>

1 INTRODUCTION

1.1 Project Background

It is understood that Louth County Council wish to install a new playground on the site of an existing carpark which is located to the south of the Collon Parish Hall. The site is located on the northern side of Collon and on the western side of the N2 national road (i.e., the Ardee Road) in Collon, County Louth (see site location maps, Figures 1 to 6). It is understood that this development is being applied for under Part 8 of the *Planning and Development Regulations 2001*, and that an Appropriate Assessment screening assessment is required. Mulroy Environmental Ltd. were appointed by Louth County Council to carry out screening for appropriate assessment for the afore-mentioned playground development.

The proposed works area for Collon is approximately 957m² in footprint and is proposed for the southern end of the carpark (see Figure 7. Site Location and Surrounding Property). This area lies directly to the north of a residential access road which provides access to a parochial house located approximately 50m west of the site (see Plate 1 below).



Plate 1. UAV Aerial photograph (40m elevation) at a location to the southeast of the site facing in a north-westerly direction (red outline shows the approximate outline of the site)

1.2 Proposed Playground Description

The works will be carried out within the site boundary as detailed in Figures 6 and 7. The playground will include a variety of play equipment including such as a roundabout, swings and bucket swings.

A safety surface consisting of engineered woodchip will be installed as part of the works in the majority of the site's footprint. Tarmac pathways will provide accessible routes to the various apparatus and benches located within the site. Picnic benches, seating, bins and fencing will be provided on site. The development will require some limited use of concrete the installation of the play equipment and fencing. The entrance walls will also need to be demolished to facilitate the works.

The ground cover on the site will be free draining with rainwater falling on the site dissipating to ground via an appropriate designed drainage layer. As such, stormwater pipework will not be necessary for the development.

1.3 Site Description

The proposed development, which is approximately 957m², is to be located on the southern end of an existing carpark which currently serves as the carpark to the Collon Parish Hall (see Plate 2 below). This carpark, which is covered by a mixture of tarmac and gravel, is currently used by people during the day working in the village of Collon. It also serves as the car park for visitors to the Collon Parish Hall which is located on the northern end of the property (see Figures 6 & 7).

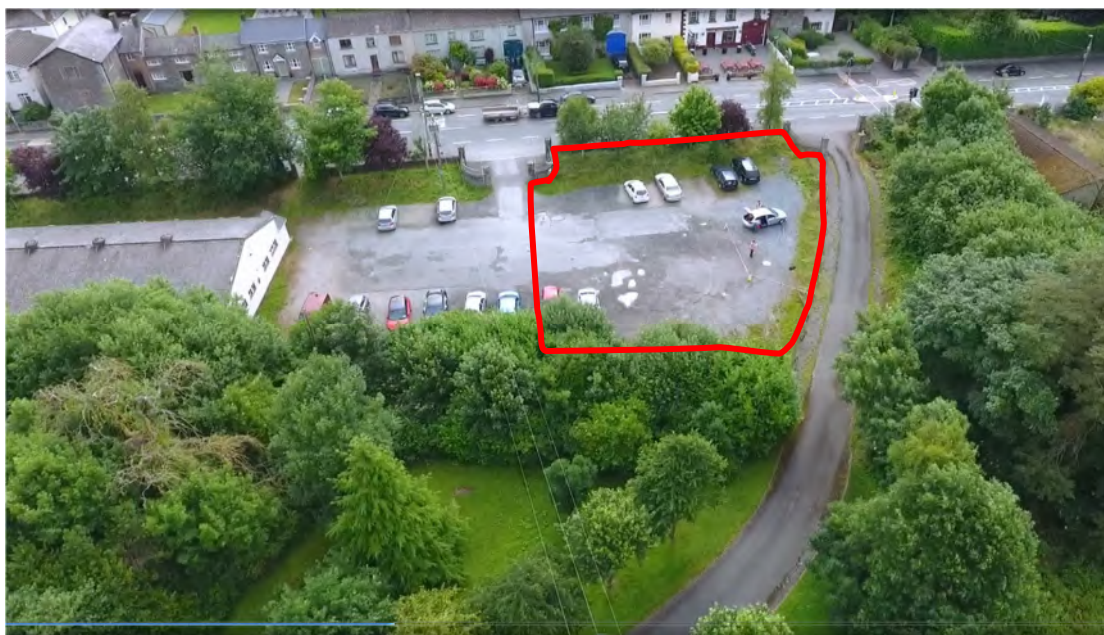


Plate 2. UAV Aerial photograph (40m elevation) at a location to the west of the site facing in an easterly direction (note red outline shows the approximate outline of the site)

The Ardee Road/N2 National Road is located to the east of the site. To the east of the N2, a row of residential property is located. A public house is located to the east of the site on the eastern side of the

N2 National Road. Approximately 80m to the northeast of the site is located the village centre, which is known as Market Square (see Figures 6 & 7 and following Plate 3).



Plate 3. UAV Aerial photograph (40m elevation) at a location to the south of the site facing in an northerly direction

A mature planted woodland area is located to the northwest and west of the existing carpark which separates the site from the residential property (i.e., a parochial house) to the west of the site. The access road to this residence also forms the southern boundary of the carpark. Further to the south and southwest of the access road, is located further mature woodland. Within this woodland is located a derelict residence and a derelict shed. It is understood that the derelict residence site to the south will be redeveloped in the future as housing (see Plate 4 below).



Plate 4. UAV Aerial photograph (40m elevation) at a location to the southwest of the site facing in an north-easterly direction

A complex consisting of ground floor commercial property with 2nd and 3rd storey apartments complex is located to the north of the Parish Hall (see Plate 5 below). A public house and restaurant are located approximately 100m to the north of the Parish Hall and to the north of the afore-mentioned complex.



Plate 5. UAV Aerial photograph (40m elevation) at a location to the northwest of the site facing in a south-easterly direction showing the apartment complex to the north of the Parish Hall (note Market Square to east of the apartment complex)

The eastern boundary of the Parish Hall, running along the N2 road, is lined with a various assortment of planted trees (see Plate 6 below).



Plate 6. UAV Aerial photograph (40m elevation) at a location to the northeast of the site facing in a westerly direction showing line of trees to the East of Collon Parish Hall

1.4 Planning Background

A review of the Louth County Development Plan Zoning Map for Collon indicates that the site has a ‘B1 Town or Village Centre’ Land Use Category. The afore-mentioned mature trees located on the north-eastern boundary of the Parish Hall are recognised as ‘Significant Trees & Hedgerows’ (see Plate 7 below).

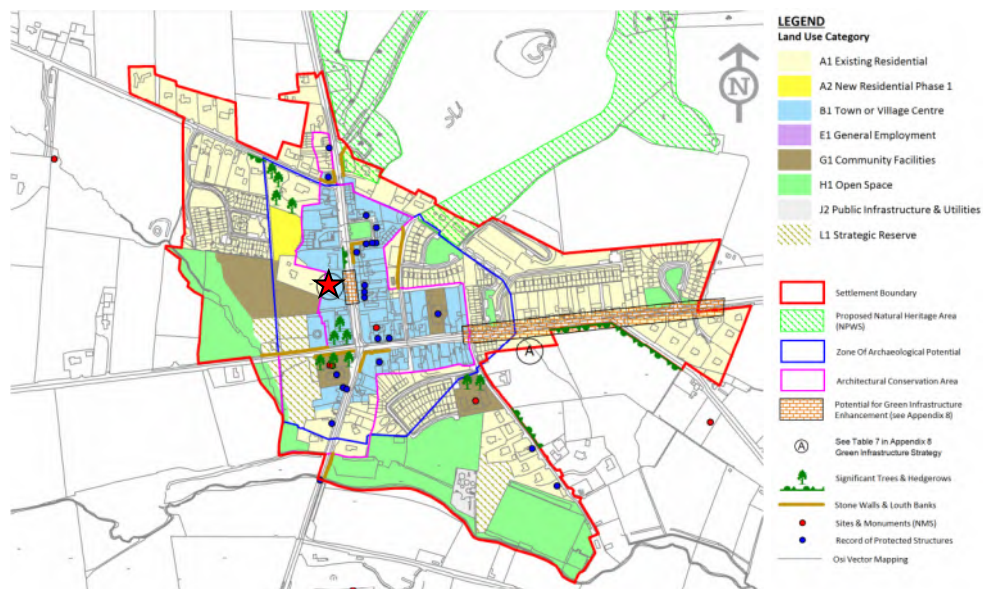


Plate 7. Collon Zoning Map (note red star indicates the location of the proposed playground site)

1.5 Appropriate Assessment Screening Report

The site is approximately 6.3km to the northwest of the River Boyne and River Blackwater Special Area of Conservation (SAC) (No. 002299) and 7.15km to the northwest of the River Boyne and River Blackwater Bay Special Protected Area (SPA) (No. 004232) (see Figures 1 to 5, Table 1 & Plate 8 following).



Plate 8. UAV Aerial photograph (40m elevation) on southern edge of site facing in of south-easterly direction towards River Boyne and River Blackwater Bay SAC and SPA

A screening report for Appropriate Assessment was processed in order to determine if the aforementioned elements of this planning application (as laid out in Section 1.2), or in combination with other plans or projects, would be likely to have a significant effect on the designated Natura 2000 site(s) or any other European site, in view of the site's Conservation Objectives. This screening report for Appropriate Assessment was processed in order to determine the likelihood of any significant adverse effects on the integrity of the aforementioned European sites.

The site's stormwater and drainage system along with the hydrology and hydrogeology of the site were assessed with the purpose of identifying any potential pathways to nearest Natura 2000 site(s).

