

Appropriate Assessment Screening for the on the Slope Remediation Project at Coghlanstown, Ballymore Eustace, Co. Kildare.



31ST JANUARY 2019

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On behalf of: Kildare County Council

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1. INTRODUCTION

An Appropriate Assessment is an assessment of the potential effects of a proposed project or plan, on its own, or in combination with other plans or projects, on one or more NATURA 2000 sites (Special Areas of Conservation (SAC) or Special Protection Areas (SPA)).

The following Appropriate Assessment (Screening Stage) has been prepared by **Altemar Ltd.** at the request of Kildare County Council. It relates to the proposed works associated with a slope failure at Coghlanstown Ballymore Eustace. An Options Report was completed by O'Connor Sutton Cronin which identified a preferred option which involves shifting the alignment of the River Liffey to enable the instatement of a more naturally sloping embankment to the existing L6047 and the stabilisation of the base with rock armour. A detailed description and methodology of the proposed works is outlined in section 4. The location of the subject site is shown in Figure 1.

According to Regulation 42(1) of the European Communities (Birds and Natural Habitats) Regulations, 2011-2015, the competent authority has a duty to:

- Determine whether the proposed Project is directly connected to or necessary for the management of one or more Natura 2000 sites; and, if not,
- Determine if the Project, either individually or in combination with other plans or projects, would be likely to have a significant effect on the Natura 2000 site(s) in view of best scientific knowledge and the Conservation Objectives of the site(s).

This report contains a Screening for Appropriate Assessment and is intended to assess and address all issues regarding the construction and operation of the project and to inform and allow the competent authority to comply with the Habitats Directive. Article 6(3) of the Habitats Directive defines the requirements for assessment of projects and plans for which likely significant effects on Natura 2000 sites may arise.

BACKGROUND TO ALTEMAR LTD.

Since its inception in 2001, Altemar has been delivering ecological and environmental services to a broad range of clients. Operational areas include residential, infrastructural, renewable, oil & gas, private industry, local authorities, EC projects and State/semi-State Departments. Bryan Deegan is the managing director of Altemar, is an environmental scientist and marine biologist with 20 years' experience working in Irish terrestrial and aquatic environments, providing services to the State, Semi-State and industry. He is currently contracted to Inland Fisheries Ireland as the sole "External Expert" to environmentally assess internal and external projects. He is also chair an internal IFI working group on environmental assessment. Bryan Deegan (MCIEEM) holds a MSc in Environmental Science, BSc (Hons.) in Applied Marine Biology, NCEA National Diploma in Applied Aquatic Science and a NCEA National Certificate in Science (Aquaculture). Bryan Deegan carried out all elements of this Appropriate Assessment Screening.

2. BACKGROUND TO THE APPROPRIATE ASSESSMENT

The Habitats Directive 92/43/EEC (together with the Birds Directive (2009/1477/EC)) forms the cornerstone of Europe's nature conservation policy. The Directive protects over 1000 animals and plant species and over 200 "habitat types" which are of European importance. In the Directive, Articles 3 to 9 provide the legislative means to protect habitats and species of European Community interest through the establishment and conservation of an EU-wide network of conservation sites (NATURA, 2000). These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Birds Directive), Article 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect NATURA 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment:

"Any plan or project not directly connected with or necessary to the management of the [NATURA 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implication for the site and subject to the provisions of paragraph 4, the component 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."

As outlined in the EC guidance document on Article 6(4) (January 2007)¹:

"Appropriate assessments of the implications of the plan or project for the site concerned must precede its approval and take into account the cumulative effects which result from the combination of that plan or project with other plans or projects in view of the site's conservation objectives. This implies that all aspects of the plan or project which can, either individually or in combination with other plans or projects, affect those objectives must be identified in the light of the best scientific knowledge in the field."

Assessment procedures of plans or projects likely to affect NATURA 2000 sites should guarantee full consideration of all elements contributing to the site integrity and to the overall coherence of the network, both in the definition of the baseline conditions and in the stages leading to identification of potential impacts, mitigation measures and residual impacts. These determine what has to be compensated, both in quality and quantity. Regardless of whether the provisions of Article 6(3) are delivered following existing environmental impact assessment procedures or other specific methods, it must be ensured that:

- *Article 6(3) assessment results allow full traceability of the decisions eventually made, including the selection of alternatives and any imperative reasons of overriding public interest.*
- *The assessment should include all elements contributing to the site's integrity and to the overall coherence of the network as defined in the site's conservation objectives and Standard Data Form, and be based on best available scientific knowledge in the field. The information required should be updated and could include the following issues:*
 - *Structure and function, and the respective role of the site's ecological assets;*
 - *Area, representativity and conservation status of the priority and nonpriority habitats in the site;*
 - *Population size, degree of isolation, ecotype, genetic pool, age class structure, and conservation status of species under Annex II of the Habitats Directive or Annex I of the Birds Directive present in the site;*
 - *Role of the site within the biographical region and in the coherence of the NATURA 2000 network; and,*

¹ European Commission. (2007). Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission;

- *Any other ecological assets and functions identified in the site.*
- *It should include a comprehensive identification of all the potential impacts of the plan or project likely to be significant on the site, taking into account cumulative impacts and other impacts likely to arise as a result of the combined action of the plan or project under assessment and other plans or projects.*
- *The assessment under Article 6(3) applies the best available techniques and methods, to estimate the extent of the effects of the plan or project on the biological integrity of the site(s) likely to be damaged.*
- *The assessment provides for the incorporation of the most effective mitigation measures into the plan or project concerned, in order to avoid, reduce or even cancel the negative impacts on the site.*
- *The characterisation of the biological integrity and the impact assessment should be based on the best possible indicators specific to the NATURA 2000 assets which must also be useful to monitor the plan or project implementation.”*

3. STAGES OF THE APPROPRIATE ASSESSMENT

This Appropriate Assessment screening was undertaken in accordance with the European Commission Methodological Guidance on the provision of Article 6(3) and 6(4) of the 'Habitats' Directive 92/43/EEC (EC, 2001), Article 42 of the 2011 Habitats Regulations and the European Commission Guidance '*Managing NATURA 2000 Sites*', in addition to the December 2009 publication from the Department of Environment, Heritage and Local Government; 'Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities' and the European Communities (Birds and Natural Habitats) Regulations 2011.

In order to comply with the above Guidelines and legislation, the Appropriate Assessment process must be structured as follows:

- 1) Screening stage:
 - Description of the proposed project or plan;
 - Identification of NATURA 2000 sites potentially affected;
 - Identification and description of individual in combination effects likely to result from the proposed project;
 - Assessment of the likely significance of the effects identified above. Exclusion of sites where it can be objectively concluded that there will be no likely significant effects; and,
 - Conclusions.
- 2) Appropriate Assessment (Natura Impact Statement):
 - Description of the NATURA 2000 sites that will be considered further;
 - Identification and description of potential adverse impacts on the conservation objectives of these sites likely to occur from the project or plan; and,
 - Mitigation Measures that will be implemented to avoid, reduce or remedy any such potential adverse impacts
 - Assessment as to whether, following the implementation of the proposed mitigation measures, it can be concluded, beyond all reasonable scientific doubt, that there will be no adverse impact on the integrity of the relevant European Site in light of its conservation objectives"
 - Conclusions.
- 3) Alternative Solutions

If mitigation is possible that enables a risk to be avoided fully, then, subject to other necessary approvals, the project or plan may proceed. If mitigation measures are insufficient, or are not actually practicable and achievable to avoid the risk entirely, then, in the light of a negative assessment, the plan or project may not proceed. A wider search for alternative solutions may need to be considered – Stage 3. ²
- 4) Imperative Reasons of Overriding Public Interest (IROPI)/Derogation. (: Stage 4 is the main derogation process of Article 6(4) which examines whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project that will have adverse effects on the integrity of a NATURA 2000 site to proceed in cases where it has been established that no less damaging alternative solution exists. The extra protection measures for Annex I priority habitats come into effect when making the IROPI case.

² (DoEHLG, 2009) Appropriate Assessment of Plans and projects in Ireland: Guidance for planning authorities.

SOURCES OF GUIDANCE

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive). Official Journal of the European Communities, L206/7;
- DEHLG (2010) Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, Dublin;
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (Birds Directive). Official Journal of the European Union, L20/7;
- European Communities (Birds and Natural Habitats) Regulations 2011. SI No. 477/2011;
- NPWS (2010) Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular Letter NPWS 1/10 & PSSP 2/10. Department of Environment, Heritage and Local Government, Dublin;
- NPWS (2013) The Status of EU Protected Habitats and Species in Ireland. Volume 2 & 3: Article 17 Assessments. Department of Arts, Heritage and Gaeltacht, Dublin;
- EC (2000) Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC. Environment Directorate-General of the European Commission;
- EC (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Environment Directorate-General of the European Commission;
- IFI (2016) Guidelines on protection of fisheries during construction works in and adjacent to waters. Inland Fisheries Ireland;
- Part XAB of the Planning and Development Act, 2000 (as amended) and;
- Court of Justice of the European Union decision on the People Over Wind and Sweetman v Coillte Teoranta (C-323/17) case.

4. SCREENING STAGE ASSESSMENT

MANAGEMENT OF THE SITE

The plan or project is not directly connected with, or necessary to, the management of NATURA 2000 sites. However, it should be noted that the slippage area is in a pNHA and the destabilisation has caused significant slippage and the remediation works will result in the stabilisation of the pNHA slope. The area of the proposed temporary diversion and the lands to the south, in the immediate vicinity of the works where a site compound is to be located, are not in a designated site.

DESCRIPTION OF THE PROPOSED PROJECT

SUMMARY

A significant slope failure has occurred at Coghlanstown Ballymore Eustace. This site is at a meander of the River Liffey which has grown and undermined the sandy slope of a section of the Liffey Meander Belt pNHA. This has resulted in the loss of trees and continued undermining of trees further up the slope with the potential for impact of critical infrastructure services within the L6047 located above the pNHA. This road is now closed due to the risk of further slippage.

An Options Report was completed by O'Connor Sutton Cronin as part of the brief which identified a preferred option. The preferred option involves shifting the alignment of the River Liffey to enable the instatement of a more naturally sloping embankment to the existing L6047 (Figures 2 and 3) and the stabilisation of the base with boulders. This is to reduce the risk of further slope slippage. The shift of the River Liffey returns the watercourse to an alignment similar to the alignment that the River Liffey ran approximately 150 years ago prior to the recent growth of the meander.

The location of the subject site is shown in Figure 1. A construction methodology for the diversion of the River Liffey in Ballymore Eustace was developed following an initial meeting with the National Parks and Wildlife Service (NPWS) and Inland Fisheries Ireland (IFI) on site on the 29th of June 2018. Following the meeting and with the development of the design, further work has gone into the construction methodology and the likely sequencing of works. Construction of the permanent diversion of the River Liffey will be required to be completed in dry conditions. Therefore a temporary channel will be required to allow for construction of the permanent channel to take place in dry conditions.

Background

Due to the growth of a meander on the River Liffey and encroachment of the River into a steep vegetated slope to the west of Ballymore Eustace, slippage has occurred on the steep slopes of the Liffey Valley Meander Belt pNHA. Critical infrastructure is located within the road above the Liffey Valley Meander Belt pNHA and the proposed works are to stabilise the slope to prevent further slippage and involve a diversion of the River Liffey in order to bring the River Liffey back on its original course, where it was not impacting on the integrity of the slope. The slope stabilisation element of the project is within a proposed Natural Heritage Area (pNHA).

PRELIMINARY SURVEY WORKS

The following preliminary survey works have been carried out on the site:

- Geotechnical Site Investigations:
Geotechnical site investigations have been carried out in advance of the detailed design and construction works in order to determine the ground conditions. This information has been

used to design the embankment. The ground conditions from the ground investigation records consist of a loose to dense granular glacial deposit, with discrete bands of cohesive glacial material present. No bedrock was recorded during the ground investigation. Groundwater strikes were recorded in two of the boreholes (BH3A and BH5) at depth of between 11 and 11.5m bgl. The findings from the ground investigation were also used to determine what type of material will be required to use as fill on the site.

