Proposed Integrated Constructed Wetland at Griffeen Valley
Park, Lucan, South County Dublin
(DURL\_Project\_#Life17\_ENV/IE/000281)
Information for Screening for Appropriate Assessment







**Brady Shipman Martin**Built.
Environment.

# Environmental Assessment Built Environment

Client:

Date:

**DURL Project SDCC** 

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#### Contents

1	Introduction and Background1				
	1.1 1.2	Background			
2	Meth	nodology2			
	2.1	Baseline data collection and field visit			
3	Scree	ening for Appropriate Assessment			
	3.1 3.2 3.3 3.3.1 3.3.2	Background3Potential zone of influence4Study area and surrounding environment4Site location and European sites4Other designated areas (other than European sites)7			
4	Desc	ription of the proposed development7			
5	Pote	ntial impacts from the proposed development, including in-combination effects7			
	5.1 5.1.1 5.1.2 5.2	European sites and habitats with links to European sites			
6	Other issues				
7	Mitigation specific to European sites				
8	In-combination effects16				
9	Screening conclusion				
App	pendix	I: Background			
	Ü	s in the assessment			

Information for Screening for Appropriate Assessment

## 1 Introduction and Background

#### 1.1 Background

The Dublin Urban Rivers LIFE (DURL) project, a collaboration between South Dublin County Council and Dún Laoghaire-Rathdown County Council, seeks to improve water quality in County Dublin and promote water quality improvement in urban areas in Ireland and across Europe. Domestic misconnections, caused by incorrectly plumbed washing machines and dishwashers discharging to the rainwater drainage network, cause water pollution and reduce the habitat value of rivers and streams. This hinders Ireland's ability to meet the requirements of the Water Framework Directive and the River Basin Management Plan for Ireland 2018-2021. As part of the response to this challenge it is proposed to build integrated constructed wetlands (ICW) at several strategic locations in South County Dublin. South Dublin County Council is the lead authority on the project.

SDCC proposes to develop a total of five ICWs at four sites in the county:

- Kilnamanagh: A single site adjacent to a canalised stream a tributary to the River Camac;
- Griffeen Valley Park, Lucan: A single site adjacent to the River Griffeen;
- **Dodder Valley Park:** Two sites within the park (DR033 and DR035), adjacent to the River Dodder, approximately 400m from each other;
- Tymon Park/Poddle: a single site within the existing park.

As part of the current project, the proposed ICWs at Kilnamanagh, Griffeen Valley Park and Dodder Valley Park (four separate ICWs in total) are being assessed.

The purpose of the ICWs is to provide an element of treatment for contaminated surface water that currently flows into watercourses in the county (the Camac, the Griffeen and the Dodder). It is intended that the ICWs will have several benefits – while water treatment is a priority, the ICWs are also expected to enhance local biodiversity and the amenity value of each site.

Given these objectives it is essential that each ICW proposal is subject to an appropriate level of biodiversity survey and appraisal.

The DURL Project (Agreement number: LIFE17 ENV/IE/000281) has received funding from the European Union.

The report reflects only the author's view and the Executive Agency for Small and Medium-sized Enterprises is not responsible for any use that may be made of the information it contains.

#### 1.2 The current project

As part of the overall project South Dublin County Council (SDCC) is seeking permission under Part 8<sup>1</sup> of the Planning and Development Regulations 2001-2019 (hereafter PDR 2001) for the development of the proposed ICW at Griffeen Valley Park.

Brady Shipman Martin was appointed by SDCC to undertake a screening exercise for Appropriate Assessment (AA). This will determine the effects, if any, on European sites, of the proposed development. This document constitutes an Appropriate Assessment Screening Report prepared for this purpose.

European sites are also known as Natura 2000 Sites (Special Areas of Conservation (SAC) and Special Protection Areas (SPA), and are designated for nature conservation. The requirements for an Appropriate Assessment are set out under Article 6 of the EU Habitats Directive (92/34/EEC), transposed into Irish law through the European Union (Birds and Natural Habitats) Regulations 2011-2015 and the Planning and Development Act, 2000 (as amended).

Brady Shipman Martin 6791\_2020-10-28\_RPAA\_Griff-01\_03

<sup>&</sup>lt;sup>1</sup> Provisions with respect to certain development by or on behalf of local authorities

Information for Screening for Appropriate Assessment

A comprehensive desk study review and a site visit were undertaken and the potential impacts on European sites, both as a result of the proposed development and in-combination with other plans and projects, are appraised in this report.

The work was carried out by Senior Ecologist Matthew Hague BSc MSc Adv. Dip. Plan. & Env. Law CEnv MCIEEM. Matthew is a highly experienced and qualified ecologist, with a master's degree in Ecosystem Conservation and Landscape Management. He has over 18 years of experience in ecological and environmental consultancy, across a wide range of sectors. He has prepared numerous reports for AA Screening as well as Natura Impact Statements, for projects of all scales, from small residential developments to nationally important infrastructure projects.

Matthew is a Chartered Environmentalist (CEnv) and a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). Matthew has also completed an Advanced Diploma in Planning and Environmental Law, at King's Inns and is a member of the Irish Environmental Law Association (IELA).

## 2 Methodology

#### 2.1 Baseline data collection and field visit

A desk-based assessment was undertaken between March and October 2020 of the site at Griffeen Valley Park and the wider area. This focused on habitats and species that are listed as Qualifying Interests (QI) (in the case of SACs) and Special Conservation Interests (SCI) (in the case of SPAs) in the designations for European sites. Ecological surveys were undertaken at the site, including habitat, invasive species, mammal and day-time bat surveys (i.e. a visual inspection of suitable features during the day-time), by the author on 16<sup>th</sup> March 2020. In addition, detailed ecological surveys were undertaken in June and July 2020 by ecologists from Roughan and O'Donovan Consulting Engineers. The results of these surveys were also taken into account in the preparation of this report.

Birds present on the site were recorded during the surveys and an assessment of habitat suitability for species with links to European sites was undertaken, in order to appraise the potential for *ex-situ* effects on European sites.