The following is an Appropriate Assessment Screening report to address the afore mentioned.

TABLE 1. NATURE CONSERVATION SITES WITHIN 15 KM OF COLLON PLAYGROUND SITE, ARDEE STREET, COLLON, DROGHEDA, CO. LOUTH, (INFORMATION OBTAINED FROM WWW.NPWS.IE IN JULY 2023)

SITE NAME, SITE CODE, DISTANCE AND DIRECTION FROM SITE	SITE OR ORGANISM NAME AND/OR CODE GIVEN ACCORDING TO INTERPRETATION MANUAL OF EUROPEAN UNION HABITATS	THE POTENTIAL SOURCE-PATHWAY-RECEPTOR LINKS BETWEEN COLLON PLAYGROUND SITE AND THE ECOLOGICALLY DESIGNATED SITE
Special Protection Areas (SPA)		
<p>River Boyne and River Blackwater SPA [004232] 7.15 km (NW)</p>	<ul style="list-style-type: none"> ▪ Kingfisher (<i>Alcedo atthis</i>)** <p>** denotes breeding birds at River Boyne and River Blackwater.</p> <p>Source: NPWS. (2022). <i>Conservation Objectives for River Boyne and River Blackwater SPA [004232]</i>. First Order Site-specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage.</p>	<p>There will be no contaminated stormwater generated during the construction phase or the operational phase of the development and there are no proposals to generate a point discharge from the site. The material used for the ground covering will not generate leachate. There are some minor concrete foundation works required but these are minor and provided they are done during dry weather no runoff will be generated. As such, there is effectively no source of contamination which can migrate off site. The ground covering will facilitate the percolation of rainfall through the material into the underlying subsoil. As such, any stormwater generated on site will be free of contamination and will discharge to ground. Based on GSI records, there is significant depth of overburden on site, and as such there is significant attenuation capacity within the overburden.</p> <p>There are no surface water bodies within the vicinity of the site nor is there any existing discharge from the site to the municipal stormwater system. As such, there is no viable pathway for possible contamination to exit the site and enter the Mattock River catchment and ultimately flow into the River Boyne and River Blackwater SPA.</p>
<p>Stabannan-Braganstown SPA [004091] 11.05 km (NE)</p>	<ul style="list-style-type: none"> ▪ Greylag Goose (<i>Anser anser</i>)** <p>** denotes breeding birds at Stabannan-Braganstown.</p> <p>Source: NPWS. (2022). <i>Conservation Objectives: Stabannan-Braganstown SPA [004091]</i>. Version 1.0. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.</p>	<p>Due to distance and the absence of any hydrological or other potential impact pathways between the proposed development and the European site, there are no potential ecological impacts.</p>
<p>Boyne Estuary SPA [004080] 12.6 km (SE)</p>	<ul style="list-style-type: none"> ▪ Shelduck (<i>Tadorna tadorna</i>)* ▪ Oystercatcher (<i>Haematopus ostralegus</i>)* ▪ Golden Plover (<i>Pluvialis apricaria</i>)* ▪ Grey Plover (<i>Pluvialis squatarola</i>)* ▪ Lapwing (<i>Vanellus vanellus</i>)* ▪ Knot (<i>Calidris canutus</i>)* ▪ Sanderling (<i>Calidris alba</i>)* ▪ Black-tailed Godwit (<i>Limosa limosa</i>)* ▪ Redshank (<i>Tringa totanus</i>)* ▪ Turnstone (<i>Arenaria interpres</i>)* ▪ Little Tern (<i>Sterna albifrons</i>)** ▪ Wetland and Waterbirds [A999] <p>* denotes wintering birds at Boyne Estuary. ** denotes breeding birds at Boyne Estuary.</p> <p>Source: NPWS. (2013). <i>Conservation Objectives: Boyne Estuary SPA [004080]</i>. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.</p>	<p>Due to distance and the absence of any hydrological or other potential impact pathways between the proposed development and the European site, there are no potential ecological impacts.</p>

TABLE 1. NATURE CONSERVATION SITES WITHIN 15 KM OF COLLON PLAYGROUND SITE, ARDEE STREET, COLLON, DROGHEDA, CO. LOUTH, (INFORMATION OBTAINED FROM WWW.NPWS.IE IN JULY 2023) (CONTINUED)

SITE NAME, SITE CODE, DISTANCE AND DIRECTION FROM SITE	SITE OR ORGANISM NAME AND/OR CODE GIVEN ACCORDING TO INTERPRETATION MANUAL OF EUROPEAN UNION HABITATS	THE POTENTIAL SOURCE-PATHWAY-RECEPTOR LINKS BETWEEN COLLON PLAYGROUND SITE AND THE ECOLOGICALLY DESIGNATED SITE
Special Protection Areas (SPA)		
<p>Dundalk Bay SPA [004026] 14.82 km (NE)</p>	<ul style="list-style-type: none"> ▪ Curlew (<i>Numenius arquata</i>)* ▪ Redshank (<i>Tringa totanus</i>)* ▪ Black-Headed Gull (<i>Chroicocephalus ridibundus</i>)* ▪ Common Gull (<i>Larus canus</i>)* ▪ Herring Gull (<i>Larus argentatus</i>)* ▪ Great Crested Grebe (<i>Podiceps cristatus</i>)* ▪ Greylag Goose (<i>Anser anser</i>)* ▪ Light-Bellied Brent Goose (<i>Branta berniclahrota</i>)* ▪ Pintail (<i>Anas acuta</i>)* ▪ Common Scoter (<i>Melanitta nigra</i>)* ▪ Red-Breasted Merganser (<i>Mergus serrator</i>)* ▪ Oystercatcher (<i>Haematopus ostralegus</i>)* ▪ Ringed Plover (<i>Charadrius hiaticula</i>)* ▪ Golden Plover (<i>Pluvialis apricaria</i>)* ▪ Grey Plover (<i>Pluvialis squatarola</i>)* ▪ Lapwing (<i>Vanellus vanellus</i>)* ▪ Knot (<i>Calidris canutus</i>)* ▪ Dunlin (<i>Calidris alpina</i>)* ▪ Black-Tailed Godwit (<i>Limosa limosa</i>)* ▪ Bar-Tailed Godwit (<i>Limosa lapponica</i>)* ▪ Shelduck (<i>Tadorna tadorna</i>)* ▪ Teal (<i>Anas crecca</i>)* ▪ Mallard (<i>Anas platyrhynchos</i>)* ▪ Wetlands & Waterbirds [A999] <p>* denotes wintering birds at Dundalk Bay.</p> <p>Source: NPWS. (2011). <i>Conservation Objectives: Dundalk Bay SPA [004026]</i>. Version 1.0. Department of Culture, Heritage and the Gaeltacht.</p>	<p>Due to distance and the absence of any hydrological or other potential impact pathways between the proposed development and the European site, there are no potential ecological impacts.</p>

TABLE 1. NATURE CONSERVATION SITES WITHIN 15 KM OF COLLON PLAYGROUND SITE, ARDEE STREET, COLLON, DROGHEDA, CO. LOUTH, (INFORMATION OBTAINED FROM WWW.NPWS.IE IN JULY 2023)

SITE NAME, SITE CODE, DISTANCE AND DIRECTION FROM SITE	SITE OR ORGANISM NAME AND/OR CODE GIVEN ACCORDING TO INTERPRETATION MANUAL OF EUROPEAN UNION HABITATS	THE POTENTIAL SOURCE-PATHWAY-RECEPTOR LINKS BETWEEN THE PROPOSED WAREHOUSE AND THE ECOLOGICALLY DESIGNATED SITE
Special Areas of Conservation (SAC)		
<p>River Boyne and River Blackwater SAC [002299] 6.3 km (SE)</p>	<ul style="list-style-type: none"> ▪ [1099] River Lamprey (<i>Lampetra fluviatilis</i>) ▪ [1106] Salmon (<i>Salmo salar</i>) ▪ [1355] Otter (<i>Lutra lutra</i>) ▪ [7230] Alkaline fens ▪ [91E0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)* <p>* denotes a priority habitat under the Habitats Directive.</p> <p>Source: NPWS. (2021). <i>Conservation Objectives: River Boyne and River Blackwater SAC [002299]</i>. Version 1.0. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.</p>	<p>There will be no contaminated stormwater generated during the construction phase or the operational phase of the development and there are no proposals to generate a point discharge from the site. The material used for the ground covering will not generate leachate. There are some minor concrete foundation works required but these are minor and provided they are done during dry weather no runoff will be generated. As such, there is effectively no source of contamination which can migrate off site.</p> <p>The ground covering will facilitate the percolation of rainfall through the material into the underlying subsoil. As such, any stormwater generated on site will be free of contamination and will discharge to ground. Based on GSI records, there is significant depth of overburden on site, and as such there is significant attenuation capacity within the overburden.</p> <p>There are no surface water bodies within the vicinity of the site nor is there any existing discharge from the site to the municipal stormwater system. As such, there is no viable pathway for possible contamination to exit the site and enter the Mattock River catchment and ultimately flow into the River Boyne and River Blackwater SAC.</p>
<p>Boyne Coast and Estuary SAC [001957] 13.5 km (SE)</p>	<ul style="list-style-type: none"> ▪ [1130] Estuaries ▪ [1140] Mudflats and sandflats not covered by seawater at low tide ▪ [1310] Salicornia and other annuals colonizing mud and sand ▪ [1330] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) ▪ [1410] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) ▪ [2110] Embryonic shifting dunes ▪ [2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes') ▪ [2130] Fixed coastal dunes with herbaceous vegetation ('grey dunes')* <p>* denotes a priority habitat under the Habitats Directive.</p> <p>Source: NPWS. (2021). <i>Conservation Objectives: River Boyne and River Blackwater SAC [002299]</i>. Version 1.0. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.</p>	<p>Due to distance and the absence of any hydrological or other potential impact pathways between the proposed development and the European site, there are no potential ecological impacts.</p>