- Leak Detection Surveys: Leak detection surveys were carried out on the watermain to determine if there were any leaks in the watermain. No leaks were determined during the survey.

PROPOSED CONSTRUCTION WORKS

The following information assumes a certain construction methodology, which will be presented to the Contractor upon appointment. All elements and stages of the proposed River Liffey diversion and slope stabilisation will be carried out in full consultation and in compliance with Inland Fisheries Ireland and NPWS. This section covers access to site, potential locations of site compounds and the potential phasing of works; Phase A and Phase B.

SITE ACCESS

Access to the site would be from two locations. Access to the southern end of the site would be from the R413. Access to the northern end of the site would be from the L6047. Temporary road widening works may be required on the road off the R413 to access the southern site. This is via a private road.

SITE COMPOUND

A work site would likely be required on both sides of the River Liffey. Lands identified will likely be used to accommodate the site compound(s) and will include accommodation buildings, site offices and a storage area for all plant, equipment and materials. The land will be topsoil stripped with the topsoil mounded and retained for re-use. The topsoil stripped will be used for the reinstatement of land upon completion of the works, to return to the relevant land owners. Ultimately, any compound locations will need to be agreed between the Contractor and respective land owners.

PRELIMINARY CONSTRUCTION WORKS - PHASE A

The works related to Phase A are outlined as follows:

- Site Clearance for set up of Construction Site 1: The first step would be to clear the site for Potential Site Compound No.1 as indicated in Figure 4. The land will be topsoil stripped with the topsoil mounded and retained for re-use and reinstatement of the land upon completion of the works. The site compound area will be stoned with Clause 804 material and a terram layer beneath. A bunded area will be provided for a generator. Establish site accommodation, including offices, welfare facilities, storage sheds and general storage area.
- Excavate Temporary Channel: The temporary channel works will be excavated in advance of the instream works period (July -September) and carried out in consultation with IFI. The excavated material removed from the channel will be re-used to increase the height of the banks for the temporary channel at a slope of 2horizontal:1vertical. An indicative temporary channel is shown in Figure 5. The extent of the depth and width of the temporary channel will be decided and agreed with the IFI by the Contractor. A terram layer will be laid along the temporary channel to prevent lifting of silts. A floating silt curtain will be used to capture any minor loss of sediment when the plug is removed to open the temporary diversion channel.
- Site Clearance for Construction Site 2 Setup: Clear the site marked for Potential Construction Compound No.2 as shown on in Figure 4. The land will be topsoil stripped with the topsoil

mounded and retained for re-use and reinstatement of the land upon completion of the works. The site compound area will be stoned with Clause 804 material and a terram layer beneath. A bunded area will be provided for a generator. Establish site accommodation, including offices, welfare facilities, storage sheds and general storage area.

- Site Clearance for Slope Reinstatement Works: Some of the section of slope will be cleared of trees and vegetation.
- Open Temporary Channel: Divert flow from the existing course of the River Liffey through the temporary channel and block any flow from entering the existing channel to allow works to begin in the channel.

MAIN CONSTRUCTION WORKS - PHASE B

The works related to Phase B are outlined as follows:

- Work on Permanent Channel: Excavation works to take place on the permanent channel diversion. This work will be done in dry conditions once the river has been diverted to the temporary channel, shown in Figure 6.
- Clearance of Slope: The remaining section of slope to be cleared of existing trees and planting.
- Slope Re-Stabilisation Works: Reinstatement of slope works to take place with layers of triaxial geogrid and drainage paths provided within slope to prevent the build-up of any hydrostatic pressure within the slope which might cause another collapse
- Scour Protection of Permanent Channel: Rock armour to be installed along northern slope face to prevent scouring occurring.
- Close Temporary Channel and Open Permanent Channel: Block off the temporary channel and open the permanent channel to along the River Liffey to run along its' new course in consultation with IFI. A floating silt curtain will be used to capture loss of sediment when the plug is removed to open the permanent re-alignment channel.
- Reinstatement Lands: Filling in of temporary channel to take place and the reinstatement of the farmer's lands in both construction site locations using the topsoil material stockpiled at the commencement of works.

SLOPE CONSTRUCTION METHODOLOGY

As part of the Phase A and B Works, there are two main elements in relation to the slope; Clearance of Slope and Slope Re-Stabilisation Works. A typical section showing the slope requirements is shown in Figure 2.

SLOPE CLEARANCE

As part of the Clearance of Slope the following will need to take place:

- All vegetation will need to be removed from the section of slope to be reprofiled as shown in Figures 5 & 6.
- Existing slope to be benched with a maximum bench height of 1m

SLOPE REINSTATEMENT

The following will take place as part of the Slope Re-Stabilisation Works:

- Slope to be backfilled using Class 1 general fill. The backfill material will be placed and compacted as per the requirements of TII Specification for Roadworks, Series 600. Initial discussion with NPWS has indicated that works would require certain restrictions on the type of material that would be imported (i.e. gravels and sands to match the existing drainage parameters).

- Geogrid reinforcement will be laid at 1m intervals to provide additional support to the slope in the short to medium term. This will comprise of layers of Tensar Triax 130 or similar. Geogrid reinforcement should extend from the face of the new slope back to the original slope.
- A drainage blanket of Class 6C material will be placed at 10m above the river level to provide drainage out of the slope and to prevent the build- up of water pressures behind the slope.
- The toe of the slope will be protected using rock armour. This will extend to a level 1m above the anticipated 1:100 year flood level. Details of this are provided in Figure 3.
- The rock armour solution will comprise two layers, an underlayer comprising materials meeting the requirements of LMA10/60 and an armour layer comprising material meeting the requirements of LMA40/200 in accordance with IS EN 13383.
- Revegetation of the slope will be carried out as per NPWS requirements. However, it is expected that a natural succession of vegetation will take place following the works. However, key tree species may need to be planted as per NPWS requirements.

TIMEFRAME

It is envisaged that a 5 month period over the summer months (May to September) will be required to complete the extent of the works. Instream works will only take place between July and September as per the Guideline on Protection of Fisheries “During Construction Works in and Adjacent to Waters” document. The Preliminary Construction Works can take place before this period with the Associated Works to take place between July and September.

SUPERVISION

As part of the conditions set out for in the contract for works, the Contractor would be required to engage with an ecologist to oversee all project elements.



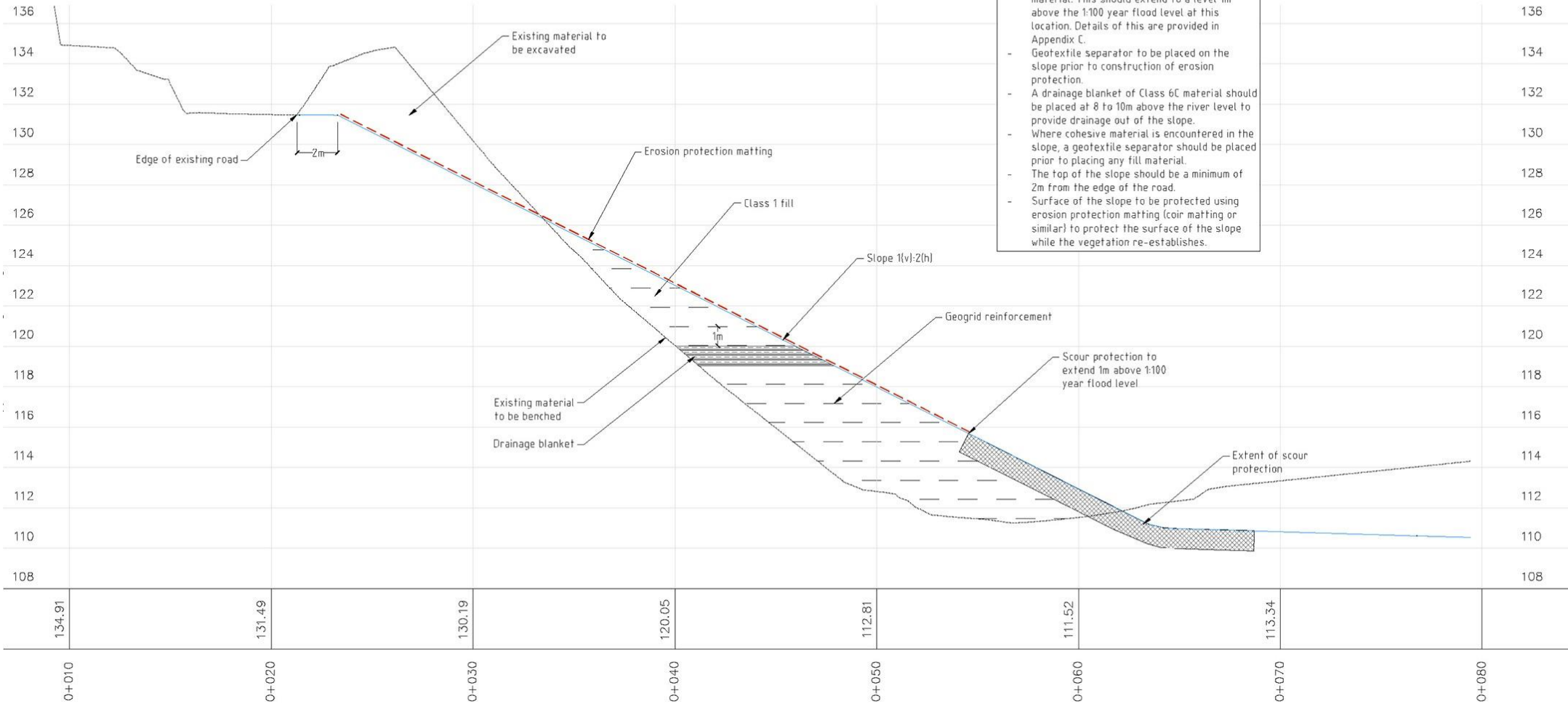
Project: Slope Remediation at Ballymore Euctace
Client: Kildare County Council
Date: 04.12.18

 Site Outline

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Figure 1. Site outline and location.



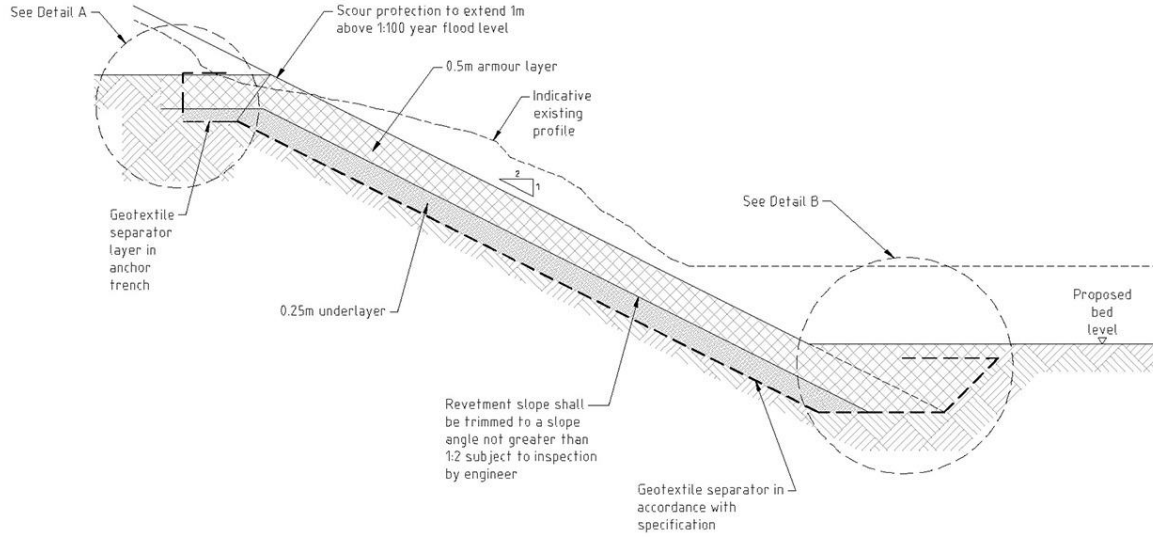
Notes:

- All vegetation to be removed from the section of slope to be reprofiled.
- Existing slope to be benched with a maximum bench height of 1m.
- Backfill material to comprise Class 1 general fill and should be placed and compacted as per the requirements of TII Specification for Roadworks, Series 600. Class 1 material shall have 0% fines.
- The toe of the new slope will require erosion protection. A rock armour solution is proposed to provide adequate protection to the placed material. This should extend to a level 1m above the 1:100 year flood level at this location. Details of this are provided in Appendix C.
- Geotextile separator to be placed on the slope prior to construction of erosion protection.
- A drainage blanket of Class 6C material should be placed at 8 to 10m above the river level to provide drainage out of the slope.
- Where cohesive material is encountered in the slope, a geotextile separator should be placed prior to placing any fill material.
- The top of the slope should be a minimum of 2m from the edge of the road.
- Surface of the slope to be protected using erosion protection matting (coir matting or similar) to protect the surface of the slope while the vegetation re-establishes.