This report takes the following guidance documents into account:

- Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities (Department of Environment, Heritage and Local Government, 2010 revision);
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 & PSSP 2/10;
- Assessment of Plans and Projects Significantly Affecting European sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission Environment Directorate-General, 2001);
- Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC. Guidance issued by the European Commission (21<sup>st</sup> November 2018).

Information was collated from the organisations and websites listed below:

- Data on European sites and rare and protected plant and animal species contained in the following databases:
  - o The National Parks and Wildlife Service (NPWS) of the Department of Culture, Heritage and the Gaeltacht (www.NPWS.ie);
  - o The National Biodiversity Data Centre (NDBC) (www.biodiversityireland.ie);

Information for Screening for Appropriate Assessment

- o BirdWatch Ireland (www.birdwatchireland.ie);
- o Bat Conservation Ireland (www.batconservationireland.org).
- Information on land-use zoning from the online mapping of the Department of the Environment, Community and Local Government (http://www.myplan.ie/en/index.html);
- Recent and historical OSi mapping and aerial photography, including www.geohive.ie;
- Photographs taken at the site in 2020;
- Information on local watercourses from www.catchments.ie;
- Information on water quality in the area (www.epa.ie);
- Information on soils, geology and hydrogeology in the area (www.gsi.ie);
- Information on the Status of EU Protected Habitats and Species in Ireland (Article 17 report) (NPWS, August 2019);
- Third National Biodiversity Plan 2017 2021 (Department of Culture, Heritage and the Gaeltacht, 2017);
- South Dublin Development Plan 2016 2022, including the accompanying Appropriate Assessment documentation (Appropriate Assessment Screening Report).

The report has regard to the following legislative instruments:

- Planning and Development, Act 2000, as amended;
- European Commission (EC) Habitats Directive 92/43/EEC;
- European Commission (EC) Birds Directive 2009/147/EC;
- European Communities (Birds and Natural Habitats) Regulations 2011-2015.

The report takes full account of the design of the proposed development and a detailed examination of all relevant elements of the proposed development was undertaken. This includes the following documents, among others submitted with the Part 8 planning application:

- South Dublin Integrated Constructed Wetlands Griffeen Valley Park Ecological Baseline Report (Roughan and O'Donovan, September 2020);
- Preliminary Examination (for the Purposes of EIA) in Accordance with Article 120 of the Planning and Development Regulations 2001 2019 (Brady Shipman Martin, October 2020).

Consultations were undertaken by the DURL project team with personnel from the National Parks and Wildlife Service (NPWS) and Inland Fisheries Ireland (IFI).

Given the amount of information available, including from South Dublin County Council and the DURL Project team, NPWS and other sources, it has been possible to gather adequate information on the site and the adjacent area (in particular, the European sites), in order to make an informed, sound judgement as to the potential impacts of the proposed development on the qualifying interests of the European sites.

# 3 Screening for Appropriate Assessment

#### 3.1 Background

The first part of the Appropriate Assessment process is the Screening phase. Screening identifies the likely effects of the proposed development on European sites that could arise, either alone or in combination with other plans

Information for Screening for Appropriate Assessment

or projects, and considers whether these impacts are likely to have a significant effect on the European site in view of the site's conservation objectives.

In accordance with sections 177U and 177V of the Planning and Development Act 2000, as amended, the AA screening test must be applied to the proposed development, as follows:

- To assess, in view of best scientific knowledge, if the development, individually or in combination with another plan or project is likely to have a significant effect on the European site;
- An appropriate assessment is required <u>if it cannot be excluded</u>, on the basis of objective information, that the development, individually or in combination with other plans or projects, will have a significant effect on a European site.

Following Screening therefore, if there is a possibility of there being a significant effect on a European site, this will generate the need for an appropriate assessment for the purposes of Article 6(3) of the Habitats Directive. This means that if the conclusions at the end of the screening exercise are that significant effects on any European sites, as a result of the proposed development, either alone or in combination with other plans and projects, are likely, uncertain or unknown, then an Appropriate Assessment must be carried out. This is in accordance with established precedent and case law.

#### 3.2 Potential zone of influence

For the risk of a significant effect to occur there must be a 'source', such as a construction site; a 'receptor', such as a designated site for nature conservation; and a pathway between the source and the receptor, such as a watercourse that links the construction site to the designated site. Although there may be a risk of an impact it may not necessarily occur, and if it does occur, it may not be significant.

Identification of a potential effect means that there is a possibility of ecological or environmental damage occurring, with the level and significance of the impact depending upon the nature and exposure to the potential effect and the characteristics of the receptor.

There are no set recommended distances for projects to consider European sites as being relevant for assessment. Rather, NPWS (2010) recommends that 'the distance should be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects'. It is often considered appropriate to include all European sites within 15km.

However, in some instances where there are hydrological connections a whole river catchment or a groundwater aquifer may need to be included. Similarly where bird flight paths are involved the impact may be on an SPA more than 15 km away. Taking this into account, as a starting point a search was carried out for all European sites within 15km of the proposed development site. This search was then extended in order to ensure that all European sites with any potential links to the proposed development were accounted for in the study.

#### 3.3 Study area and surrounding environment

#### 3.3.1 Site location and European sites

This site is located approximately 500m south of the N4 in Lucan and 3.5km west of the M50, within the Griffeen Valley. The Griffeen River<sup>2</sup> flows in a northerly direction through the centre of this park. It is proposed to develop the ICW itself on the western side of the river. Immediately adjacent to the proposed ICW site the river splits into two channels – a primary and a secondary channel. An island with woodland and scrub is situated between the two channels.