TABLE 1. NATURE CONSERVATION SITES WITHIN 15 KM OF COLLON PLAYGROUND SITE, ARDEE STREET, COLLON, DROGHEDA, CO. LOUTH, (INFORMATION OBTAINED FROM WWW.NPWS.IE IN JULY 2023) (CONTINUED)

SITE NAME, SITE CODE, DISTANCE AND DIRECTION FROM SITE	SITE OR ORGANISM NAME AND/OR CODE GIVEN ACCORDING TO INTERPRETATION MANUAL OF EUROPEAN UNION HABITATS	THE POTENTIAL SOURCE-PATHWAY-RECEPTOR LINKS BETWEEN THE PROPOSED WAREHOUSE AND THE ECOLOGICALLY DESIGNATED SITE
Special Areas of Conservation (SAC)		
<p>Dundalk Bay SAC [000455] 14.83 km (NE)</p>	<ul style="list-style-type: none"> ▪ [1130] Estuaries ▪ [1220] Perennial vegetation of stony banks ▪ [1410] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) ▪ [1310] <i>Salicornia</i> and other annuals colonizing mud and sand ▪ [1140] Mudflats and sandflats not covered by seawater at low tide ▪ [1330] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) <p>Source: NPWS. (2011). <i>Conservation Objectives: Dundalk Bay SAC [000455]</i>. Version 1.0. Department of Culture, Heritage and the Gaeltacht.</p>	<p>Due to distance and the absence of any hydrological or other potential impact pathways between the proposed development and the European site, there are no potential ecological impacts.</p>

2 SCREENING

Screening involves the following:

1. Description of the surrounding area, plan showing the elements of retention and proposed structures, the local site or plan area characteristics and its existing/proposed effluent discharge(s);
2. Identification of relevant Natura 2000 sites, and compilation of information on their qualifying interests and conservation objectives;
3. Assessment of likely effects (direct, indirect and cumulative) through the completion of a desk study or field survey; and
4. Screening statement including conclusions

2.1 Site History

A review of 6-inch historical Ordnance Survey mapping indicates that the site was woodland with evidence of a landscaped garden towards the northern end of the site (see Plate 9 below). The area to the south of the site where a number of buildings are evident possibly shows evidence of an industrial complex.

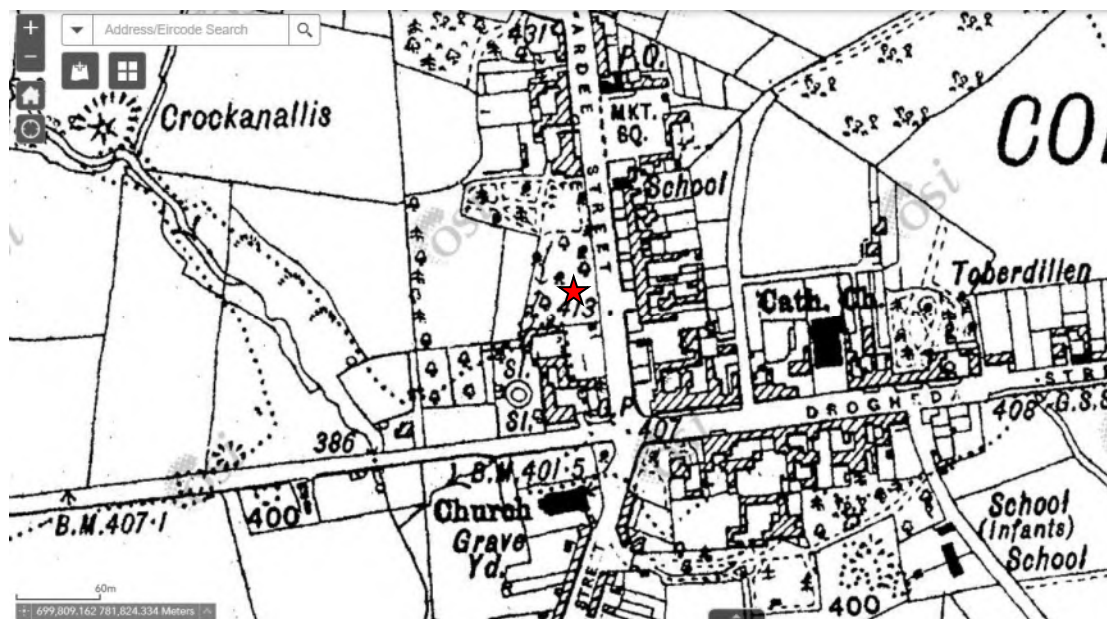


Plate 9. Extract of last Edition of 6-inch historical OS Mapping showing historical brick works to the northwest of the site (note red star indicates the approximate location of the site)

A review of 25-inch historical Ordnance Survey mapping indicates that the site remained as woodland with some slight changes to the landscaped garden towards the northern end of the site. The industrial area to the south of the site also shows little change (see following Plate 10).

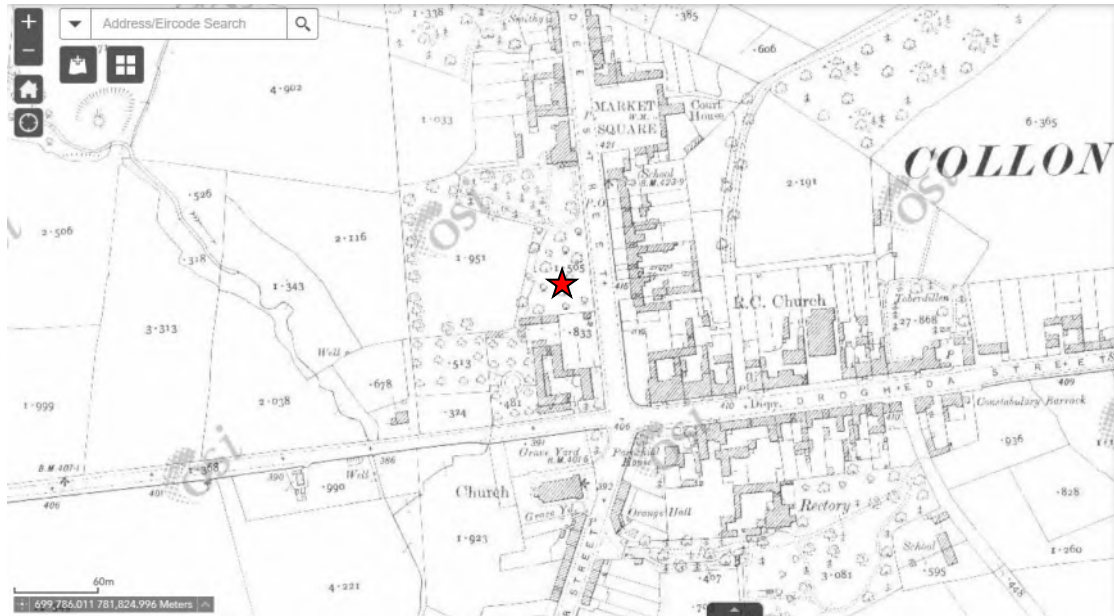


Plate 10. Extract of last Edition of 25-inch historical OS Mapping (note red star indicates the approximate location of the site)

A surface water body can be seen on both 6-inch and 25-inch historical mapping rising in an area to the west of the site known as Crockanallis. This surface water body is a stream, which is approximately 160m southwest of the site at its closest point. This stream flows in a northwest to southeast direction and then in a southerly direction to the south of the L1297 Country Road (i.e., Kells Road) whereafter it joins the Mattock River which is located approximately 325m to the south of the site.

It is understood that the Collon Parish Hall was built on the site during the 1950s.

2.2 Closest Designated Protected Sites

As stated previously, the site is approximately 6.3km to the northwest of the River Boyne and River Blackwater Bay Special Area of Conservation (SAC) (No. 002299) and 7.15km to the northwest of the River Boyne and River Blackwater Bay Special Protected Area (SPA) (No. 004232) (see Figures 1 to 5).

2.3 Topography

The topography of the site slopes evenly from north to south. The highest point of the site is near the northern boundary and is approximately 124.5m AOD. The lowest part of the site is located on the southern end of the site where the elevation is 123.5m AOD (see Plate 11 below).

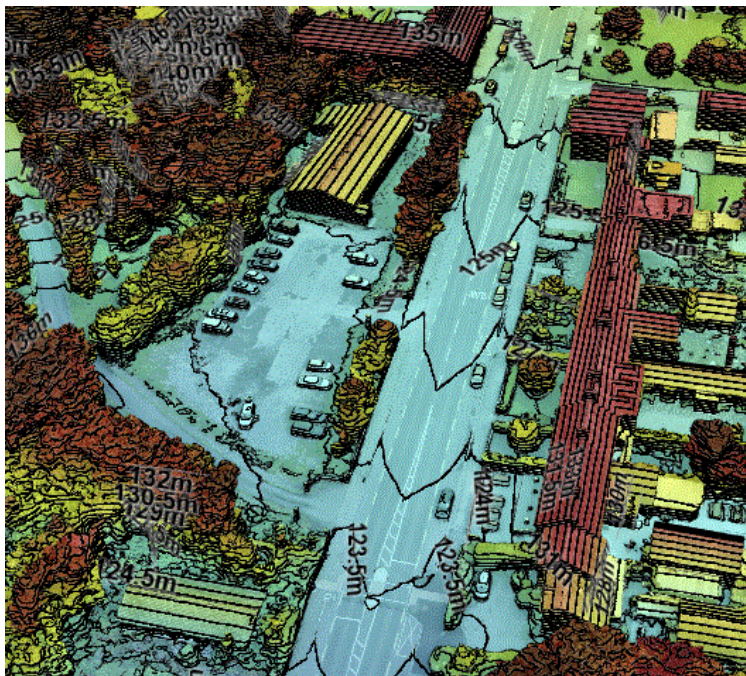


Plate 11. Extract from Dronedeploy 3D Model showing topographic contour lines

2.4 Existing Municipal Foulwater & Stormwater Drainage

A foulwater and stormwater drainage scheme which serves Collon are located on the main N2/Ardee Road to the east of the site. A foulwater discharge from the Collin Parish Hall discharges to the foulwater network. There is no existing stormwater discharge from the site with the existing tarmac and gravel allowing stormwater to dissipate through the overburden.