Notes contd:

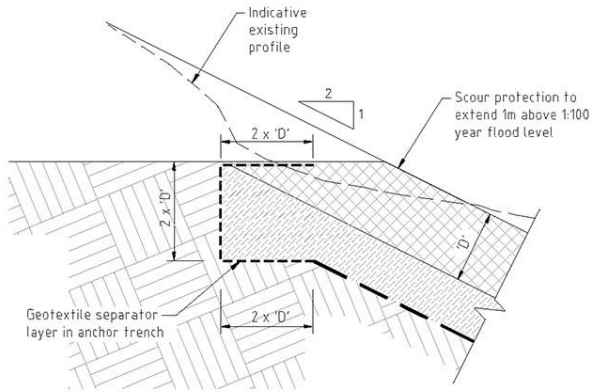
- All Geogrid reinforcement to be Tensor Triax 130 or similar.
- Geogrid to extend back from slope face to original ground.
- Geogrid to be installed at 1m vertical intervals.

Figure 2. Section through Centre of Failure Area



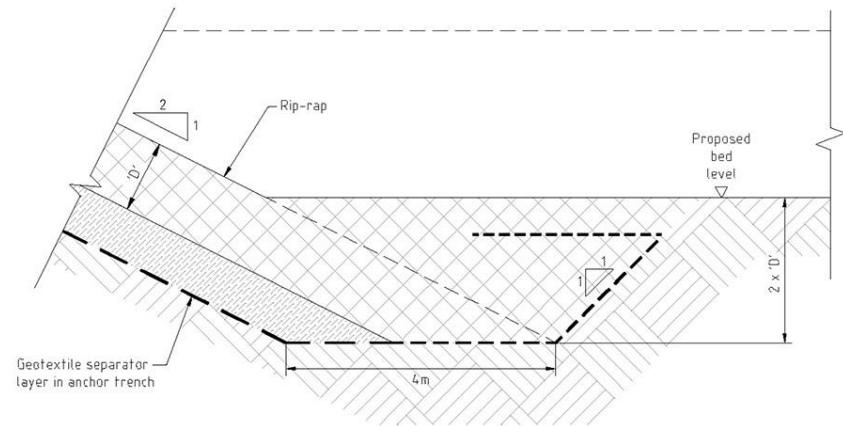
Scour Protection Typical Section

Scale - N.T.S.



Detail A - Anchor Trench for Geotextile Separator

Scale - N.T.S.



Detail B - Toe Protection

Scale - N.T.S.



Potential Site
Compound
Location no.1

Potential Site
Compound
Location no.2

Figure 4. Potential Site Compound Locations.

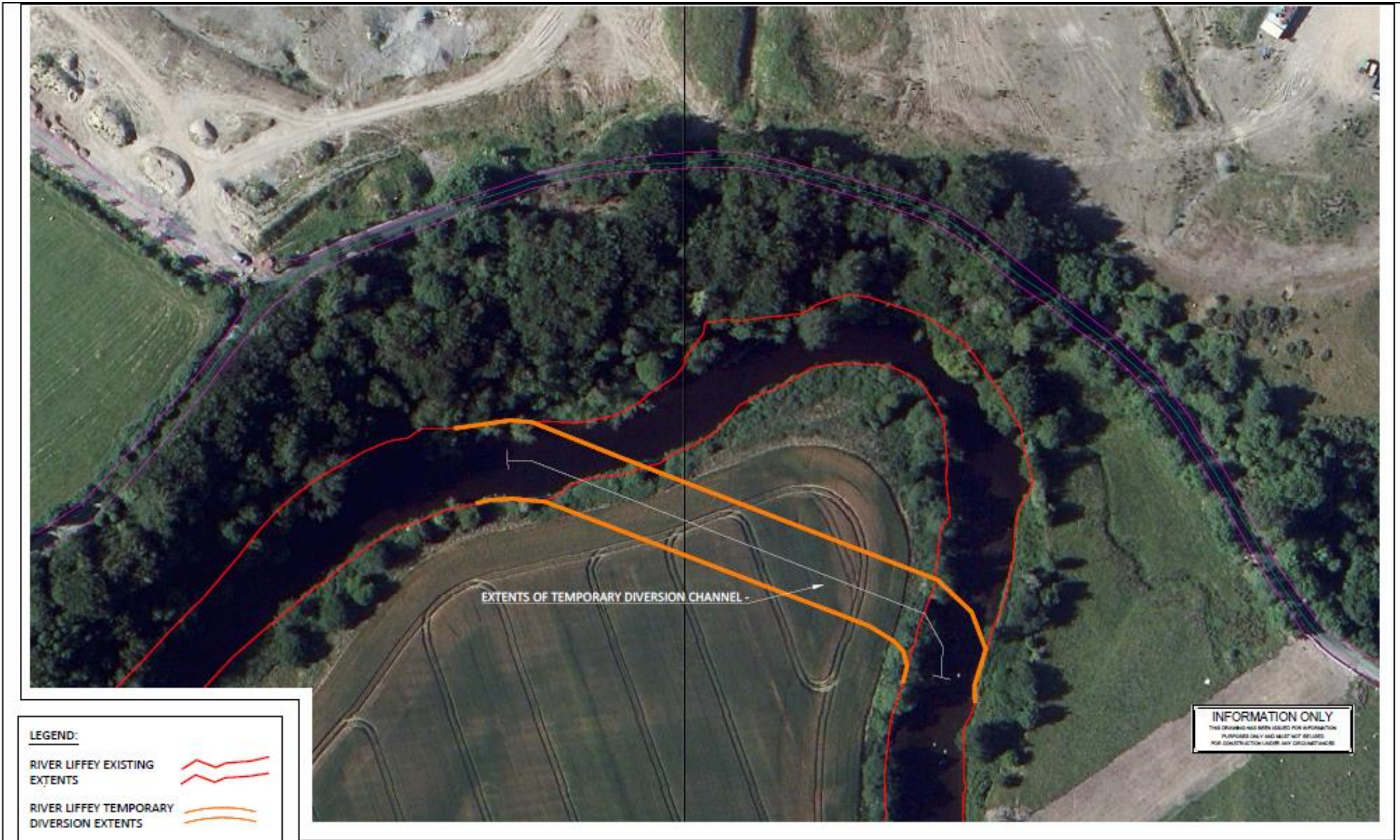
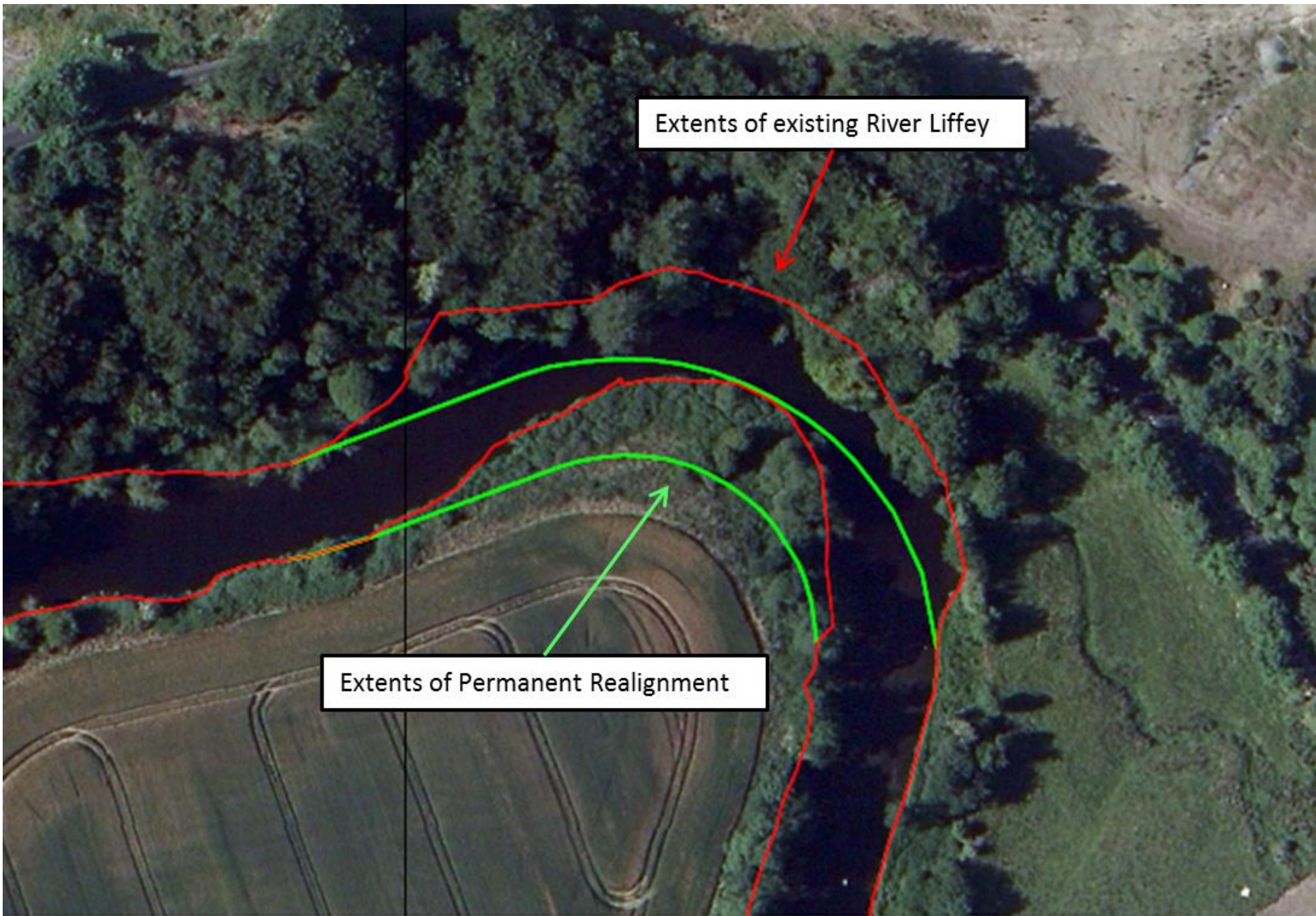


Figure 5. Temporary channel diversion.



Extents of existing River Liffey

Extents of Permanent Realignment

Figure 6. Location of permanent realignment.

IDENTIFICATION OF NATURA 2000 SITES/SPECIES POTENTIALLY AFFECTED.