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<sup>&</sup>lt;sup>2</sup> https://gis.epa.ie/EPAMaps/

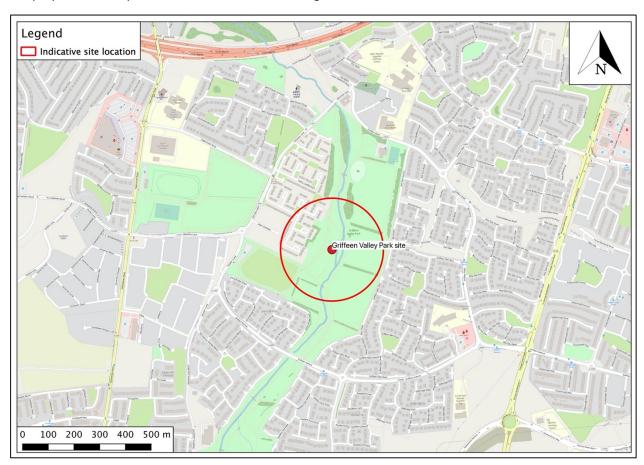
#### Information for Screening for Appropriate Assessment

The Griffeen River is a significant watercourse in this part of County Dublin. It is a tributary to the River Liffey (it flows into the Liffey approximately 2km downstream of the park) and is known to hold small populations of brown trout. Otters are also known to be present along the river. Within Griffeen Valley the river channel is relatively natural, however it has been subject to significant human intervention. The banks are relatively species poor, and are open and grassed in places. There are willow-dominated tree lines present in places. The river channel itself is varied, with substrates of various types (cobble, gravel and sand) and riffles and pools all present in this area.

The Griffeen River and its associated habitats are the key features of ecological interest within the park, which is otherwise dominated by open amenity grassland, with occasional pockets of woodland, scrub and remnant hedgerows. Of significant note in this location is the island formed by the existence of the secondary channel. This island holds a diverse flora, and scrub and woodland habitats. The bat surveys undertaken by Roughan & O'Donovan in the summer of 2020 recorded four bat species commuting and foraging along the river and throughout the park. Evidence of otter, in the form of spraint (droppings) was recorded c.100m upstream of the study site in 2020, indicating that otters are present along the river corridor.

Although the site, in particular the river corridor, is of ecological interest there are no habitats or species that correspond to the Qualifying Interests/Special Conservation Interests of any European site. within the zone of influence of the proposed ICW development.





**Figure 1**: Location of proposed ICW development site at Griffeen Valley Park (Source: Google Maps, refer to accompanying documentation for full details)

There are five European sites located within a 15km radius of the proposed development (see **Figure 2**). These are:

Special Areas of Conservation (SAC)

Information for Screening for Appropriate Assessment

- o Rye Water Valley/Carton SAC (site code 001398), c3.9km) to the north west;
- o Glenasmole Valley SAC (site code 001209), c.10.6km to the south east;
- o Wicklow Mountains SAC (site code 002122), c.12.5km to the south east;

#### Special Protection Areas (SPA)

- o South Dublin Bay and River Tolka Estuary SPA (site code 004024), c.14.2km to the east;
- o Wicklow Mountains SPA (site code 004040), c.15.0km to the south east;

Beyond the 15km zone, there are a number of additional European sites that are potentially within the Zone of Influence of the proposed ICW development:

- o South Dublin Bay SAC (site code 000210), c.15.1km to the east;
- o North Dublin Bay SAC (site code 000206), c.17.3km to the east;
- Rockabill to Dalkey Island SAC (site code 003000), c.23.3km to the east<sup>3</sup>;
- o North Bull Island SPA (site code 004006), c.17.3km to the east;

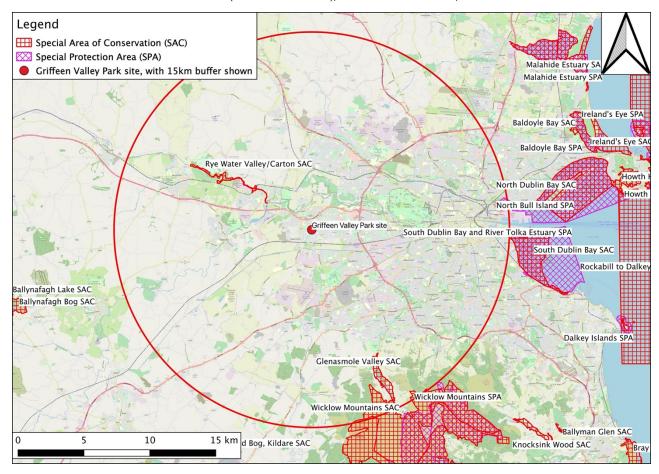


Figure 2: Study site at Griffeen Valley Park, showing European sites (Source: OpenStreetMap)

rady Shipman Martin 6791 2020-10-28 RPAA Griff-01 03

<sup>&</sup>lt;sup>3</sup> Although there are European sites nearer to the proposed ICW development than this SAC, such as Red Bog, Kildare SAC, Ballynafagh Lake SAC and Malahide Estuary SAC, this is the only such site potentially within the Zone of Influence, as it is, theoretically at least, linked via the surface water pathway

Information for Screening for Appropriate Assessment

#### 3.3.2 Other designated areas (other than European sites)

The nearest site designated for nature conservation, not otherwise designated as a European site, is the Grand Canal proposed Natural Heritage Area (pNHA site code 002104), c.1.3km to the south. Liffey Valley pNHA (site code 00128) is c.1.8km to the north. The Royal Canal pNHA is c.3.3km to the north (and c.1.5km north of Liffey Valley pNHA).

These are included in this report in order to address their potential to act as supporting sites for the European sites

## 4 Description of the proposed development

The proposed ICW at Griffeen Valley Park will improve water quality through the treatment of storm water contaminated with misconnections from domestic dwellings which currently discharge directly into the watercourse. It is proposed to provide an ICW with two cells, located on existing amenity grassland. The works proposed will involve the following:

- Temporary Access Works;
- New Surface Water manhole and flow controller with a 100 to 150mm diameter PVC pipe to the ICW, c.100m in length. The ICW will require the provision of c.140m of pipework in total; including c.20m of pipework between the two ICW cells, and c.20m from the ICW to discharge back to the river;
- The development of the ICW will require excavation up to 0.9m deep. Spoil arising will be either removed from site or reused locally as appropriate;
- The total ICW works area will be c.6500m<sup>2</sup> (during construction);
- The ICW will comprise two cells with the following dimensions:

	Total Area	Treatment Area	Avg Depth
Cell 1	1,750m <sup>2</sup>	1,105m <sup>2</sup>	655mm
Cell 2	1,342m <sup>2</sup>	895m <sup>2</sup>	235mm

• Following construction of the ICW any temporary works/access areas will be reinstated.