As stated in Section 1.2 of this report, there are no requirements to discharge stormwater from the proposed playground to the existing municipal stormwater network.

It should be noted that there are no surface water bodies or land drains within the site or along the perimeter of the site. As such, there are no stormwater ‘point’ discharges from the site to a surface water catchment.

2.5 Site Hydrology

2.5.1 Regional Hydrology

The Mattock River is located approximately 330m to the south of the site (see Figures 5 & 6). The site is located within the Boyne Water Framework Directive (WFD) River Basin District (RBD). In Ireland, each RBD is sub-divided into a number of Water Management Units (WMU) (see Appendix 1). The site is in the WFD Subcatchment Boyne_SC_020. Beneath this Subcatchment the site is located within WFD River Sub Basin Mattock_010 (see Appendix 1 for hydrological desk study information).

The Mattock catchment is a relatively small catchment located on the southern boundaries of Co Louth. The Mattock River flows from its source in Collon in an approximate northwest to southeast direction towards the River Boyne. It flows through County Louth towards the southeast until a place west of Drummond Tower in Coolfore where it begins to form the boundary between Counties Meath and Louth. Here it turns towards the southwest until Monknewtown where it takes a southeastern direction again before turning roughly east at Dowth. It joins the Boyne in the townland of Oldbridge at a location approximately 7km to the southeast of the site.

2.5.2 Local Hydrology

A minor surface water body rises in a wooded area to the west of the site known as Crockanallis. This stream is approximately 160m southwest of the site at its closest point. It flows in an approximate northwest to southeast direction and then in a southerly direction to the south of the L1297 Country Road (i.e., Kells Road) whereafter it joins the Mattock River which is located approximately 325m to the south of the site.

There are no surface water bodies and/or land drains in the vicinity of the site. Rainwater currently falling on the site appears to dissipate into the overburden.

No evidence of surface water ponding was observed onsite during an inspection by Mulroy Environmental.

2.6 Site Geology

2.6.1 Introduction

This section addresses the soil and geology aspects of the environment and assesses the impacts of the proposed development on the existing soil, subsoil and bedrock environments. This section was prepared following a site audit and desk study work. Relevant documents that were accessed comprised geological maps and publications by the National Soil Survey of Ireland and the Geological Survey of Ireland (GSI).

2.6.2 Soil

2.6.2.1 Soil (Top Horizon)

The formation of topsoil is known as the ‘pedogenic’ process. Reference to the General Soil Map of Ireland, published by An Foras Talúntais (1980) indicates that the predominant or principal soil type in the vicinity of the site is Soil Association No. 11, *Gleys* (90%) with secondary soils as and *Brown Earth* (10%).

A National Soil Mapping Project carried out jointly by the EPA and Teagasc have identified a number of soil types within the footprint of the site. Soil type *AminPD - Mineral poorly drained (Mainly acidic)* (which is part of the *Surface water Gleys, Ground water Gleys* soil group) was identified in the area to the north and west of the site (see Plate 12 below). A small area of Soil type *AminSP - Shallow poorly drained mineral (Mainly acidic)* (which is part of the *Surface water Gleys, Ground water Gleys* soil group) is located to the west of the site. A small linear strip of *A - Alluvium* is located running along the route of the surface water body to the west of the site.



Plate 12. Extract of GSI Mapping showing soil types identified within the vicinity of the site

Soil type *AminDW - Deep well drained mineral (Mainly acidic)* was identified in the area to the southwest of the site. The footprint of the site is, as expected classed as *URBAN* which is made ground. It is reasonable to infer that there were non-native soils and materials deposited for the purposes of the development of the Collon Parish Hall and carpark. However, it is reasonable to assume that the soil classification is accurate. Based on Mulroy Environmental's local knowledge of the area, the general classification for the area is considered appropriate for the site (see Appendix 1).

2.6.2.2 Subsoil (Quaternary) Geology

The origin of the subsoil material in this region is associated with the movement and deposition from glaciers during the last Ice Age. The ice sheets ground down the underlying bedrock, breaking the rock and grinding it to small sizes ranging from clays to boulders. The powerful erosive force of these ice sheets are considered to have moulded/sculpted the landscape in the area, with glacial features evident in the area. Glacial deposits in the area consist of tills, which were deposited at the base of moving glaciers, and to a lesser extent fluvio-glacial sand and gravels, which were deposited by glacial meltwaters.

The National Soil Mapping Project carried out jointly by the EPA and Teagasc have identified the main subsoil type on the footprint of the site as *TLPSsS - Till derived from Lower Palaeozoic sandstones and shales* (see Plate 13 below). A small linear strip of subsoil of *A - Alluvium Undifferentiated* was identified in the vicinity of the stream to the east of the site. Shallow bedrock was identified in a small area to the west of the site. *GLPSsS - Gravels derived from Lower Palaeozoic sandstones and shales* are located to the south of the village (see Appendix 1).

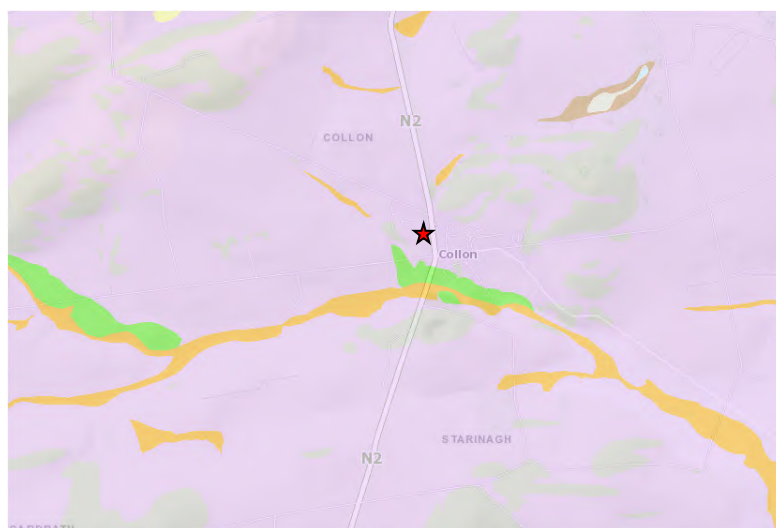


Plate 13. Extract of GSI Mapping showing subsoil types identified within the vicinity of the site

2.6.2.3 Site Specific Soil & Subsoil Detail

No site specific information is available on the site's soil and/or subsoil.

2.6.3 Geology

2.6.3.1 Regional Bedrock Geology

Based on the Geological Survey of Ireland (GSI Bedrock 1:100,000 scale digital geological map series) the bedrock formation for the site is described as the Collon Formation which is comprised of Andesite breccia/conglomerate/sandstone (see Appendix 1).

2.6.3.2 On-site Bedrock Geology

A review of GSI online records, indicates that there are no GSI borehole records within the vicinity of the site with depth to bedrock information.

2.6.4 Hydrogeology

2.6.4.1 General Hydrogeological Classification

The GSI have classified the bedrock aquifer underlying the site as *Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones* (see Appendix 1). Poor (P) aquifers would generally have 'moderate' or 'low' well yields - less than 100m³/d.

2.6.4.2 Groundwater Vulnerability

Groundwater vulnerability is a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease with which groundwater may be contaminated by human activities. The vulnerability category is based on the relative ease with which infiltrating water and potential contaminants may reach groundwater in a vertical or sub-vertical direction. The permeability and thickness of the subsoil, which influences the attenuation capacity, are important elements in determining the vulnerability of groundwater. The Irish GSI has produced guidelines on groundwater vulnerability mapping that aim to represent the intrinsic geological and hydrogeological characteristics that determine how easily groundwater may be contaminated by human activities. Vulnerability depends on the quantity of contaminants that can reach the groundwater, the time taken by water to infiltrate to the water table and the attenuating capacity of the geological deposits through which the water travels. These factors are controlled by the types of subsoils that overlie the groundwater, the way in which the contaminants recharge the geological deposits (whether point or diffuse) and the unsaturated thickness of geological deposits from the point of contaminant discharge. For vulnerability assessments with regard to bedrock aquifers the relevant geological layer is the subsoil between the release point of contaminants and the top of the bedrock. Any unsaturated bedrock layer is not considered as it is assumed that bedrock has little or no attenuation capacity due to its fissure flow characteristics. Groundwater encountered in low permeability glacial tills, or other non-aquifer subsoils, is not considered to be a target. Therefore, where low permeability subsoils overlie the bedrock it is the thickness of subsoil between the release point of contaminants and bedrock that is considered when assessing vulnerability of bedrock aquifers, regardless of whether the low permeability materials are saturated or not. The entirety of the site has been given an aquifer

vulnerability category rating of *Low (L)* by the GSI, (see Table 2 and Plate 14 following and Appendix 1).