The proposed works are not within a NATURA 2000 site. Following the guidance provided in DEHLG (2010) and taking into account the key variables outlined above, the likely zone of impact for the Project was defined as the area within:

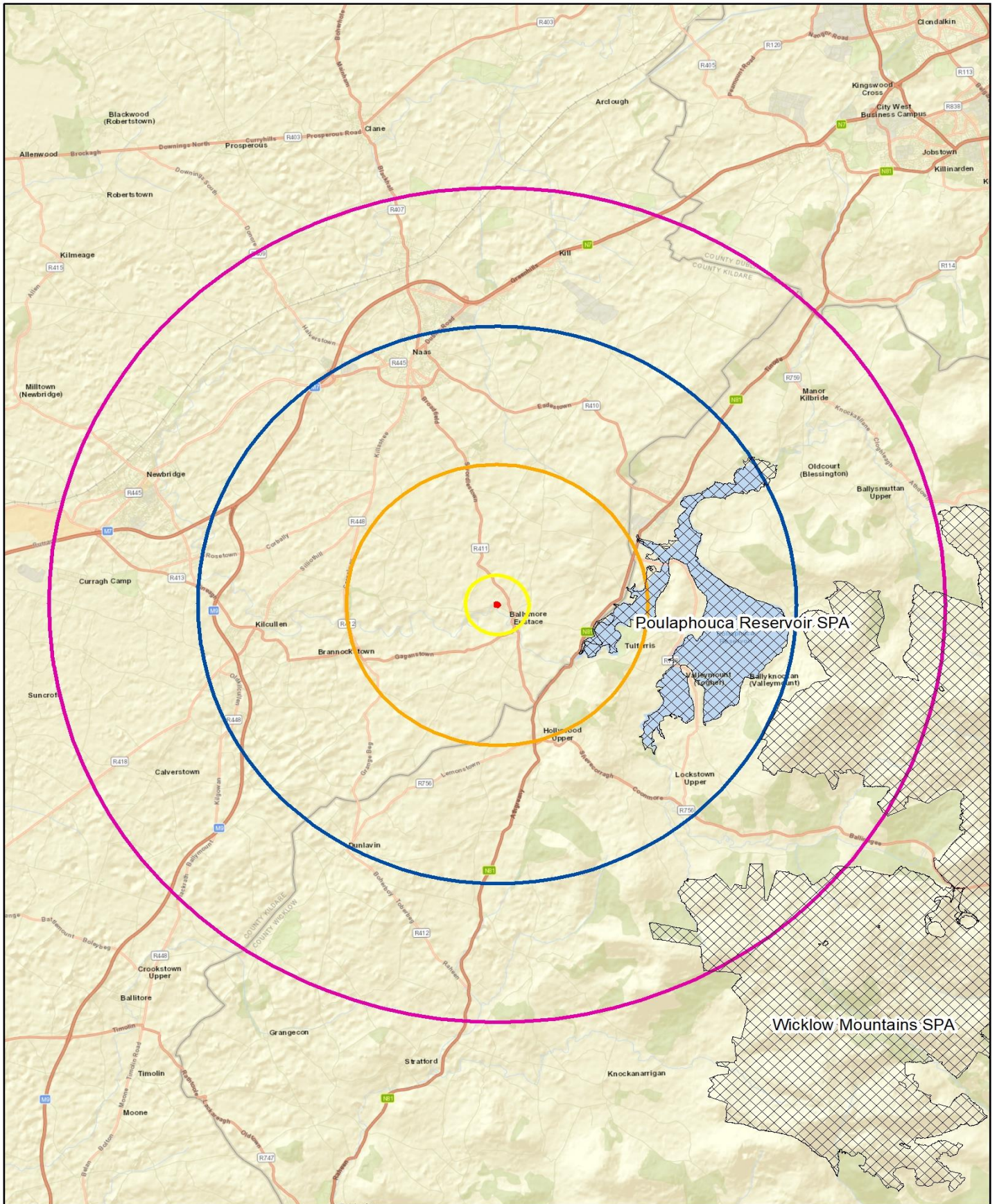
- The river sub-basin limits (source: Environmental Protection Agency Data) of all watercourses crossed by and within 1 km of the Project; and,
- As a further precaution, an additional 2 km buffer around the Project works boundary.

No Natura 2000 sites are found within the zone of impact as defined above. However, following the precautionary principle the potential impact on NATURA 2000 sites within 15km and those with potential biological corridor links (watercourses beyond 3km) are seen in Table 1. Natura 2000 sites within 15km are seen in Figures 7 (SPA's) & 8 (SAC's). Watercourses in the vicinity of the proposed works (EPA-WFD data) are seen in Figures 9 (SPA) and 10 (SAC). As can be seen from the EPA Waterframework Directive (WFD) data in Figures 9 and 10, the project is on the River Liffey and there is a downstream and upstream pathway to Natura 2000 sites. The direct distance to downstream Natura 2000 sites is significant at 34km (min 70km downstream via actual River Liffey course) and these sites are in the marine environment on the far side of Dublin City. However, upstream of the proposed works are Pollaphouca Reservoir SPA (3.1km) (Figure 11) and the Wicklow Mountains SAC (10km) (Figure 12) & SPA (10.1km). Watercourses, Natura 2000 sites and satellite imagery in the vicinity of the proposed works are seen in Figures 13 (SPA's) and 13 (SAC's).

Natura 2000 sites, their conservation objectives, features of interest in addition to the potential impact from the proposed works are seen in Table 2. It should be noted that there are no Natura 2000 sites within the Zone of Influence of the proposed project.. Natura 2000 sites downstream of the works are in the marine environment.

Table 1. Natura 2000 sites within 15km of the proposed development.

| Name | Distance (km) | Type |
|--|---------------|------|
| Red Bog | 8.5 | SAC |
| Wicklow Mountains (Hydrological Link Upstream) | 10.0 | SAC |
| Mouds Bog | 13.7 | SAC |
| Pollardstown Fen | 14.2 | SAC |
| South Dublin Bay (Marine-Indirect hydrological link Downstream) | 34.4 | SAC |
| North Dublin Bay (Marine- Indirect hydrological link Downstream) | 38.9 | SAC |
| Rockabill to Dalkey (Marine- Indirect hydrological link Downstream) | 37.2 | SAC |
| | | |
| Poulaphouca Reservoir (Hydrological Link Upstream) | 3.1 | SPA |
| Wicklow Mountains (Hydrological Link Upstream) | 10.1 | SPA |
| South Dublin Bay and River Tolka (Marine- Indirect hydrological link Downstream) | 34.2 | SPA |
| North Bull Island(Marine- Indirect hydrological link Downstream) | 39.7 | SPA |



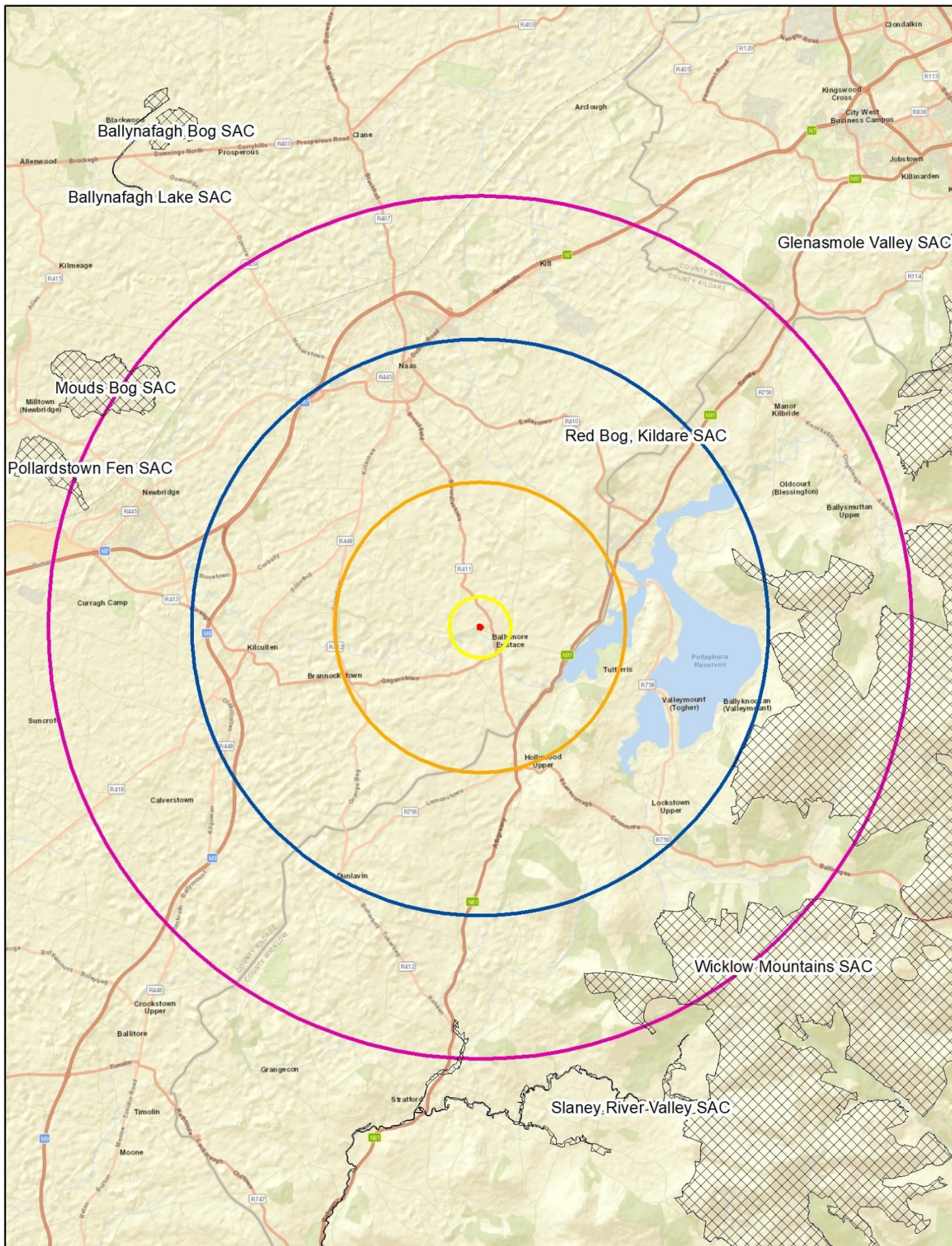
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- Site
- 1km
- 5km
- 10km
- 15km
- SPA_2017_06

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Figure 7. Special Protected Areas (None) located within 1km, 5km, 10km and 15km of the proposed works.



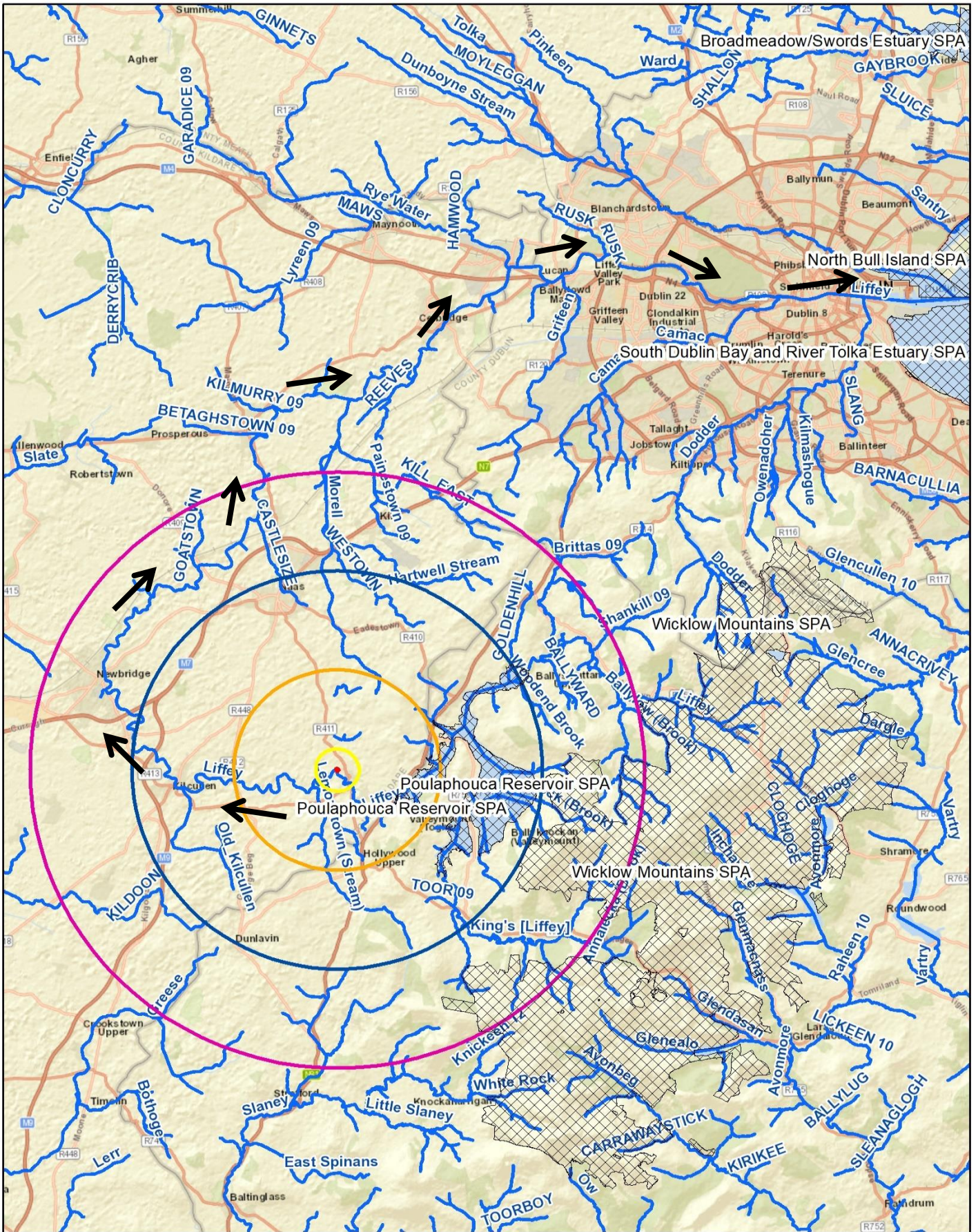
Project: Slope Remediation at Ballymore Euctace
 Client: Kildare County Council
 Date: 28.11.18

- Site
- 1km
- 5km
- 10km
- 15km
- SAC_2018_08

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Figure 8. Special Areas of Conservation located within 1km, 5km, 10km and 15km of the proposed works.