## 5 Potential impacts from the proposed development, including incombination effects

#### 5.1 European sites and habitats with links to European sites

The proposed ICW development site is not under any wildlife or conservation designation. Furthermore, no rare, threatened or legally protected plant species, as listed in the *Irish Red Data Book 1 – Vascular Plants (Curtis & McGough, 1988)*, the *Flora Protection Order*, 2015 or the *EU Habitats Directive*, are known to occur within the site.

No features of any ecological significance in the context of European sites are present on the proposed ICW development site. No evidence of any habitat suitable for breeding birds, or protected species such as badger, or rare or protected plants, was recorded during the surveys carried out, and the habitats present are not suitable for such species. No invasive alien plant species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011-2015 are known to be present on the site.

No evidence of any habitats or species with links to European sites within the zone of influence of the proposed development was recorded during either the field surveys or desk study undertaken in 2020 and no 'reservoir' type habitats (habitats which have the potential to support Qualifying Interest/Special Conservation Interest species in any European site) are present.

Brady Shipman Martin 6791\_2020-10-28\_RPAA\_Griff-01\_03

Information for Screening for Appropriate Assessment

#### 5.1.1 Potential impacts during construction

At any development site, site clearance and construction activities pose a potential risk to water, as **surface/ground water** arising at a site may contain contaminants. The main contaminants arising from such activities may include suspended solids, hydrocarbons and concrete/cement products. If not properly managed, such pollutants could pose a temporary risk to surface water quality in the local surface water network during construction.

A potential surface water pathway, via the River Griffeen, exists between the proposed ICW development site and coastal European sites associated with Dublin Bay (c.15km from the proposed ICW development boundary). There is also a potential groundwater pathway between the proposed development site and the European sites should indirect discharges (i.e. spillages to ground) occur, or should any contamination on the site enter the ground water.

Despite the presence of these theoretical indirect pathways, the risk of contamination of any watercourses or groundwater is extremely low, and even in the event of a pollution incident significant enough to impact upon surface water quality locally, it is reasonable to assume that **this would not be perceptible in the offshore European sites**, for the following reasons:

- The distance to the European sites —the designated sites of Dublin Bay are c.14km distant (straight-line distance to the boundary of the nearest South Dublin Bay and River Tolka Estuary SPA) and the only pathway between the proposed development site and these European sites is the Griffeen River, which enters the River Liffey approximately 2km downstream of Griffeen Valley Park. Any pollution entering the river system from the construction site would be so diluted as to be entirely undetectable by the time the water enters the Bay;
- The fact that a significant level of dilution and mixing of surface and sea water would occur in any event. Upon reaching the estuary any pollutants would be even further diluted and dissipated by the receiving waters;
- In addition, the construction of the proposed development will take place over a comparatively short period and there is no possibility of long-term impacts arising as a result of the construction elements of the proposed development;
- There is no conceivable pathway between the proposed ICW site at this location and any other European sites, the nearest of which Glenasmole Valley SAC is, in any case, over 5km distant.

There is no possibility of any other potential direct, indirect or secondary impacts on any European site during the construction phase. For example there will be no land-take from any European site and there will be no resource requirements such as water abstraction. Similarly there will be no emissions to air from construction vehicles that could remotely impact any European site. Dust, noise and vibration arising during construction will similarly be entirely remote from any European site.

There will be no loss, fragmentation, disruption, disturbance or other change to any element of any European site as a result of the construction of the proposed development, and no interference with the key relationships that define the structure or function of any European site.

Construction-related impacts as a result of the proposed development, on European sites or otherwise, can therefore be excluded.

#### 5.1.2 Potential impacts during operation

The integrated constructed wetland, once operational, will improve the quality of surface water entering the Griffeen and Liffey river system. It will draw water from a contaminated storm water drainage pipe at a fixed, and to a maximum, rate and return that purified volume back to the pipe further downstream.

Information for Screening for Appropriate Assessment

A new pipe will discharge from the ICW back into the river, completely separate to the existing drainage line. Exisiting drainage lines will not change size/position. Depending on the final design a new chamber may be built on line to house the flow controller and take water into the ICW. If this is not required an existing chamber may be modified.

The placement of an ICW alongside existing storm water drainage is very unlikely to create pluvial or fluvial flooding issues.

There will be no operational impacts related to surface water management, flooding, or foul water management, on European sites or otherwise, as a result of the proposed ICW development.

There is no possibility of any other potential direct, indirect or secondary impacts on any European site once the proposed ICW development is operational. There will be no loss, fragmentation, disruption, disturbance or other change to any element of any European site as a result of the operation of the proposed development, and no interference with the key relationships that define the structure or function of any European site.

Operation-related impacts as a result of the proposed development, on European sites or otherwise, can therefore be excluded.

Full details of the potential impacts of the proposed development on European sites are presented in Table 1.

Information for Screening for Appropriate Assessment

Table 1 lists relevant European sites and outlines their Qualifying Interests/Special Conservation Interests and Conservation Objectives\*