Table 2. Groundwater Vulnerability Mapping Guidelines

Vulnerability rating	High permeability (sand/gravel)	Moderate permeability (sandy till)	Low permeability (clayey subsoil)
Extreme	0 – 3.0m	0-3.0 m	0 – 3.0m
High	>3.0m	3.0-10.0m	3.0 – 5.0m
Moderate	N/A	>10m	5.0 – 10.0m
Low	N/A	N/A	>10.0m

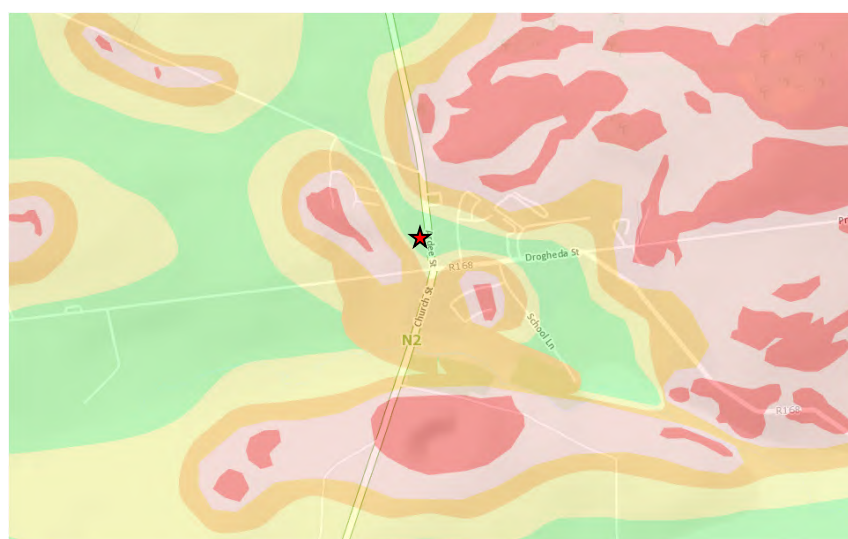


Plate 14. EPA/Teagasc/GSI Aquifer Vulnerability Mapping in proximity of site (note red star is in the centre of the site)

The aquifer vulnerability category rating of *Low (L)* by the GSI is most likely due to the poorly drained and impermeable soils and subsoils identified on site and their depth i.e. in excess of 10m. In addition, average annual recharge rates from rainfall in the vicinity of the site indicate that soil permeabilities are classed as low (see Appendix 1).

2.6.4.3 Groundwater Source Protection

The DoE-LG, EPA and GSI guidelines for Groundwater Protection Schemes allow for the combination of aquifer classification and vulnerability rating giving classifications of groundwater protection zones. The purpose of these zones is to place a control on the activities practised within a zone and thus provide protection to any underlying groundwater resources. Using DoE-LG, EPA and GSI criteria and the aquifer classification and vulnerability categories defined for the site, a vulnerability PI/L (*'L – Low'*) would be assigned for the site.

2.7 Site Ecology

2.7.1 On-site Ecology

2.7.1.1 Overview

The proposed site for the playground is located in Collon village, within a carpark at a Parish Hall property, which is owned by the diocese. The majority of the site has been developed with infrastructure and hardstanding (i.e., tarmac, concrete and gravel). However, there is a treeline along the eastern boundary of the site. There are also treelines planted along the eastern and northern boundaries of the Parish Hall. There is also a small area of grass to the right of the Parish Hall, and a mature planted woodland to the west of the site and the Parish Hall (see Figures 6-8). The area is highly modified. The site was originally a woodland over 100 years ago. This has since been modified to cater for the Collon Parish Hall, built in the 1950s, and the adjacent car park.

2.7.1.2 Methodology

A site-based habitat assessment was carried out on the 5th July, 2023 of the entire Collon Parish Hall site, which is approximately 3,103m² in area, and of a portion of the adjacent woodland positioned to the south of the site, which is approximately 9,987m² in area in its entirety. There was limited access to this mature planted woodland south of the site, so the assessment was carried out on the visible and accessible habitats alongside the access road which is approximately 54m in length.

The habitat survey was carried out following the Heritage Council's *Best Practice Guidance (Smith et al., 2011)*. Habitats were classified to Level 3 of the Heritage Council's classification (*Fossitt, 2000*), and also according to the *Habitats Directive types (European Commission, 2013)* where appropriate. Due to the small study area, a minimum mappable habitat size of 400m² was used (*Smith et al., 2011*). Prior to field survey, a desk study was undertaken to identify habitats through 2D drone photogrammetric survey imagery (i.e., orthomosaics) and 3D mapping. Habitat types and data sets obtained from National Parks and Wildlife Service (NPWS), the National Biodiversity Data Centre (NBDC), the Environmental Protection Agency (EPA), and other sources were employed to assist in the drafting of a habitat map in preparation of the field survey.

In addition to habitat mapping, notes on plant species composition, structure and management were collected. Plant species were assigned a DAFOR abundance rating within each habitat. The DAFOR scale is presented in the following table, Table 3 which was modified from *Smith et al. (2011) Habitat Mapping Guidelines*. Plant nomenclature follows Stace (2010). Plant species identification was assisted by the PictureThis plant identification application with 98% accuracy (PictureThis, 2023). The identification and classification of these plants was also assisted by databases provided by the NBDC, the EPA, Teagasc, Biodiversity Ireland and the NPWS.

Four GIS maps of different scales were produced using the ArcGIS computer programme. These maps were used to identify the proximity of the site to Special Areas of Conservation (SACs) and Special

Protected Areas (SPAs), and to surrounding surface waters. SAC and SPA data was imported from NPWS and added as a layer (NPWS, 2023). An orthomosaic developed through a drone photogrammetric survey was imported into ArcGIS Pro and added as a map surface layer. The site boundary was identified and outlined within this map. A 15km buffer was created around a centre point within the site boundary.

It is general practice when screening a plan or project for compliance with the Habitats Directive, to identify all Natura 2000 sites (SPAs & SACs) within the functional area of the plan/project itself and within 15km of the boundaries of the area the plan/project applies to. This approach is currently recommended in the Department of the Environmental, Heritage and Local Government’s document Guidance for Planning Authorities and as a precautionary measure, to ensure that all potentially affected Natura 2000 sites are included in the screening process.

Table 3. DAFOR Abundance Rating

RATING	DESCRIPTION
Dominant (D)	A Dominant species generally covers more than two-thirds of the habitat.
Abundant (A)	Abundant species typically cover between one-third and two-thirds of the habitat. A rule of thumb for evaluating Abundant species is ‘everywhere you look you see lots’.
Frequent (F)	Commonly encountered species seen when walking through the habitat. ‘Everywhere you look you see some’.
Occasional (O)	Occasional species generally have relatively low frequency and low cover. However, they do not have to be searched for to be found.
Rare (R)	Rare species are those that are only found once or a very few times during the survey, depending on the size of the habitat. Species cover is also very low where Rare species are found.
Locally Abundant (LA)	Used where overall occurrence of species is either occasional or rare, but species is abundant over a small area.

2.7.1.3 Habitat Descriptions

Three habitat types were found in the vicinity of the area proposed for the playground (see Figure 8). The tree line located to the east of the Parish Hall has been listed as protected by the Louth County Council (see previous section, Section 1.4). The plant species recorded within this treeline have been listed in a detailed table, Table 4. Plant species were assigned a DAFOR rating to give a measure of abundance within each habitat. General plant species composition for the woodland area and the other treeline have also been listed in Table 5 and Table 6 respectively.

The footprint of the proposed playground site is 957m². This area includes three habitats: Buildings and Artificial Surfaces (BL3), Broadleaved Woodland (WD1) and Treelines (WL2). The eastern boundary

Table 4. Plant Species identified in WL2 - Treeline Habitat at Proposed Site for Playground, Collon, County Louth

Tree ID	Common Name	Taxon Name	Native/Alien/Invasive	Irish Status	Invasive Impact Score	DAFOR
1	Silver birch	<i>Betula pendula</i>	Native	Not protected	NA	F
2	Cherry plum	<i>Prunus cerasifera</i>	Native	Not protected	NA	O
3	Norway maple	<i>Acer platanoides</i>	Alien	Established	Low 10	O
4	Red alder	<i>Alnus rubra</i>	Alien	Not assessed	Not assessed	O
5	Blackthorn	<i>Prunus spinosa</i>	Native	Not protected	NA	O
6	Gray alder	<i>Alnus incana</i>	Alien	Established	Low 8	O
7	Japanese cherry	<i>Prunus serrulata</i>	Alien	Not assessed	Not assessed	O
8	Silver birch	<i>Betula pendula</i>	Native	Not protected	NA	F

Table 5. Plant Species identified in WDI- Woodland Habitat at Proposed Site for Playground, Collon, County Louth