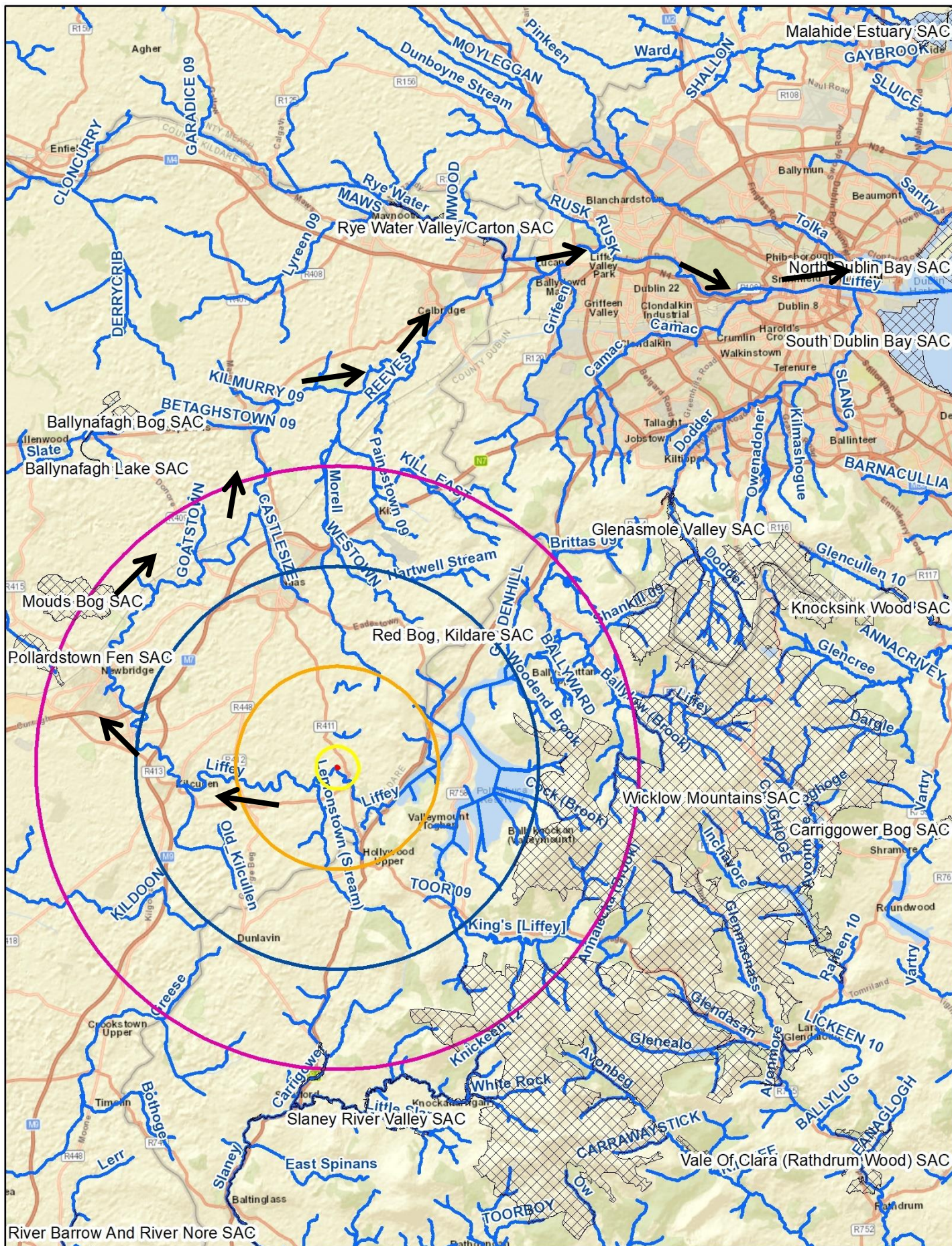
Project: Slope Remediation at Ballymore Euctace
 Client: Kildare County Council
 Date: 28.11.18

- Site
- 1km
- 5km
- 10km
- 15km
- SPA_2017_06

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Figure 9. Potential hydrological links from the proposed works to SPA's.



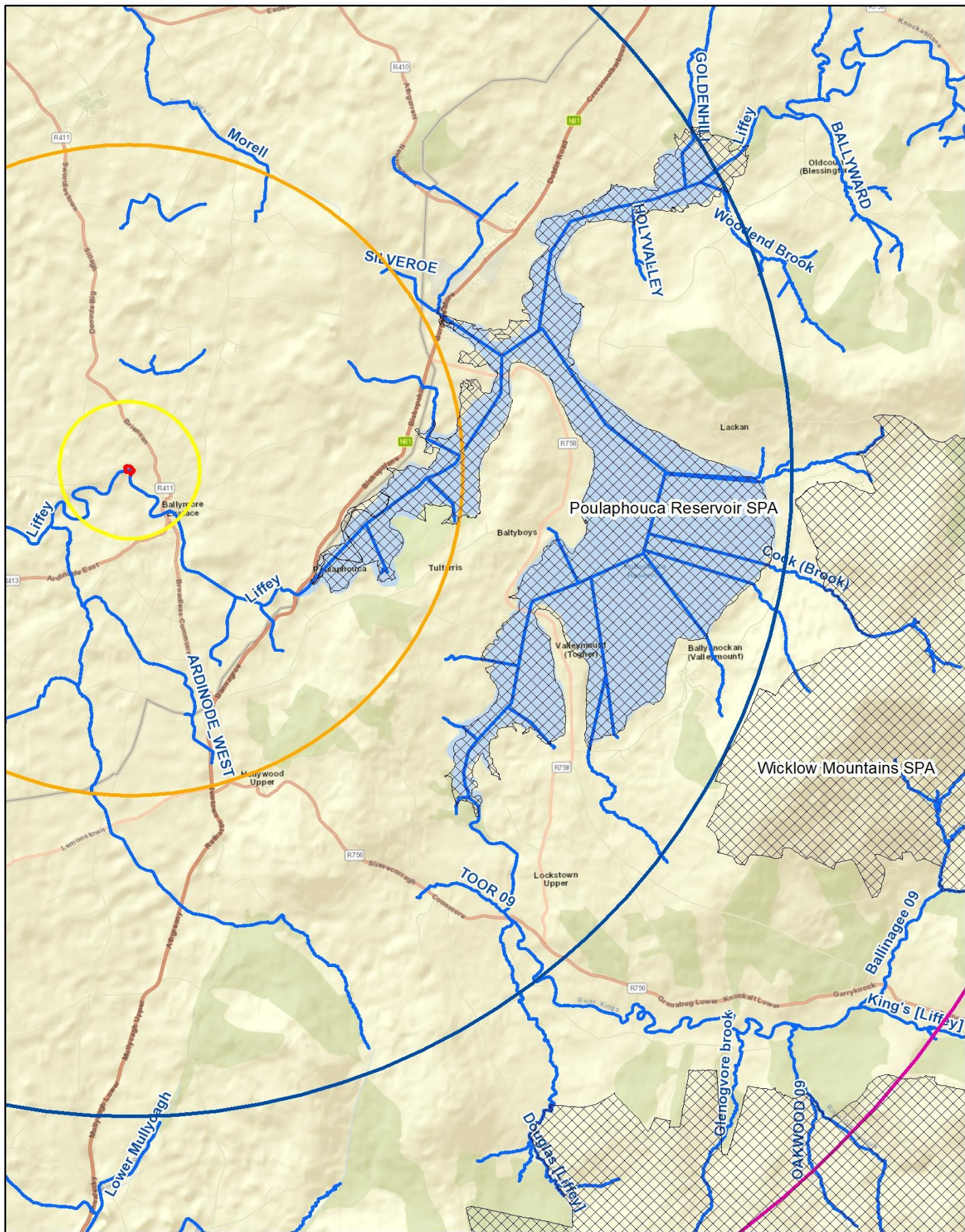
Project: Slope Remediation at Ballymore Euctace
 Client: Kildare County Council
 Date: 28.11.18

- Site
- 1km
- 5km
- 10km
- 15km
- SAC_2018_08

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Figure 10. Potential hydrological links from the proposed works to SAC's.



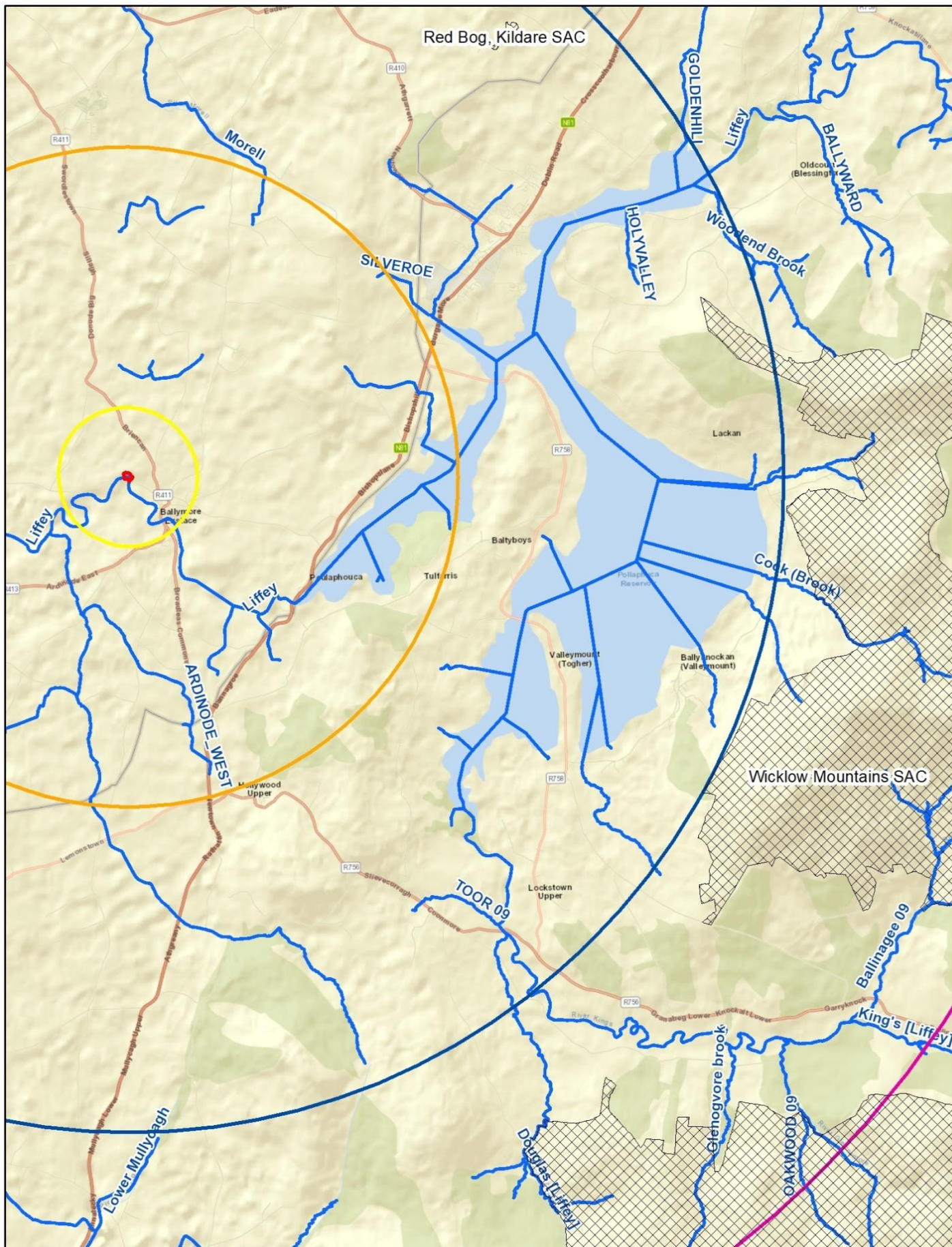
Project: Slope Remediation at Ballymore Euctace
 Client: Kildare County Council
 Date: 28.11.18

- Site
- 1km
- 5km
- 10km
- 15km
- SPA_2017_06

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Figure 11. Watercourses in the vicinity of the proposed works (EPA-WFD data) and SPA's.