European Site	Reasons for designation (information correct as of 16 <sup>th</sup> October 2020) (*denotes a priority habitat)	Source – Pathway – Receptor link
Rye Water Valley/Carton SAC (site code 001398), c.3.9km to the west	7220 Petrifying springs with tufa formation (Cratoneurion)* 1016 Desmoulin's Whorl Snail ( <i>Vertigo moulinsiana</i> ) 1014 Narrow-mouthed Whorl Snail ( <i>Vertigo angustior</i> )  According to this SAC's site Generic Conservation Objectives document (Version 7, dated 7 <sup>th</sup> April 2020), for each of the listed SCIs, the Conservation Objectives are to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SPA has been selected.	There is no hydrological link or any other pathway between the proposed ICW development site at Griffeen Valley Park and this SAC. It is almost 4km distant and is completely unconnected. Furthermore there will be no loss of habitat or species, fragmentation or disturbance to the qualifying interests of this SAC as a result of the proposed development.
Glenasmole Valley SAC (site code 001209), c.10.6km to the south east	6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) 6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) 7220 Petrifying springs with tufa formation (Cratoneurion)  According to this SAC's site Generic Conservation Objectives document (Version 7, dated 7 <sup>th</sup> April 2020), for each of the listed SCIs, the Conservation Objectives are to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SPA has been selected.	There is no hydrological link or any other pathway between the proposed ICW development site at Griffeen Valley Park and this SAC. It is almost 11km distant and is completely unconnected. Furthermore there will be no loss of habitat or species, fragmentation or disturbance to the qualifying interests of this SAC as a result of the proposed development.
Wicklow Mountains SAC (site code 002122), c.12.5km to the south east	3110 Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) 3160 Natural dystrophic lakes and ponds 4010 Northern Atlantic wet heaths with <i>Erica tetralix</i> 4030 European dry heaths 4060 Alpine and Boreal heaths 6130 Calaminarian grasslands of the Violetalia calaminariae 6230 Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) 7130 Blanket bogs (* if active bog)	There is no hydrological link or any other pathway between the proposed ICW development site at Griffeen Valley Park and this SAC. It is approximately 12.5km distant and is completely unconnected. Furthermore there will be no loss of habitat or species, fragmentation or disturbance to the qualifying interests of this SAC as a result of the proposed development.

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European Site	Reasons for designation (information correct as of 16 <sup>th</sup> October 2020) (*denotes a priority habitat)	Source – Pathway – Receptor link
	8110 Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani) 8210 Calcareous rocky slopes with chasmophytic vegetation 8220 Siliceous rocky slopes with chasmophytic vegetation 91A0 Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles 1355 Lutra lutra (Otter)  According to this SAC's site Conservation Objectives document (Version 1, dated 31 <sup>st</sup> July 2017), for each of the listed Qls, the Conservation Objective is to maintain or restore the favourable conservation condition of the Annex I habitat(s) for which the SAC has been selected.	
South Dublin Bay SAC (site code 000210), c.15.1km to the east	1140 Mudflats and sandflats not covered by seawater at low tide  The following habitats are listed as Qualifying Interests on the NPWS website, but are not included in the Conservation Objectives document:  (1210 Annual vegetation of drift lines 1310 Salicornia and other annuals colonising mud and sand 2110 Embryonic shifting dunes)  According to this SAC's site Conservation Objectives document (Version 1, dated 22 <sup>nd</sup> August 2013), for the listed QI, the Conservation Objective is to maintain the favourable conservation condition of the Annex I habitat for which the SAC has been selected.	No significant effects on water quality, and therefore on the site's QIs, are predicted. Surface/ground water arising during the site clearance, construction and operation of the proposed ICW development at the Griffeen Valley Park site could contain pollutants (foul water, silt, hydrocarbons and other chemicals). Such contaminated water could potentially discharge to the ground or the local surface water drainage network and from there, eventually, to Dublin Bay.  There would be no significant effects on the conservation objectives of the European site should this occur, given the nature, size and location of the proposed development, as described in Section 5.1. Even in the event of a pollution incident (such as a fuel or cement spill) significant enough to impact upon surface/ground water quality locally, this would not be perceptible in South Dublin Bay SAC.  This is due to the significant separation between the proposed development site and the European site – the proposed development site is approximately 15km (straight line distance) from the SAC and any pollution arising during development would be so diluted as to be undetectable by the time the water enters Dublin Bay. In addition, significant dilution and mixing of surface and sea water would occur. Upon reaching the bay any pollutants would be even further diluted and dissipated by the receiving waters which are classified as unpolluted according to the EPA database of coastal water quality. Furthermore, the construction of the proposed development will take place over a comparatively short period and there is no possibility of long-term impacts arising as a result of the construction elements of the proposed development.  There will be no loss of habitat or species, fragmentation or disturbance to the qualifying interests of this site as a result of the proposed development.

	Reasons for designation (information correct as of 16 <sup>th</sup> October 2020) (*denotes a priority habitat)	Source – Pathway – Receptor link
		In addition, no operational impacts on this European site will occur as a result of the proposed development, which will in fact result in improved water quality downstream of the site.
North Dublin Bay SAC (site code 000206), c.17.3km to the east	1140 Mudflats and sandflats not covered by seawater at low tide 1210 Annual vegetation of drift lines 1310 Salicornia and other annuals colonising mud and sand 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) 1410 Mediterranean salt meadows (Juncetalia maritimi) 2110 Embryonic shifting dunes 2120 Shifting dunes along the shoreline with Ammophila arenaria (white dunes) 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)* 2190 Humid dune slacks 1395 Petalwort ( <i>Petalophyllum ralfsii</i> )  According to this SAC's site Conservation Objectives document (Version 1, dated 06 <sup>th</sup> November 2013), for each of the listed QIs, the Conservation Objective is to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.	No significant effects on water quality, and therefore on the site's QIs, are predicted. Surface/ground water arising during the site clearance, construction and operation of the proposed ICW development at the Griffeen Valley Park site could contain pollutants (foul water, silt, hydrocarbons and other chemicals). Such contaminated water could potentially discharge to the ground or the local surface water drainage network and from there, eventually, to Dublin Bay.  There would be no significant effects on the conservation objectives of the European site should this occur, given the nature, size and location of the proposed development, as described in Section 5.1. Even in the event of a pollution incident (such as a fuel or cement spill) significant enough to impact upon surface/ground water quality locally, this would not be perceptible in North Dublin Bay SAC.  This is due to the significant separation between the proposed development site and the European site — the proposed development site is over 17km (straight line distance) from the SAC and any pollution arising during development would be so diluted as to be undetectable by the time the water enters Dublin Bay. In addition, significant dilution and mixing of surface and sea water would occur. Upon reaching the bay any pollutants would be even further diluted and dissipated by the receiving waters which are classified as unpolluted according to the EPA database of coastal water quality. Furthermore, the construction of the proposed development will take place over a comparatively short period and there is no possibility of long-term impacts arising as a result of the construction elements of the proposed development.  There will be no loss of habitat or species, fragmentation or disturbance to the qualifying interests of this site as a result of the proposed development.  In addition, no operational impacts on this European site will occur as a result of the proposed development, which will in fact result in improved water quality downstream of the site
Rockabill to Dalkey Island SAC (site code 003000), c.23.3km to the east	1170 Reefs 1351 Harbour Porpoise ( <i>Phocoena phocoena</i> )  According to this SAC's site Conservation Objectives document (Version 1, dated 07 <sup>th</sup> May 2013), for each of the listed QIs, the Conservation Objective is to maintain the favourable conservation condition of the Annex I habitat and the Annex II species for which the SAC has been selected.	No significant effects on water quality, and therefore on the site's QIs, are predicted. Surface/ground water arising during the site clearance, construction and operation of the proposed ICW development at the Griffeen Valley Park site could contain pollutants (foul water, silt, hydrocarbons and other chemicals). Such contaminated water could potentially discharge to the ground or the local surface water drainage network and from there, eventually, to Dublin Bay.  There would be no significant effects on the conservation objectives of the European site should this occur, given the nature, size and location of the proposed development, as described in Section 5.1. Even in the event of a pollution incident (such as a fuel or cement spill) significant enough to