Common Name	Taxon Name	Native/Alien/Invasive	Irish Status	Invasive Impact Score	DAFOR
Cherry laurel	<i>Prunus laurocerasus</i>	Invasive	Established	High 18	F
Elder	<i>Sambucus nigra</i>	Native	Not protected	N/A	A
Butterfly bush	<i>Buddleja davidii</i>	Invasive	Established	Medium 15	F
Stinging nettle	<i>Urtica dioica</i>	Native	Not protected	N/A	F
Bitter dock	<i>Rumex obtusifolius</i>	Invasive	Not assessed	Not assessed	A
Bull thistle	<i>Cirsium vulgare</i>	Native	Not protected	N/A	O
Goat willow	<i>Salix caprea</i>	Native	Not protected	N/A	A
Large bindweed	<i>Calystegia silvatica</i>	Alien	Established	Not assessed	O
Elmleaf blackberry	<i>Rubus ulmifolius</i>	Native	Not protected	N/A	F
Common ragwort	<i>Jacobaea vulgaris</i>	Native	Not protected	N/A	F
Red raspberry	<i>Rubus idaeus</i>	Native	Not protected	N/A	F
Herb robert	<i>Geranium robertianum</i>	Native	Not protected	N/A	O
Norway maple	<i>Acer platanoides</i>	Alien	Established	Low 10	O
Common ash	<i>Fraxinus excelsior</i>	Native	Not protected	N/A	O
Common holly	<i>Ilex aquifolium</i>	Native	Not protected	N/A	O
Hedge bindweed	<i>Calystegia sepium</i>	Native	Not protected	N/A	F
Creeping buttercup	<i>Ranunculus repens</i>	Native	Not protected	N/A	F
Old man's beard	<i>Clematis vitalba</i>	Invasive	Established	Medium 17	R
English ivy	<i>Hedera helix</i>	Native	Not protected	N/A	F
Grey willow	<i>Salix cinerea</i>	Native	Not protected	N/A	O
Sweet cherry	<i>Prunus avium</i>	Native	Not protected	N/A	F
Lawson's cypress	<i>Chamaecyparis lawsoniana</i>	Alien	Established	Not assessed	R
European mountain ash	<i>Sorbus aucuparia</i>	Native	Not protected	N/A	O

Table 6. Plant Species identified in WL2 (2) - Treeline Habitat east of the Parish Hall, beside the Proposed Site for Playground, Collon, County Louth

Tree ID	Common Name	Taxon Name	Native/Alien/Invasive	Irish Status	Invasive Impact Score	DAFOR
9	Norway maple	<i>Acer platanoides</i>	Alien	Established	Low 10	F
10	Cherry plum	<i>Prunus cerasifera</i>	Native	Not protected	N/A	F
11	Red alder	<i>Alnus rubra</i>	Alien	Not assessed	Not assessed	O
12	Gray alder	<i>Alnus incana</i>	Alien	Established	Low 8	O
13	Sweet cherry	<i>Prunus avium</i>	Native	Not protected	N/A	F
14	Silver birch	<i>Betula pendula</i>	Native	Not protected	N/A	F
15	Norway maple	<i>Acer platanoides</i>	Alien	Established	Low 10	F
16	Cherry plum	<i>Prunus cerasifera</i>	Native	Not protected	N/A	F
17	Common ash	<i>Fraxinus excelsior</i>	Native	Not protected	N/A	O
18	Sweet cherry	<i>Prunus avium</i>	Native	Not protected	N/A	F
19	Common hornbeam	<i>Carpinus betulus</i>	Alien	Naturalised	Not assessed	R

is separated off from Ardee Street with a stone wall topped with iron bars, whilst the southern boundary is fenced with a partially fallen wire fence behind more stable iron chain linked pillars. A narrow woodland forms the boundary along the western side of the site. The remainder of the carpark is located immediately north of the site, followed further north by the Parish Hall (see Figures 6 to 8). It is understood that future plans are in place to rebuild the hall. The proposed location for the playground is on the southern end of the existing carpark.

Buildings and Artificial Surfaces (BL3)

This category includes all buildings and structures which are composed of artificial structures such as cement, bricks, and tarmac. The Collon Parish hall and the parking lot are included under this habitat description, as they are built with artificial materials, and include less than 50% plant cover. Much of the site is classed under this category (see Plate 15 below and Figure 8).



Plate 15. Ground view of site from southwestern corner facing in a northeasterly direction showing the Parish Hall, parking lot (BL3) & the northeastern treeline (WL2)

Broadleaved Woodland (WD1)

This category includes areas of non-native planted woodland or highly modified woodland, which include majority cover (90-100%) broad leaved trees, and no more than 0-25% coniferous land cover (see Figure 8). Woodlands within this category cannot be specified as semi-natural, however the species composition can include both non-native and native trees. The woodland on the western border of the carpark and the Parish Hall can be classified as a broadleaved woodland, as it is a planted non-natural area with majority broadleaf cover (see following plate, Plate 16). This would be specified as a non-mixed woodland as it is not particularly specious. The portion of the woodland to the southwest along the proposed playground site would be more closely identified as a *narrow* woodland, as it is between 10-12 meters wide. However, as this is greater than 4 meters in elevation, it cannot be described as a treeline. The canopy is also greater than 5 meters in height, so this also cannot be classified as scrub, despite the abundance of shrubbery present (see Figure 8).



Plate 16. Ground views of Broadleaved Woodland (WD1) in southwestern area of site

A mix of both native and non-native species were recorded within this habitat. A list of species found can be seen in Table 5. Elder *Sambucus nigra* species were the most dominant across the habitat. Numerous invasive species were detected, including high impact species such as Cherry laurel (*Prunus laurocerasus*) and medium impact species such as Butterfly bush (*Buddleja davidii*) and Old man's beard (*Clematis vitalba*) (see Table 5). This western woodland boundary may be trimmed back to allow for a larger area for the site and to facilitate construction works. This will likely promote the dispersal of these invasive species to the wider area, most alarmingly the high impact species *P. laurocerasus*. This toxic species outcompetes native flora and forms dense thickets which block sunlight from reaching the undergrowth which can discourage regeneration of native plants (Maguire, C.M. et al., 2008). However, the invasive species identified in Table 5 are not listed as Invasive Alien Species of Union Concern by the European Commission. Therefore, they are not regulated as part of the Alien Invasive Species European Regulation (EU No. 1143/2014).

Despite this, preventative measures should be put in place to conserve the biodiversity within the broadleaved woodland (WD1) habitat and to prevent the spread of invasive species. Invasive species can negatively alter the composition and structure of a habitat. They may be spread by machinery or equipment on site through directly transferring propagules, or due to the presence of propagules on equipment or machinery which may be introduced when they are used in another area of a site. To prevent this, equipment or machinery which has been in contact with invasive flora must be cleaned to remove invasive debris. Invasive species' propagules may also exist within the soil; therefore, soil should not be transferred to another area or site. Invasive plant species can be physically removed by grubbing the root and cutting large stems, once the plant material is properly disposed of to prevent re-growth. The soil itself or the plant may be treated with chemical controls such as glyphosate, triclopyr or ammonium sulphate. The chemical type, solution, application method and ideal environmental conditions will vary depending on the target plant species. Regarding invasive plant species control,

the ‘Guidelines on The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads’ (NRA, 2010) should be followed.

No protected species were surveyed across this habitat. However, several native Irish species were encountered, for example elder (*Sambucus nigra*), goat willow (*Salix caprea*) and elmleaf blackberry (*Rubus ulmifolius*) plants were identified in several locations. Other native species such as the common holly (*Ilex aquifolium*) were also identified at lower abundances across the habitat (see Table 5). Diverse pollinator activity was evident along the woodland on the western boundary of the site. Native plant species within this habitat such as elder, sweet cherry, grey willow, creeping buttercup, ash, and herb robert serve as food sources for pollinators such as bees and butterflies (NBDC, 2023).

Treelines (WL2)

Treelines include narrow strips or lines of trees, less than 4 meters wide, which are usually planted as property or field boundary outlines. Typically, each tree is proportionally spaced apart. Tree species are often made up of non-native species such as Beech (*Fagus sylvatica*), Horse Chestnut (*Aesculus hippocastanum*), Lime trees (*Tilia spp.*) or conifers, etc. There are 2 treelines present, one of which is located on the eastern border of the Parish Hall, and another along the eastern boundary of the site (see Plates 17 and 18 following). These treelines are made up of both native and non-native species, and act as a boundary line between the site and the Ardee Street.

The treeline located to the northeast of the site is protected under the Louth County Development Plan and may not be modified during construction. The species within this treeline have been listed in Table 6. Native species encountered include cherry plum (*Prunus cerasifera*), sweet cherry (*Prunus avium*), silver birch (*Betula pendula*) and common ash (*Fraxinus excelsior*), while non-native species include Japanese cherry (*Prunus serrulata*), gray alder (*Alnus incana*), red alder (*Alnus rubra*) and Norway maple (*Acer platanoides*). This treeline includes several shrubs at the base, and two small evergreen shrubs frame the access gate along this treeline. There is also a small area of grassland adjacent to it.

The treeline which borders the east of the site will be affected by construction works. This includes native species such as silver birch, blackthorn, and cherry plum. Alien species such as Japanese cherry (*P. serrulata*), gray alder (*A. incana*), red alder (*A. rubra*), and Norway maple (*A. platanoides*) were also recorded here. These species have not been categorised as invasive either due to a lack of information or because they pose a low invasive risk to native biota or protected species. The alien species found along the treeline boundary immediately east of the site are not listed as Invasive Alien Species of Union Concern by the European Commission. Therefore, they are not regulated as part of the Alien Invasive Species European Regulation (EU No. 1143/2014).



Plate 17. Ground views of the protected treeline (WL2) on the eastern boundary of the Parish Hall.



Plate 18. Ground views of the second treeline (WL2) on the southeastern boundary of the site

2.7.2 Surrounding Ecology

A parochial house is located to the west of the site. A mature planted woodland extends to the east of this property and along the southern boundary. Using Fossit's, *A Guide to Habitats in Ireland 2000*, this woodland is most likely a continuation of the *WD1 Broadleaved Woodland* habitat located on site, which would be regarded as of low ecological importance (see Figure 8). This woodland extension was inaccessible while the habitat survey was carried out. Based on overhead drone imagery, this woodland appears to contain 2 No. significant trees which reach above 20-meter heights. The garden area surrounding the parochial house is classed as a *GA2 Amenity Grassland* habitat, which is typically associated with lawns and landscaped grasslands. Several trees are also dotted across the garden. The house, shed and the tarmac drive are classed as a *BL3 Buildings and Artificial Surfaces* and comprise a large proportional area of the property.