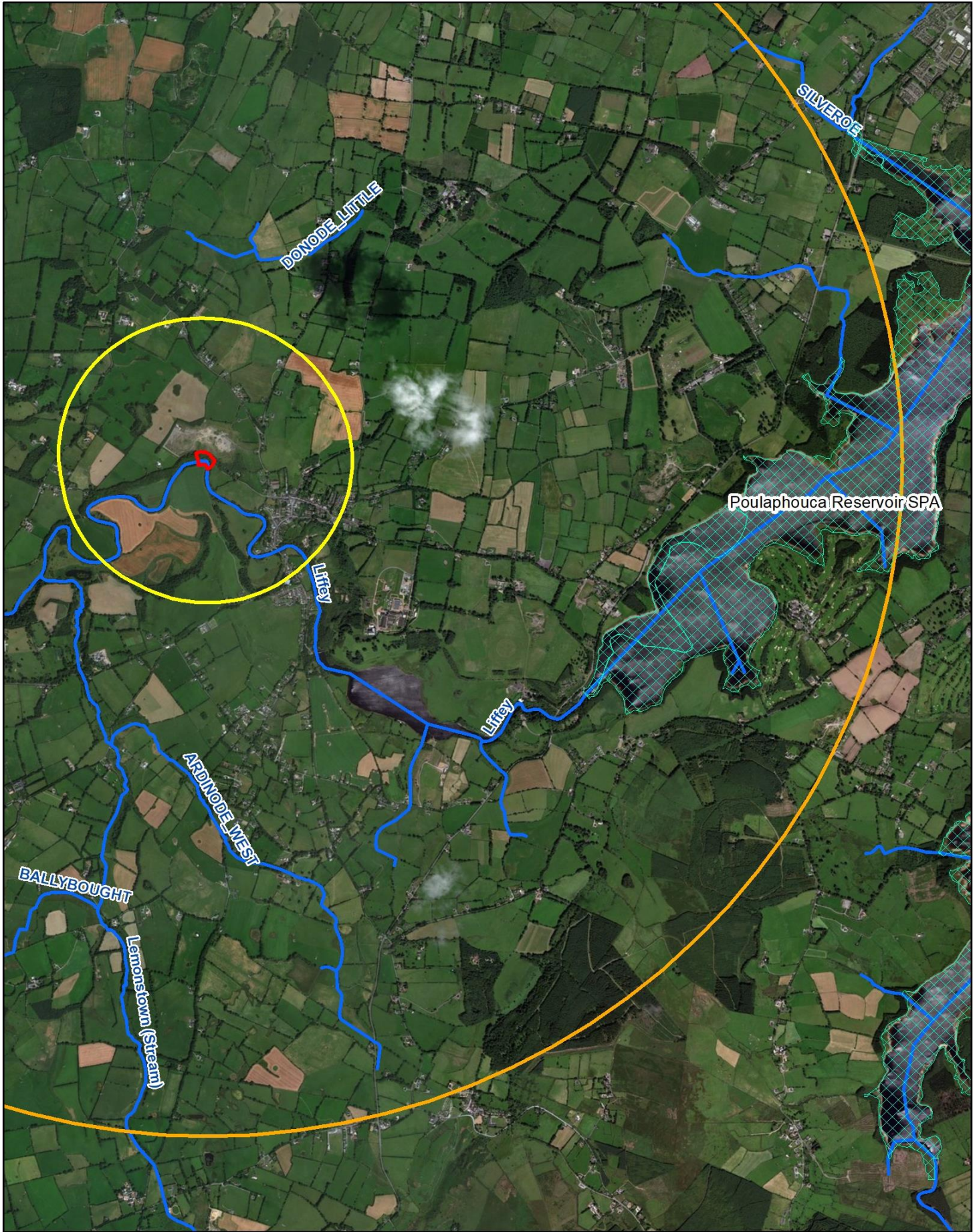
Project: Slope Remediation at Ballymore Euctace
 Client: Kildare County Council
 Date: 28.11.18

- Site
- 1km
- 5km
- 10km
- 15km
- SAC_2018_08

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Figure 12. Watercourses in the vicinity of the proposed works (EPA-WFD data) and SAC's.



Project: Slope Remediation at Ballymore Euctace
 Client: Kildare County Council
 Date: 28.11.18

- Site
- 1km
- 5km
- 10km
- 15km
- SPA_2017_06

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Figure 13. Watercourses, satellite imagery and SPA's in the vicinity of the proposed works.

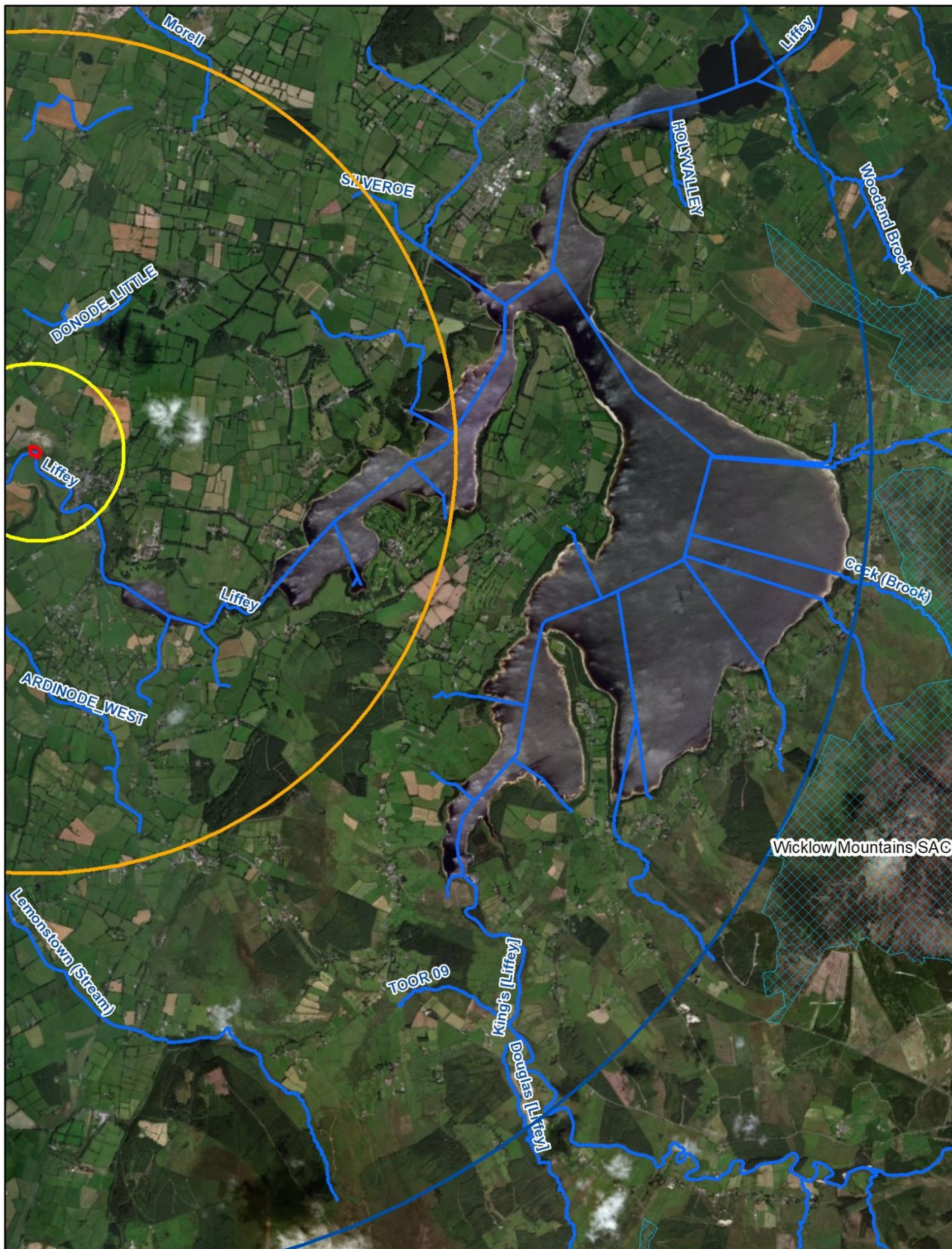


Figure 14. Watercourses, satellite imagery and SAC's in the vicinity of the proposed works.

Table 2. NATURA 2000 sites within 15km of, and with direct hydrological links to, the proposed works, their conservation objectives, features of interest and the potential impact of the proposed development on Natura 2000 sites.

a) Special Areas of Conservation

| NATURA CODE | NAME | Screened In/Out | Reason |
|--------------------------------------|-----------------------|-----------------|---|
| Special Areas of Conservation | | | |
| IE000397 | Red Bog, Kildare SAC | Out | <p>Conservation Objectives 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.</p> <p>Feature of Interest 7140 Transition mires and quaking bogs</p> <p>Potential impact This SAC is in an upland area 8.5 km from the proposed development site on the far side of the M7 motorway. There is no direct or indirect hydrological or ecological stepping stone³ to the SAC. No impact is foreseen on the feature of interest or conservation objectives of this Natura 2000 site. As a result no impact on this SAC is foreseen. The proposed works are not likely to effect this Natura 2000 site.</p> <p>No significant effects are likely.</p> |
| IE002122 | Wicklow Mountains SAC | Out | <p>Conservation Objectives 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.</p> <p>Features of Interest Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea unijflorae</i> and/or Isoeto-Nanojuncetea [3130] Natural dystrophic lakes and ponds [3160] Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] European dry heaths [4030] Apine and Boreal heaths [4060] Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230] Blanket bogs (if active bog) [7130] Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) [8110] Calcareous rocky slopes with chasmophytic vegetation [8210] Siliceous rocky slopes with chasmophytic vegetation [8220] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] <i>Lutra lutra</i> (Otter) [1355]</p> |

³ Stepping stones and ecological corridors including nature conservation sites (other than Natura 2000 sites) encapsulated by Article 10 of the Habitats Directive. Such features are those which, by virtue of their linear and continuous structure such as rivers with their banks or the traditional systems for marking field boundaries or their function as stepping stones (such as ponds or small woods) are essential for the migration, dispersal and genetic exchange of wild species.