European Site	Reasons for designation (information correct as of 16 <sup>th</sup> October 2020) (*denotes a priority habitat)	Source – Pathway – Receptor link
		impact upon surface/ground water quality locally, this would not be perceptible in Rockabill to Dalkey Island SAC.
		This is due to the significant separation between the proposed development site and the European site – the proposed development site is over 23km (straight line distance) from the SAC and any pollution arising during development would be so diluted as to be undetectable by the time the water enters Dublin Bay. In addition, significant dilution and mixing of surface and sea water would occur. Upon reaching the bay any pollutants would be even further diluted and dissipated by the receiving waters which are classified as unpolluted according to the EPA database of coastal water quality. Furthermore, the construction of the proposed development will take place over a comparatively short period and there is no possibility of long-term impacts arising as a result of the construction elements of the proposed development.
		There will be no loss of habitat or species, fragmentation or disturbance to the qualifying interests of this site as a result of the proposed development.
		In addition, no operational impacts on this European site will occur as a result of the proposed development, which will in fact result in improved water quality downstream of the site.
South Dublin Bay and River Tolka Estuary SPA (site code 004024), c.14.2km to the east	A144 Sanderling ( <i>Calidris alba</i> ) A157 Bar-tailed Godwit ( <i>Limosa lapponica</i> ) A149 Dunlin ( <i>Calidris alpina</i> ) A162 Redshank ( <i>Tringa totanus</i> ) A179 Black-headed Gull ( <i>Chroicocephalus ridibundus</i> )	No significant effects on water quality, and therefore on the site's SCIs, are predicted.  Surface/ground water arising during the site clearance, construction and operation of the proposed ICW development at the Griffeen Valley Park site could contain pollutants (foul water, silt, hydrocarbons and other chemicals). Such contaminated water could potentially discharge to the ground or the local surface water drainage network and from there, eventually, to Dublin Bay.
	A143 Knot ( <i>Calidris canutus</i> ) A192 Roseate Tern ( <i>Sterna dougallii</i> ) A046 Light-bellied Brent Goose ( <i>Branta bernicla hrota</i> ) A141 Grey Plover ( <i>Pluvialis squatarola</i> ) A130 Oystercatcher ( <i>Haematopus ostralegus</i> ) A194 Arctic Tern ( <i>Sterna paradisaea</i> )	There would be no significant effects on the conservation objectives of the European site should this occur, given the nature, size and location of the proposed development, as described in Section 5.1. Even in the event of a pollution incident (such as a fuel or cement spill) significant enough to impact upon surface/ground water quality locally, this would not be perceptible in South Dublin Bay and River Tolka Estuary SPA.
	A193 Common Tern ( <i>Sterna hirundo</i> ) A137 Ringed Plover ( <i>Charadrius hiaticula</i> ) Wetlands	This is due to the significant separation between the proposed development site and the European site – the proposed development site is over 14km (straight line distance) from the SPA and any pollution arising during development would be so diluted as to be undetectable by the time the water enters Dublin Bay. In addition, significant dilution and mixing of surface and sea water would
	According to this SPA's site Conservation Objectives document (Version 1, dated 9 <sup>th</sup> March 2015), for each of the listed SCIs, the Conservation Objective is to maintain the favourable	occur. Upon reaching the bay any pollutants would be even further diluted and dissipated by the receiving waters which are classified as unpolluted according to the EPA database of coastal water