A tarmac-paved access road is located south of the site, leading into the drive of the parochial property. This would also be included under *BL3 Buildings and Artificial Surfaces*. A mature woodland borders the far side of this access road and continues further south (see Figure 8 and Plate 19 below). A general list of accessible species identified alongside this road is outlined in Table 5. This woodland is also classed as a *WD1 Mixed Broadleaved Woodland* based on evidence collected during the field survey and a desk-based study of the drone survey mapping. There were numerous shrub species identified within the undergrowth of this woodland. Additionally, there are 2 derelict buildings which were also visible within this woodland area. Further investigation would be required to identify whether these buildings would be classed as an intact building under *BL3 Buildings and Artificial Surfaces*, or a highly damaged stone derelict building, under the *BL1 Stone Walls and other Stonework* category. Structures under this category would be regarded as of high ecological importance, particularly as potential habitats for bats and bird species. A concrete boundary wall lines this property on the east and south alongside the road.

Apartment buildings are located to the north of the Parish Hall, while the Ardee road and residential buildings compose habitats beyond the east of the site. These structures and properties would be included under the *BL3 Buildings and Artificial Surfaces* category.



Plate 19. Ground view of Broadleaved Woodland (WD1) to the south of the site

3 IDENTIFICATION OF NATURA 2000 SITES

It is general practice, when screening a plan or project for compliance with the Habitats Directive, to identify all Natura 2000 sites (SPAs & SACs) within the functional area of the plan/project itself and within 15km of the boundaries of the area the plan/project applies to. This approach is currently recommended in the Department of the Environmental, Heritage and Local Government's document Guidance for Planning Authorities and as a precautionary measure, to ensure that all potentially affected Natura 2000 sites are included in the screening process.

A list of all the SPAs and SACs within 15km of the site are included in a comprehensive table, Table 1 at the start of the report. The following table, Table 7 represents a summary of Table 1. Please see Figures 1 to 5 for locations of the sites at various mapping scales.

Table 7. Natura 2000 sites within 15km of the Proposed Playground Site at Collon

SITE CODE	DESIGNATION	SITE NAME
004232	SPA	River Boyne and River Blackwater
002299	SAC	River Boyne and River Blackwater
004080	SPA	Boyne Estuary
001957	SAC	Boyne Coast & Estuary
004091	SPA	Stabannon-Bragganstown
000455	SAC	Dundalk Bay
004026	SPA	Dundalk Bay

4 DESCRIPTION OF NATURA 2000 SITES

Please note that conservation objectives, qualifying interests, vulnerability and conservation status of individual sites is provided in Section 5.

4.1 River Boyne and River Blackwater SPA (004232)

The River Boyne and River Blackwater SPA is a long, linear site that comprises stretches of the River Boyne and several of its tributaries; most of the site is in Co. Meath, but it extends also into Cos Cavan, Louth and Westmeath. It includes the following river sections: the River Boyne from the M1 motorway bridge, west of Drogheda, to the junction with the Royal Canal, west of Longwood, Co Meath; the River Blackwater from its junction with the River Boyne in Navan to the junction with Lough Ramor in Co. Cavan; the Tremblestown River/Athboy River from the junction with the River Boyne at Kilnagross Bridge west of Trim to the bridge in Athboy, Co. Meath; the Stoneyford River from its junction with the River Boyne to Stonestown Bridge in Co. Westmeath; the River Deel from its junction with the River Boyne to Cumber Bridge, Co. Westmeath. The site includes the river channel and marginal vegetation.

Most of the site is underlain by Carboniferous limestone but Silurian quartzite also occurs in the vicinity of Kells and Carboniferous shales and sandstones close to Trim. The site is a Special Protection Area (SPA) under the E.U. Birds Directive of special conservation interest for the Kingfisher.

4.2 River Boyne and River Blackwater SAC (002299)

This site comprises the freshwater element of the River Boyne as far as the Boyne Aqueduct, the Blackwater as far as Lough Ramor and the Boyne tributaries including the Deel, Stoneyford and Tremblestown Rivers. These riverine stretches drain a considerable area of Meath and Westmeath, and smaller areas of Cavan and Louth. The underlying geology is Carboniferous Limestone for the most part, with areas of Upper, Lower and Middle well represented. In the vicinity of Kells Silurian Quartzite is present while close to Trim are Carboniferous Shales and Sandstones. There are many large towns adjacent to but not within the site, including Slane, Navan, Kells, Trim, Athboy and Ballivor.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

- [7230] Alkaline Fens;
- [91E0] Alluvial Forests*;
- [1099] River Lamprey (*Lampetra fluviatilis*);
- [1106] Atlantic Salmon (*Salmo salar*); and
- [1355] Otter (*Lutra lutra*).

The main areas of alkaline fen in this site are concentrated in the vicinity of Lough Shesk, Freehan Lough and Newtown Lough. The hummocky nature of the local terrain produces frequent springs and seepages which are rich in lime. A series of base-rich marshes have developed in the poorly-drained hollows, generally linked with these three lakes. Open water is usually fringed by Bulrush (*Typha latifolia*), Common Club-rush (*Scirpus lacustris*) or Common Reed (*Phragmites australis*), and this last

species also extends shorewards where a dense stand of Great Fen-sedge (*Cladium mariscus*) frequently occurs. This in turn grades into a sedge and grass community (*Carex spp.* and Purple Moor-grass, *Molinia caerulea*), or one dominated by Black Bog-rush (*Schoenus nigricans*). An alternative aquatic/terrestrial transition is a floating layer of vegetation. This is normally based on Bogbean (*Menyanthes trifoliata*) and Marsh Cinquefoil (*Potentilla palustris*). Other species gradually become established on this cover, especially plants tolerant of low nutrient status e.g. bog mosses (*Sphagnum spp.*). Diversity of plant and animal life is high in the fen and the flora includes many rarities. Plants of interest include Narrow-leaved Marsh-orchid (*Dactylorhiza traunsteineri*), Fen Bedstraw (*Galium uliginosum*), Cowbane (*Cicuta virosa*), Frogbit (*Hydrocharis morsus-ranae*) and Least Bur-reed (*Sparganium minimum*). These species tend to be restricted in their distribution in Ireland. Also notable is the abundance of aquatic stoneworts (*Chara spp.*) which are characteristic of calcareous wetlands.

4.3 Boyne Estuary SPA (004080)

This moderately-sized coastal site is situated west of Drogheda on the border of Counties Louth and Meath. The site comprises most of the estuary of the Boyne River, a substantial river which drains a large catchment. Apart from one section which is over 1 km wide, its width is mostly less than 500 m. The river channel, which is navigable and dredged, is defined by training walls, these being breached in places. Intertidal flats occur along the sides of the channelled river. The sediments vary from fine muds in the sheltered areas to sandy muds or sands towards the river mouth. The linear stretches of intertidal flats to the north and south of the river mouth are mainly composed of sand. One or more species of Eelgrass (*Zostera spp.*) occur in the estuary. Parts of the intertidal areas are fringed by salt marshes, most of which are of the Atlantic type, and dominated by Sea-purslane (*Halimione portulacoides*). Other species present include Common Saltmarsh-grass (*Puccinellia maritima*), Sea Plantain (Plantago maritima), Lax-flowered Sea-lavender (*Limonium humile*) and Glasswort (*Salicornia spp.*). Common Cord-grass (*Spartina anglica*) occurs frequently on the flats and salt marshes. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Shelduck, Oystercatcher, Golden Plover, Grey Plover, Lapwing, Knot, Sanderling, Black-tailed Godwit, Redshank, Turnstone and Little Tern. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

4.4 Boyne Coast & Estuary SAC (001957)

Boyne Coast and Estuary SAC is a coastal site which includes most of the tidal sections of the River Boyne, intertidal sand- and mudflats, saltmarshes, marginal grassland, and the stretch of coast from Bettystown to Termonfeckin that includes the Mornington and Baltray sand dune systems. The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

- [1130] Estuaries;
- [1140] Tidal Mudflats and Sandflats;
- [1210] Annual vegetation of drift lines;
- [1310] Salicornia Mud;

- [1330] Atlantic Salt Meadows;
- [2110] Embryonic Shifting Dunes;
- [2120] Marram Dunes (White Dunes); and
- [2130] Fixed Dunes (Grey Dunes).

4.5 Stabannan – Braganstown SPA

Stabannan-Braganstown SPA is situated approximately 4km inland from Dundalk Bay in Co. Louth. It is a small, flat alluvial plain adjacent to the River Glyde and is bounded to the north and south by low, rolling hills. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Greylag Goose.

The site is of ornithological importance as it supports an important population of Greylag Goose, which on occasion occurs in numbers of international importance. It is of note that three species that regularly occur at the site are listed on Annex I of the E.U. Birds Directive, i.e. Greenland White-fronted Goose, Whooper Swan and Golden Plover.