| NATURA CODE | NAME | Screened In/Out | Reason |
|-------------|---------------|-----------------|--|
| | | | <p>Potential Impact</p> <p>The proposed works are located 10.0 km from the Wicklow Mountains SAC, which is located at a higher elevation and hydrologically linked to the works. The works are located downstream of the Wicklow Mountains SAC, on the River Liffey, below the ESB Hydroelectric Dam and Blessington lakes. The proposed works would not impact on the habitats of this SAC as it is 10km from the works at a higher elevation.</p> <p>Otters are an Annex species and a feature of interest of this SAC. No holts or couches were observed within the works area. However, otters may be present intermittently on site and have been recorded within the site outline by NPWS (Rare and protected species data). It should be noted that the Blessington Lakes and the ESB Hydroelectric PowerStation are located between the proposed works and the Wicklow Mountains SAC. As a result of this and the distance (i.e. 10km) and the break in the biodiversity corridor (dam), the size of the river and lakes providing a good source of food, otters within the vicinity of the proposed works would not be expected to be within the same home range as those within the Wicklow Mountains SAC. It would be expected that the proposed works would not impact on the Distribution, Extent of terrestrial habitat, Extent of freshwater (river) habitat, Extent of freshwater (lake) habitat, Couching sites and holts, Fish biomass available, or create Barriers to connectivity for otters within the Wicklow Mountains SAC as these habitats are upstream of the proposed works on the far side of the Blessington dam and lakes at a significant distance from the SAC (10km).</p> <p>Atlantic salmon (in Freshwater) is an Annex species protected under the Habitats Directive and are likely to be present in the River Liffey in the vicinity of the proposed works. This species is not a feature of interest of this SAC. All works will be carried out in full compliance with Inland Fisheries Ireland and will ensure compliance with Water Pollution Acts.</p> <p>The proposed works will not impact on the features of interest of this site. All works will comply with Inland Fisheries Ireland, Kildare County Council and National Parks and Wildlife Service conditions. No impact is foreseen on the features of interest of this site. As a result no impact on this SAC is foreseen. The proposed works are not likely to impact the Conservation Objectives of this site.</p> <p>No significant effects are likely.</p> |
| IE002331 | Mouds Bog SAC | Out | <p>Conservation Objectives</p> <p>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.</p> <p>Feature of Interest</p> <p>(7110) Active raised bogs*</p> <p>(7120) Degraded raised bogs still capable of natural regeneration</p> <p>(7150) Depressions on peat substrates of the Rhynchosporion</p> <p>Potential Impact</p> <p>This SAC is 13.7 km from the proposed development site on the</p> |

| NATURA CODE | NAME | Screened In/Out | Reason |
|-------------|----------------------|-----------------|--|
| | | | <p>far side of the River Liffey, main Dublin railway line and the R445 dual carriageway. There is no direct or indirect hydrological or ecological stepping stone to the SAC. No impact is foreseen on any of the features of interest of this site. As a result the proposed works are not likely to have a significant effect this SAC.</p> <p>No significant Effects are Likely.</p> |
| IE000396 | Pollardstown Fen SAC | Out | <p>Conservation Objectives 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.</p> <p>Features of Interest (7210) Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>* (7220) Petrifying springs with tufa formation (Cratoneurion)* (7230) Alkaline fens (1013) Geyer's Whorl Snail (<i>Vertigo geyeri</i>) (1014) Narrow-mouthed Whorl Snail (<i>Vertigo angustior</i>) (1016) Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>)</p> <p>Potential Impact This SAC is 14.2 km from the proposed development site on the far side of the River Liffey, main Dublin railway line and Newbridge town. There are no direct or indirect hydrological or uninterrupted ecological stepping stones to the SAC. No impact is foreseen on any of the features of interest of this site. As a result the proposed works are not likely to have a significant effect on this SAC.</p> <p>No significant Effects are Likely</p> |
| IE000210 | South Dublin Bay SAC | Out | <p>Conservation Objectives To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in South Dublin Bay SAC, which is defined by the following targets:</p> <ul style="list-style-type: none"> • The permanent habitat area is stable or increasing, subject to natural processes. • Maintain the extent of the <i>Zostera</i> –dominated community, subject to natural processes. • Conserve the high quality of the <i>Zostera</i> –dominated community, subject to natural processes • Conserve the following community type in a natural condition: Fine sands with <i>Angulus tenuis</i> community complex. <p>Features of Interest Mudflats and sandflats not covered by seawater at low tide [1140]</p> <p>Potential Impact The proposed works are located 34.3 km from the South Dublin Bay SAC which is a marine SAC. Due to the meandering of the River Liffey the actual distance to the SAC for instream impacts, if any, via the River Liffey is over 70km. Between the proposed works and the South Dublin Bay SAC the River Liffey is fed by</p> |

| NATURA CODE | NAME | Screened In/Out | Reason |
|-------------|----------------------|-----------------|--|
| | | | <p>numerous tributaries and passes through Kilcullen, Newbridge, Celbridge, Leixlip, Lucan and Dublin City in addition to the ESB Hydro Electric Power Station and reservoir at Golden Falls (Leixlip), prior to reaching this Natura 2000 site.</p> <p>All works will be carried out in full compliance with Inland Fisheries Ireland and will ensure compliance with Water Pollution Acts. In addition all works will comply with Kildare County Council and National Parks and Wildlife Service conditions. The proposed works will not impact on the feature of interest of this site due to the nature of the works, the dilution and settlement of impacts, including silt, prior to reaching the SAC and the significant instream distance between the proposed project and the SAC. As a result no impact on this SAC is foreseen. The proposed works are not likely to impact the Conservation Objectives of this site.</p> <p>No significant Effects are Likely</p> |
| IE0000206 | North Dublin Bay SAC | Out | <p>Conservation Objectives: 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.</p> <p>Features of Interest 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 (<i>Glauco-Puccinellietalia maritima</i>) 1395 Petalwort <i>Petalophyllum ralfsii</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) 2190 Humid dune slacks</p> <p>Potential Impact No potential impact is foreseen on this SAC. The proposed development is located over 38.9 km from the SAC. Due to the meandering of the River Liffey the actual distance to the SAC for instream impacts, if any, via the River Liffey is over 75km.</p> <p>Between the proposed works and the North Dublin Bay SAC the River Liffey is fed by numerous tributaries and passes through Kilcullen, Newbridge, Celbridge, Leixlip, Lucan and Dublin City in addition to the ESB Hydro Electric Power Station and reservoir at Golden Falls (Leixlip), prior to reaching this Natura 2000 site.</p> <p>All works will be carried out in full compliance with Inland Fisheries Ireland and will ensure compliance with Water Pollution Acts. In addition, all works will comply with Kildare County Council and National Parks and Wildlife Service conditions. The proposed works will not impact on the feature</p> |

| NATURA CODE | NAME | Screened In/Out | Reason |
|-------------|--------------------------------|-----------------|---|
| | | | <p>of interest of this site due to the nature of the works, the dilution and settlement of impacts, including silt, prior to reaching the SAC and the significant instream distance between the proposed project and the SAC. As a result no impact on this SAC is foreseen. The proposed works are not likely to impact the Conservation Objectives of this site.</p> <p>No significant Effects are Likely</p> |
| IE0003000 | Rockabill to Dalkey Island SAC | Out | <p>Conservation Objectives: 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.</p> <p>Qualifying Interests 1170 Reefs 1351 Harbour porpoise <i>Phocoena phocoena</i></p> <p>Potential Impact The proposed works are located a minimum of 37.2km from the SAC. Due to the meandering of the River Liffey the actual distance to the SAC for instream impacts, if any, via the River Liffey is over 75km. Between the proposed works and the Rockabill to Dalkey Island SAC the River Liffey is fed by numerous tributaries and passes through Kilcullen, Newbridge, Celbridge, Leixlip, Lucan and Dublin City in addition to the ESB Hydro Electric Power Station and reservoir at Golden Falls (Leixlip) and Dublin Bay prior to reaching this Natura 2000 site. All works will be carried out in full compliance with Inland Fisheries Ireland and will ensure compliance with Water Pollution Acts. In addition all works will comply with Kildare County Council and National Parks and Wildlife Service conditions. The proposed works will not impact on the feature of interest of this site due to the nature of the works, the dilution and settlement of impacts, including silt, prior to reaching the SAC and the significant instream distance between the proposed project and the SAC, which is located in the marine environment. As a result no impact on this SAC is foreseen. The proposed works are not likely to impact the Conservation Objectives of this site.</p> <p>No significant Effects are Likely</p> |

* denotes a priority habitat

b) Special Protection Areas

| NATURA CODE | NAME | Screened In/Out | Reason |
|---------------------------------|---------------------------|-----------------|---|
| Special Protection Areas | | | |
| IE0004063 | Poulaphouca Reservoir SPA | Out | <p>Conservation Objectives To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p> <p>Features of Interest Greylag Goose (<i>Anser anser</i>) [A043] Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183]</p> <p>Potential Impact The proposed works are 3.1 km from the Poulaphouca Reservoir SPA. As outlined in the Site Synopsis this SPA is of national importance for its Greylag Goose population, which is one of the largest in the country. The site provides the main roost for the birds, with feeding occurring mostly on improved grassland outside of the site. As outlined by Nairn and Crowley (1998), “this species roosts on the lake by night and feeds during the day in surrounding fields, particularly those to the north of the site near Threecastles and to the south near Poulaphouca Dam.The reservoir is also regularly used by significant numbers of Lesser Black-backed Gull, particularly as a night-time roost during the autumn.” It is also stated in the Site Synopsis that “the reservoir attracts roosting gulls during winter, most notably a large population of Lesser Black -backed Gull (651), which in Ireland is rare in winter away from the south coast”.</p> <p>The proposed works are on the River Liffey, downstream of the SPA. The ESB hydroelectric power station and dam are between the SPA and the proposed works site. The features of interest are concentrated in the vicinity of the lacustrine habitat and surrounding fields. The habitats on site i.e. river and woodland would not be utilised by the features of interest of this SPA. Noise and disturbance impacts would be localised and in the vicinity of the proposed works and would not reach the SPA on the far side of the ESB dam.</p> <p>No significant Effects are Likely</p> |
| IE004040 | Wicklow Mountains SPA | Out | <p>Conservation Objectives To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p> <p>Features of Interest <i>Falco colombarius</i> (Merlin) [A098] <i>Falco peregrinus</i> (Peregrine) [A103]</p> <p>Potential Impact The development site is located within a suburban area 10.1 km from the Wicklow Mountains SPA. The site would not be seen as an important feeding habitat for merlin or peregrine falcon and has no direct connection to this SPA. The proposed works are on the River Liffey, downstream of the SPA. The ESB hydroelectric power station and dam are between the SPA and the proposed works site. The features of interest are concentrated in the vicinity of the upland habitat. The habitats on site i.e. river and woodland would not be</p> |

| | | | |
|-----------|--|------------|--|
| | | | <p>utilised by the features of interest of this SPA. Noise and disturbance impacts would be localised and in the vicinity of the proposed works and would not reach the SPA on the far side of the ESB dam.</p> <p>No significant Effects are Likely</p> |
| IE004024 | South Dublin Bay and River Tolka Estuary SPA | Out | <p>Conservation Objectives</p> <p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p> <p>To maintain the favourable conservation condition of the wetland habitat in South Dublin Bay and River Tolka Estuary SPA as a resource for the regularly occurring migratory waterbirds that utilise it.</p> <p>Features of Interest</p> <p><i>Branta bernicla brota</i> (Light-bellied Brent Goose) [A046] <i>Haematopus ostralegus</i> (Oystercatcher) [A130] <i>Charadrius hiaticula</i> (Ringed Plover) [A137] <i>Pluvialis squatarola</i> (Grey Plover) [A141] <i>Calidris canutus</i> (Knot) [A143] <i>Calidris alba</i> (Sanderling) [A144] <i>Calidris alpina</i> (Dunlin) [A149] <i>Limosa lapponica</i> (Bar-tailed Godwit) [A157] <i>Tringa totanus</i> (Redshank) [A162] <i>Chroicocephalus ridibundus</i> (Black-headed Gull) [A179] <i>Sterna dougallii</i> (Roseate Tern) [A192] <i>Sterna hirundo</i> (Common Tern) [A193] <i>Sterna paradisaea</i> (Arctic Tern) [A194] Wetland and Waterbirds [A999]</p> <p>Potential Impact</p> <p>The development site is located within a suburban area 34.2 km from the South Dublin Bay and River Tolka Estuary SPA. This SPA and its features of interest are marine/intertidal. Due to the meandering of the River Liffey the actual distance to the SPA for instream impacts, if any, via the River Liffey is over 70km. Between the proposed works and the South Dublin Bay and River Tolka Estuary SPA the River Liffey is fed by numerous tributaries and passes through Kilcullen, Newbridge, Celbridge, Leixlip, Lucan and Dublin City in addition to the ESB Hydro Electric Power Station and reservoir at Golden Falls (Leixlip), prior to reaching this Natura 2000 site.</p> <p>All works will be carried out in full compliance with Inland Fisheries Ireland and will ensure compliance with Water Pollution Acts. In addition all works will comply with Kildare County Council and National Parks and Wildlife Service conditions. The proposed works will not impact on the feature of interest of this site due to the nature of the works, the dilution and settlement of impacts, including silt, prior to reaching the SPA and the significant instream distance between the proposed project and the SPA. As a result no impact on this SPA is foreseen. The proposed works are not likely to impact the Conservation Objectives of this site.</p> <p>No significant Effects are Likely</p> |
| IE0004006 | North Bull Island SPA | Out | <p>Conservation Objective: The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.</p> |