Information for Screening for Appropriate Assessment

1	Reasons for designation (information correct as of 16 <sup>th</sup> October 2020) (*denotes a priority habitat)	Source – Pathway – Receptor link
	conservation condition of the species and wetland habitat for which the SPA has been selected.	comparatively short period and there is no possibility of long-term impacts arising as a result of the construction elements of the proposed development.
		There will be no loss of wetland habitat or species, fragmentation or disturbance to the special conservation interests of this site as a result of the proposed development.
		In addition, no operational impacts on this European site will occur as a result of the proposed development, which will in fact result in improved water quality downstream of the site.
Wicklow Mountains SPA (site code 004040), c.15km to the south	A098 Merlin (Falco columbarius) A103 Peregrine (Falco peregrinus)  According to this SPA's site Generic Conservation Objectives document (Version 7, dated 7 <sup>th</sup> April 2020), for each of the listed SCIs, the Conservation Objectives are to maintain or restore the favourable conservation condition of the species for which the SPA has been selected.	There is no hydrological link or any other pathway between the proposed ICW development site at Griffeen Valley Park and this SPA. It is approximately 15km distant and is completely unconnected. Furthermore there will be no loss of species, fragmentation or disturbance to the special conservation interests of this SPA as a result of the proposed development.
North Bull Island SPA (site code 004006), c.17.3km to the north east	A160 Curlew (Numenius arquata) A149 Dunlin (Calidris alpina) A157 Bar-tailed Godwit (Limosa lapponica) A162 Redshank (Tringa totanus) A179 Black-headed Gull (Chroicocephalus ridibundus) A144 Sanderling (Calidris alba) A156 Black-tailed Godwit (Limosa limosa) A143 Knot (Calidris canutus) A169 Turnstone (Arenaria interpres) A054 Pintail (Anas acuta) A046 Light-bellied Brent Goose (Branta bernicla hrota) A048 Shelduck (Tadorna tadorna) A052 Teal (Anas crecca) A141 Grey Plover (Pluvialis squatarola) A056 Shoveler (Anas clypeata) A130 Oystercatcher (Haematopus ostralegus) A140 Golden Plover (Pluvialis apricaria) Wetlands	No significant effects on water quality, and therefore on the site's SCIs, are predicted. Surface/ground water arising during the site clearance, construction and operation of the proposed ICW development at the Griffeen Valley Park site could contain pollutants (foul water, silt, hydrocarbons and other chemicals). Such contaminated water could potentially discharge to the ground or the local surface water drainage network and from there, eventually, to Dublin Bay.  There would be no significant effects on the conservation objectives of the European site should this occur, given the nature, size and location of the proposed development, as described in Section 5.1. Even in the event of a pollution incident (such as a fuel or cement spill) significant enough to impact upon surface/ground water quality locally, this would not be perceptible in North Bull Island SPA.  This is due to the significant separation between the proposed development site and the European site – the proposed development site is over 17km (straight line distance) from the SPA and any pollution arising during development would be so diluted as to be undetectable by the time the water enters Dublin Bay. In addition, significant dilution and mixing of surface and sea water would occur. Upon reaching the bay any pollutants would be even further diluted and dissipated by the receiving waters which are classified as unpolluted according to the EPA database of coastal water quality. Furthermore, the construction of the proposed development will take place over a comparatively short period and there is no possibility of long-term impacts arising as a result of the construction elements of the proposed development.
	(Version 1, dated 9 <sup>th</sup> March 2015), for each of the listed SCIs, the	estimated of the proposed development.

Brady Shipman Martin 6791\_2020-10-28\_RPAA\_Griff-01\_03

European Site	Reasons for designation (information correct as of 16 <sup>th</sup> October	Source – Pathway – Receptor link
	2020) (*denotes a priority habitat)	
	Conservation Objective is to maintain the favourable conservation	There will be no loss of wetland habitat or species, fragmentation or disturbance to the special
	condition of the species and wetland habitat for which the SPA has	conservation interests of this site as a result of the proposed development.
	been selected.	In addition, no operational impacts on this European site will occur as a result of the proposed development, which will in fact result in improved water quality downstream of the site.

<sup>\*</sup>For completeness, this table includes all European designated sites within 15km of the proposed ICW site. It also includes the sites associated with Dublin Bay (South Dublin Bay SAC, North Dublin Bay SAC, Rockabill to Dalkey Island SAC and North Bull Island SPA), which are also, in addition to South Dublin Bay and River Tolka Estuary SPA, theoretically within the potential Zone of Influence of the proposed ICW development. As confirmed in Section 5.1, only the European sites associated with Dublin Bay are linked in any way to the proposed development site. None of the other listed sites, and no sites further afield, are remotely linked to the proposed development site, by virtue of distance, lack of a pathway and the reasons for their designation.



Information for Screening for Appropriate Assessment

#### 5.2 Summary of potential impacts of the proposed development

There will be no loss of any habitat or species listed as a QI or SCI of any designated site as a consequence of the proposed ICW development. There is, therefore, no potential for the effects of habitat loss or fragmentation to occur.

There will also be no significant effects on any European sites as a result of:

- Land-take;
- Resource requirements such as water abstraction;
- Impacts to habitat structure;
- Mortality to species (such as roadkill);
- Noise pollution/vibration impacts;
- Light pollution;
- Air pollution.

#### 6 Other issues

No invasive plant species (*i.e.* those species listed on Schedule 3 of the *Birds and Habitats Regulations, 2011-2015*, such as Japanese knotweed or giant hogweed) were identified on site.

Additionally, and for the reasons outlined in this report for the European sites, no impacts on any other designated sites including proposed Natural Heritage Areas, will occur.

## 7 Mitigation specific to European sites

In relation to European sites, there will be no impacts as a result of the proposed development. Therefore no mitigation is necessary or proposed for the protection of European sites or which was intended to avoid or reduce impacts on any European sites. Accordingly, this screening assessment is consistent with the judgment of the European Court in Case C-323/17, People Over Wind & Sweetman v Coillte (Judgment of the Court (Seventh Chamber) of 12 April 2018) and the recent case-law of the High Court, including Heather Hill Management Company CLG v An Bord Pleanála [2019] IEHC 450 and Sweetman v An Bord Pleanála [2020] IEHC 39.

#### 8 In-combination effects

It is a requirement of Part XAB of the *Planning and Development Act, 2000* that when considering whether a plan or project will have a significant effect on a European site the assessment must take into account in-combination effects with other current or reasonably foreseeable plans and projects. If there are identified effects arising from the plan or project even if they are perceived as minor and not likely to have a significant effect on the integrity of a European site alone, then these effects must be considered 'in-combination' with the effects arising from other plans and projects.

There are no developments proposed within the immediate vicinity of the site that would, in combination with the development under appraisal in this report, give rise to significant effects.

The South Dublin County Development Plan 2017-2023 has a series of objectives intended to protect and enhance the natural environment. For example the CDP includes policies for the protection of the county's flood plains, to prevent development in flood plains without satisfying the appropriate justification test and to require the use of sustainable drainage systems (SuDS) to minimise and limit the extent of hard surfacing and paving in order to reduce the potential impact of existing and predicted flooding risks.

Brady Shipman Martin 6791\_2020-10-28\_RPAA\_Griff-01\_03

Information for Screening for Appropriate Assessment

The proposed development will not impact on the flow of water through the area, nor increase potential flood impacts. It is in compliance with all of the relevant County Development Plan objectives. In fact, the proposed development will directly contribute to the improvement water quality in the wider area and downstream in the receiving waters. There are no developments that could act in-combination with any potential effects of the proposed ICW development to give rise to significant effects.