4.6 Dundalk Bay SAC

Dundalk Bay, Co. Louth, is a very large open shallow sea bay with extensive saltmarshes and intertidal sand/mudflats, extending some 16km from Castletown River on the Cooley Peninsula in the north to Annagassan/Salterstown in the south (see site synopsis in Appendix 3). The bay encompasses the mouths and estuaries of the Rivers Dee, Glyde, Fane, Castletown and Flurry.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive:

- Estuaries (1130);
- Tidal Mudflats and Sandflats (1140);
- Perennial Vegetation of Stony Banks (1220);
- Salicornia Mud (1310);
- Atlantic Salt Meadows (1330); and
- Mediterranean Salt Meadows (1410)

The site is internationally important for waterfowl because it regularly holds over 20,000 birds (up to and supports over 1% of the North-West European/East Atlantic Flyway populations of Brent Goose (366), Bartailed Godwit (2,312) and Knot (11,948). Additionally, it is nationally important for Golden Plover (4,266), Great Crested Grebe (193), Greylag Goose (312), Shelduck (463), Mallard (657), Pintail (100), Red-breasted Merganser (148), Oystercatcher (6,940), Grey Plover (218), Ringed Plover (133), Wigeon (565), Dunlin (9,112), Blacktailed Godwit (754), Curlew (1,593), Lapwing (4,822), Greenshank (20) and Redshank (1,455). Both Golden Plover and Bar-tailed Godwit are Annex I species.

4.7 Dundalk Bay SPA

Dundalk Bay is a large open shallow sea bay with extensive saltmarshes and intertidal sand/mudflats, extending some 16 km from Castletown River on the Cooley Peninsula, in the north, Annagassan/Salterstown in the south.

Dundalk Bay SPA is one of the most important wintering waterfowl sites in the country and one of the few that regularly supports more than 20,000 waterbirds (see site synopsis in Appendix 6). Four species occur in numbers of international importance and a further 19 species in numbers of national importance. The regular occurrence of Golden Plover, Bar-tailed Godwit, Red-throated Diver, Great Northern Diver and Little Egret is of particular note as these species are listed on Annex I of the E.U. Birds Directive.

5 CONSERVATION OBJECTIVES, QUALIFYING INTERESTS, VULNERABILITY AND CONSERVATION STATUS OF NATURA 2000 SITES

Of the 7 sites located within 15km of the site proposed in Collon for the playground there are no potential *Source-Pathway-Receptor* links present. The reasons for this are as follows.

5.1 Sources of Contamination

There will be no contaminated stormwater generated during the construction phase or the operational phase of the development and there are no proposals to generate a point discharge from the site. The material used for the ground covering will not generate leachate. As such, there is effectively no ‘*Source*’ of contamination which can migrate off site. The development will require some limited use of concrete the installation of the play equipment and fencing. These works are minor and will be carried out during dry weather to prevent run-off and as such, it will not represent a viable source of contamination.

As stated in Section 2.4, the ground covering will facilitate the percolation of rainfall through the material into the underlying subsoil. As such, any stormwater generated on site will be free of contamination and will discharge to ground. Based on GSI records, there is significant depth of overburden on site, and as such there is significant attenuation capacity within the overburden.

5.2 Pathways for Off-site Migration to Natura 2000 Receptors

There are no surface water bodies within the vicinity of the site nor is there any existing discharge from the site to the municipal stormwater system. As such, there is no viable ‘*Pathway*’ for possible contamination to exit the site and get into the Mattock River catchment and ultimately enter into the River Boyne and River Blackwater SPA and/or SPA.

5.3 Potential Natura 2000 Receptors

The nearest Natura 2000 site is the River Boyne and River Blackwater SAC (002299) which is 6.3km to the south of the site. However, there are no sources of contamination from the site nor are there pathways to this SAC if a hypothetical source was to arise.

5.4 Other Sensitive Ecological Receptors

The operations of the playground site will not have any significant negative impact on flora and fauna within, or adjacent to the boundary of the site as there will not be any increase in indirect impacts (e.g., disturbance and noise from people, parking cars, etc) compared with the current baseline ecological conditions.

6 ASSESSMENT OF LIKELY EFFECTS ON THE ECOLOGY OF RIVER BOYNE AND RIVER BLACKWATER SPA/SAC

A review of the proposed development indicates that there will not be:

- Any impact on an Annex I habitat;
- Any reduction in the area of a Natura 2000 site;
- Direct or indirect damage to the physical quality of the environment in the Natura 2000 site;
- Serious or ongoing disturbance to species or habitats for which Natura 2000 is selected;
- Direct or indirect damage to the size, characteristics or reproductive ability of populations on the Natura 2000 site; and
- Interference with mitigation measures put in place for other plans/projects.

7 SCREENING CONCLUSION AND STATEMENT

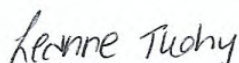
The findings and conclusions of the screening process are as follows:

1. *No potential for significant effects/AA is not required*

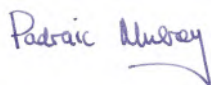
Screening established that there is **no potential for significant effects** and the project/plan can proceed as proposed. However, no changes may be made after this as this will invalidate the findings of the screening.

2. However, prior to the commencement of construction, a separate Invasive Alien Plant Species (IAPS) assessment may be required along with this report. The project site may need to be re-surveyed to establish the extent and locations of invasive plant species within the site in order to determine a suitable management strategy.

Yours sincerely,



Leanne Tuohy, BSc.,
Staff Ecologist,
Mulroy Environmental Ltd.



Padraic Mulroy
BSc., MSc., MIPSS, MIEI, C.Sci., BREEAM AP, LEED Green Assoc.
Managing Director
Mulroy Environmental Ltd.

**MULROY ENVIRONMENTAL LTD.
SERVICE CONSTRAINTS**

1. This report and the AA Screening Assessment carried out in connection with the report (together the "Services") were compiled and carried out for Louth County Council (the "client") in accordance with the terms of an emailed fee proposal agreement Fee Proposal PRP525.04.05.2023 between Mulroy Environmental Ltd. and the "client" dated the 4th May, 2023. Mulroy Environmental Ltd. received permission to proceed by email on the 14th June, 2023. The Services were performed by Mulroy Environmental Ltd. with the skill and care ordinarily exercised by a reasonable Environmental consultant at the time the Services were performed. Further, and in particular, the Services were performed by Mulroy Environmental Ltd. taking into account the limits of the scope of works required by the client, the time scale involved and the resources, including financial and manpower resources, agreed between Mulroy Environmental Ltd. and the client.
2. Other than that expressly contained in paragraph 1 above, Mulroy Environmental Ltd. provides no other representation or warranty whether express or implied, in relation to the Services.
3. Unless otherwise agreed the Services were performed by Mulroy Environmental Ltd. exclusively for the purposes of the client. Mulroy Environmental Ltd. is not aware of any interest of or reliance by any party other than the client in or on the Services. Unless expressly provided in writing, Mulroy Environmental Ltd. does not authorise, consent or condone any party other than the client relying upon the Services. Should this report or any part of this report, or otherwise details of the Services or any part of the Services be made known to any such party, and such party relies thereon that party does so wholly at its own and sole risk and Mulroy Environmental Ltd. disclaims any liability to such parties. Any such party would be well advised to seek independent advice from a competent environmental consultant and/or lawyer.
4. It is Mulroy Environmental Ltd.'s understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was a significant factor in determining the scope and level of the Services. Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of or reliance upon the report in those circumstances by the client without Mulroy Environmental Ltd. be requested to review the report after the date hereof, Mulroy Environmental Ltd. shall be entitled to additional payment at the then existing rates or such other terms as agreed between Mulroy Environmental Ltd. and the client.
5. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of Mulroy Environmental Ltd. In the absence of such written advice of Mulroy Environmental Ltd., reliance on the report in the future shall be at the client's own and sole risk. Should Mulroy Environmental Ltd. be requested to review the report in the future, Mulroy Environmental Ltd. shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between Mulroy Environmental Ltd. and the client.
6. The observations and conclusions described in this report are based solely upon the Services which were provided pursuant to the agreement between the client and Mulroy Environmental Ltd. Mulroy Environmental Ltd. has not performed any observations, investigations, studies or testing not

specifically set out or required by the contract between the client and Mulroy Environmental Ltd.. Mulroy Environmental Ltd. is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the Services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, Mulroy Environmental Ltd. did not seek to evaluate the presence on or off the site of asbestos, electromagnetic fields, lead paint, heavy metals, radon gas or other radioactive or hazardous materials.

7. The Services are based upon Mulroy Environmental Ltd.'s observations of existing physical conditions at the Site gained from a walk-over survey of the site together with Mulroy Environmental Ltd.'s interpretation of information including documentation, obtained from third parties and from the client on the history and usage of the site. The Services are also based on information and/or analysis provided by independent testing and information services or laboratories upon which Mulroy Environmental Ltd. was reasonably entitled to rely. The Services clearly are limited by the accuracy of the information, including documentation, reviewed by Mulroy Environmental Ltd. and the observations possible at the time of the walk-over survey. Further Mulroy Environmental Ltd. was not authorised and did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the Services. Mulroy Environmental Ltd. is not liable for any inaccurate information or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to Mulroy Environmental Ltd. and including the doing of any independent investigation of the information provided to Mulroy Environmental Ltd. save as otherwise provided in the terms of the contract between the client and Mulroy Environmental Ltd..

8. The environmental monitoring aspects of the Services is a limited sampling of the site at pre-determined borehole and soil vapour locations based on the operational configuration of the site. The conclusions given in this report are based on information gathered at the specific test locations and can only be extrapolated to an undefined limited area around those locations. The extent of the limited area depends on the soil and groundwater conditions, together with the position of any current structures and underground facilities and natural and other activities on site. In addition chemical analysis was carried out for a limited number of parameters [as stipulated in the contract between the client and Mulroy Environmental Ltd.] [based on an understanding of the available operational and historical information,] and it should not be inferred that other chemical species are not present.

9. Any site drawing(s) provided in this report is (are) not meant to be an accurate base plan, but is (are) used to present the general relative locations of features