## 9 Screening conclusion

Following review of the characteristics of the proposed ICW development against the Conservation Objectives of the relevant European sites, it is concluded that there is no possibility that the proposed development could result in any likely significant effects on European sites on its own or in combination with other plans and projects. This assessment was reached without considering or taking into account mitigation measures or measures intended to avoid or reduce any impact on European sites.

In view of best scientific knowledge therefore, this report concludes that the proposed ICW development at Griffeen Valley Park, individually or in combination with another plan or project, is not likely to have a significant effect on European sites under Article 6 of the Habitats Directive (92/43/EEC) in light of their conservation objectives. The proposed development does not require Appropriate Assessment.

rady Shipman Martin 6791\_2020-10-28\_RPAA\_Griff-01\_03

Information for Screening for Appropriate Assessment

## Appendix I: Background

The European and network is a Europe-wide network of ecologically important sites (SPAs and cSACs – also known as 'European Sites' or 'Natura 2000 sites') that have been designated for protection under either the EU Birds Directive (Council Directive 79/409/EEC on the Conservation of Wild Birds) or the EU Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna).

The main aim of the Habitats Directive is "to contribute towards ensuring biodiversity through the conservation of natural habitats of wild fauna and flora in the European territory of the Member States to which the treaty applies". Any actions taken must be designed to "maintain or restore, at a favourable conservation status, natural habitats and species of wild fauna and flora of Community interest". Under Article 6 of the Habitats Directive, an assessment is required where a plan or project may give rise to significant effects upon a European site.

In addition, it is a matter of law that candidate SACs (cSACs) and Sites of Community Importance (SCI) are considered in this process;

Article 6 (paragraphs (3) and (4)) of the Habitats Directive states that:

- (3) Any plan or project not directly connected with or necessary to the management of the site but likely to have significant effect thereon, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.
- (4) If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest"

The requirements of the Habitats Directive are transposed into Irish law by means of the European Communities (Birds and Natural Habitats) Regulations 2011-2015 (hereafter referred to as the Birds and Habitats Regulations) and by the Planning and Development Act 2000, as amended.

In Ireland, the statutory agency responsible for the designated areas is NPWS.

#### Stages in the assessment

European Commission guidance (2001)<sup>5</sup> sets out the principles on how to undertake decision making in applying the Habitats Directive. The requirements of the Habitats Directive comprise four distinct stages:

**Stage 1: Screening** is the process which initially identifies the likely significant effects upon a European site of a project or plan, either alone or in combination with other projects or plans, and considers whether these impacts may be significant. It is important to note that the burden of evidence is to show, on the basis of objective information, that there will be no significant effect; if the effect may be significant, or is not known, that would trigger the need for an Appropriate Assessment. There is European Court of Justice case law to the

rady Shipman Martin 6791\_2020-10-28\_RPAA\_Griff-01\_03 **18** 

<sup>&</sup>lt;sup>4</sup> The EU Habitats Directive, Article 3.1, states "A Coherent European ecological network of Special Areas of Conservation and Special Protection Areas pursuant to Directive 79/409/EEC shall be set up under the title European"

<sup>&</sup>lt;sup>5</sup> European Commission (2001) Assessment of Plans and Projects Significantly Affecting European Sites: Methodological Guidance on the Provisions of Article 6 (3) and (4) of the Habitats Directive 92/43/EEC

Information for Screening for Appropriate Assessment

effect that unless the likelihood of a significant effect can be ruled out on the basis of objective information, then an Appropriate Assessment must be made.

**Stage 2: Appropriate Assessment** is the detailed consideration of the impact on the integrity of the European site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's conservation objectives and its structure and function. This is to determine with scientific certainty whether or not there will be adverse effects on the integrity of the site in light of its conservation objectives. This stage also includes the development of mitigation measures to avoid or reduce any possible impacts.

**Stage 3: Assessment of alternative solutions** is the process which examines alternative ways of achieving the objectives of the project or plan that would avoid impacts on the integrity of the European site, should avoidance or mitigation measures be unable to cancel out adverse effects.

Stage 4: Assessment where no alternative solutions exist and where adverse impacts remain. At Stage 4 an assessment is made with regard to whether or not the development is necessary for imperative reasons of overriding public interest (IROPI) and, if so, of the compensatory measures needed to maintain the overall coherence of the European network.

#### Conservation Objectives of European sites

The conservation objectives for a European Site are intended to represent the aims of the Habitats and Birds Directives in relation to that site. To this end, habitats and species of European Community importance should be maintained or restored to 'favourable conservation status' (FCS), as defined in Article 1 of the Habitats Directive below:

The conservation status of a natural habitat will be taken as 'favourable' when:

- Its natural range and the area it covers within that range are stable or increasing;
- The specific structure and functions which are necessary for its long term maintenance exist and are likely to continue to exist for the foreseeable future;
- Conservation status of typical species is favourable as defined in Article 1(i).

The conservation status of a species will be taken as favourable when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future;
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Guidance from the European Commission<sup>6</sup> indicates that the Habitats Directive intends FCS to be applied at the level of an individual site, as well as to habitats and species across their European range. Therefore, in order to properly express the aims of the Habitats Directive for an individual site, the conservation objectives for a site are essentially to maintain (or restore) the habitats and species of the site at (or to) FCS.

The European Commission guidance recommends that screening should fulfil the following steps:

- 1. Determine whether the plan (or policy) is directly connected with or necessary for the management of European sites;
- 2. Describe the plan and describe and characterise any other plans or projects which, in combination, have the potential for having significant effects on European sites;
- 3. Identify the potential effects on European sites;

Assess the likely significance of any effects on European sites.

Brady Shipman Martin 6791\_2020-10-28\_RPAA\_Griff-01\_03 19

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 $<sup>^6</sup>$  Managing European sites: the provisions of Article 6 of the Habitats Directive 92/43/EEC. (European Commission 2000)

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