| | | |
|--|--|--|
| | | <p>Qualifying Interests</p> <p>A046 Light-bellied Brent Goose (<i>Branta bernicla hrota</i>)</p> <p>A048 Shelduck (<i>Tadorna tadorna</i>)</p> <p>A052 Teal (<i>Anas crecca</i>)</p> <p>A054 Pintail (<i>Anas acuta</i>)</p> <p>A056 Shoveler (<i>Anas clypeata</i>)</p> <p>A130 Oystercatcher (<i>Haematopus ostralegus</i>)</p> <p>A140 Golden Plover (<i>Pluvialis apricaria</i>)</p> <p>A141 Grey Plover (<i>Pluvialis squatarola</i>)</p> <p>A143 Knot (<i>Calidris canutus</i>)</p> <p>A144 Sanderling (<i>Calidris alba</i>)</p> <p>A149 Dunlin (<i>Calidris alpina alpina</i>)</p> <p>A156 Black-tailed Godwit (<i>Limosa limosa</i>)</p> <p>A157 Bar-tailed Godwit (<i>Limosa lapponica</i>)</p> <p>A160 Curlew (<i>Numenius arquata</i>)</p> <p>A162 Redshank (<i>Tringa tetanus</i>)</p> <p>A169 Turnstone (<i>Arenaria interpres</i>)</p> <p>A179 Black-headed Gull (<i>Chroicocephalus ridibundus</i>)</p> <p>A999 Wetlands</p> <p>Potential Impact</p> <p>The proposed works are a minimum of 39.7 km from the North Bull Island SPA. This SPA and its features of interest are marine/intertidal. Due to the meandering of the River Liffey the actual distance to the SPA for instream impacts, if any, via the River Liffey is over 70km. Between the proposed works and the South Dublin Bay and River Tolka Estuary SPA the River Liffey is fed by numerous tributaries and passes through Kilcullen, Newbridge, Celbridge, Leixlip, Lucan and Dublin City in addition to the ESB Hydro Electric Power Station and reservoir at Golden Falls (Leixlip), prior to reaching this Natura 2000 site.</p> <p>All works will be carried out in full compliance with Inland Fisheries Ireland and will ensure compliance with Water Pollution Acts. In addition all works will comply with Kildare County Council and National Parks and Wildlife Service conditions. The proposed works will not impact on the feature of interest of this site due to the nature of the works, the dilution and settlement of impacts, including silt, prior to reaching the SPA and the significant instream distance between the proposed project and the SPA. As a result no impact on this SPA is foreseen. The proposed works are not likely to impact the Conservation Objectives of this site.</p> <p>No significant Effects are Likely</p> |
|--|--|--|

SITE VISIT AND ECOLOGICAL ASSESSMENT

A site visit was carried out on the 18/10/2018. The proposed re-stabilisation site (Figures 1 & 2) comprises primarily of the recolonising exposed gravelly sandy (Plate 1). Either side of the slippage is within the pNHA and consisted of thin tall beech trees with a thin ground flora primarily of ivy and grasses. The southern side of the River, where the diversion is to take place is primarily arable land, with a perimeter of scrub in at the bank of the River. No invasive species were noted on or in proximity to the proposed works site.



Plate 1: Proposed works area (main image) and slippage area (inset).

No species of conservation importance were observed within the site outline. However, a disused outlier badger's sett was noted to the west of the slippage, within the proposed works site. No otters or holts were noted within the works area, but otters would be expected to frequent the habitat in the vicinity of the watercourse. Atlantic salmon (*Salmo salar*), freshwater eel (*Anguilla anguilla*), brown trout (*Salmo trutta*) would be expected to be present, based on Inland Fisheries Ireland WaterFramework Directive sampling data from Kilcullen. Freshwater crayfish would also be expected in the River Liffey and are noted to be present on site by NBDC data. Several species of conservation importance have been observed within the potential zone of influence by the National Parks and Wildlife Service and the National Biodiversity Data Centre. NPWS Rare and protected data recorded otter on site within fine resolution and within the 1km grid Irish Stoat (*Mustela erminea subsp. hibernica*), Common Frog (*Rana temporaria*), Badger (*Meles meles*), Red Deer (*Cervus elaphus*), Sika Deer (*Cervus Nippon*) and flora including Basil Thyme (*Clinopodium acinos*) and Green-Winged Orchid (*Orchis morio*) are noted. Invasive species Canadian Waterweed (*Elodea canadensis*) and American Mink (*Mustela vison*) have been recorded by the NBDC in the vicinity of the proposed works.

The bat habitat Suitability Index for bats ranges from 0 to 100 with 0 being least favourable and 100 most favourable for bats. The area of the proposed works based on NBDC data gives a rating for the following species Soprano pipistrelle (*Pipistrellus pygmaeus*)(35), Brown long-eared bat (*Plecotus auritus*)(35), Common pipistrelle (*Pipistrellus pipistrellus*)(43), Lesser horseshoe bat (*Rhinolophus hipposideros*)(1), Leisler's bat (*Nyctalus leisleri*) (35), Whiskered bat (*Myotis mystacinus*)(15), Daubenton's bat (*Myotis daubentonii*)(20), Nathusius's pipistrelle (*Pipistrellus nathusii*) (20), Natterer's bat (*Myotis nattereri*)(33). However, given the location of the works on the River Liffey, the ranking of the site for Daubenton's bat is likely to be an underestimate.

CLEARANCE AND CONSTRUCTION IMPACTS

All waste from the clearance and construction phase will be disposed of in a registered facility and will not pose a threat to a NATURA 2000 site. The proposed works will involve instream works and slope clearance in the vicinity of the watercourse. Instream works and works in close proximity to the watercourse could introduce silt to the River. The clearance of the slope will result in the removal of all vegetation from the slope. Standard construction phase controls should be in place to reduce potential impacts on local biodiversity. These should include the protection of the watercourse from silt and petrochemicals in order to protect biodiversity in the immediate vicinity of the works from localised impacts. Landscaping should be discussed and agreed with NPWS. All works will be carried out in compliance with Local Government (Water Pollution) Acts 1977-1990, Inland Fisheries Ireland and Kildare County Council Conditions. It should be noted that the nearest downstream Natura 2000 site is 34km (>70km via the River Liffey course) and not in close proximity to Natura 2000 sites. No mitigation is required to protect the integrity of Natura 2000 sites.

It should be noted that a derogation licence will be required for the removal of any badger sett (active or disused). The slope stabilisation process will result in the removal of the disused sett on site. A revised method statement should be submitted to Inland Fisheries Ireland prior to the commencement of works.

CUMULATIVE IMPACTS

A search of the Kildare County Council online planning revealed a proposed development by Ballymore Ireland Contracting Services Ltd., for 84 No. dwellings. It is also proposed to include a single storey crèche, single storey residents' gym, a medical clinic with 4 No. consultants' suites (180sqm), a retail unit (76sqm) and Design Centre/office (360sqm), public parkland and associated road works, parking, footpaths and cycle facilities, drainage, hard and soft landscaping including 2 No. pedestrian bridges over the stream and associated engineering works to the south of Coughlanstown Road and the Naas Road. The conclusion of the project's AA screening was that the project "will not have any significant effect on the integrity of the Natura 2000 Network". This project will not have a cumulative effect on the proposed works or on Natura 2000 sites.

It should be noted that the slope stabilisation works are downstream of the ESB Hydroelectric Power station and works should be carried out in consultation with the ESB to ensure that critical stages of the project e.g. diversion, instream works and the placement of rock armour are all done within minimal flow periods in order to reduce the resuspension of silt, thus impacting local biodiversity. This approach should be discussed with the project ecologist and Inland Fisheries Ireland.

Given the isolated nature of the site with a 70km (by river) pathway to the nearest downstream Natura 2000 sites which are located in the marine environment, having passed through numerous towns including Dublin City, the reservoir and dam at Golden Falls (Leixlip), in addition to dilution from tributaries joining the River Liffey over that 70km no significant cumulative impact would be envisaged for the project alone or in combination with other projects. No significant cumulative impacts are foreseen that are likely to have a significant effect on a Natura 2000 site.

ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS.

The assessment questions listed below have been sourced from EC (2001):

Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site:

No project element will cause any impact to Natura 2000 sites. Construction impacts may introduce silt that could impact on local biodiversity. However, the nearest downstream Natura 2000 site is 34km (>70km by river, due to the meandering nature of the River Liffey). The revised layout of the River Liffey and slope will not impact on Natura 2000 sites.

Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 site:

The clearance and construction have the potential to lead to accidental pollution events within the River Liffey. Such events could result in reduced water quality and increased sedimentation, affecting habitat quality local biodiversity and would not impact on Natura 2000 sites.

Describe any likely significant changes to the site:

No element of the project is likely to result in significant physical or ecological change to or cause an impact or effect on any features of interest, conservation objectives of any Natura 2000 site.

Describe any likely impacts on the Natura 2000 site as a whole:

No element of the Project is likely to result in likely significant impacts on the overall structure and function of any Natura 2000 sites.

Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known:

The clearance and construction of the new slope and the realignment of the River Liffey, in the absence of appropriate controls has the potential to give rise to negative effects on the local populations of European Otter, Atlantic Salmon and White-clawed Crayfish in the River but not on the features of interest or the conservation objectives of Natura 2000 sites within 15km or with a direct hydrological connection to the proposed project.

CONCLUSIONS

The proposed works involve slope clearance, a temporary diversion of the River Liffey to allow for the stabilisation of the slope and the importation of fill and rock armour and the realignment of the River Liffey back to the course that it had approximately 100 years ago.

In order to protect local biodiversity features all works will be carried out in full compliance with Inland Fisheries Ireland and will ensure compliance with Water Pollution Acts. In addition all works will comply with Kildare County Council and National Parks and Wildlife Service conditions.

Between the proposed works and the nearest downstream Natura 2000 site, the River Liffey is fed by numerous tributaries and passes through Kilcullen, Newbridge, Celbridge, Leixlip, Lucan and Dublin City in addition to the ESB Hydro Electric Power Station and reservoir at Golden Falls (Leixlip), prior to reaching this Natura 2000 site, some 70km downstream (by river).

The nearest Natura 2000 site is Pollaphuca Reservoir SPA. The Blessington ESB hydroelectric power station and dam are between the SPA and the proposed works site. The features of interest are concentrated in the vicinity of the lacustrine habitat and surrounding fields and the proposed works would not impact on the features of interest of this SPA which is located upstream of the proposed works in the Pollaphuca Reservoir. As outlined in the AA screening the proposed works are not likely to have a significant on any features of interest or conservation objectives of Natura 2000 sites within 15km of the proposed works or Natura 2000 sites with a hydrological link to the proposed works. . The proposed works will not impact on the feature of interest of Natura 2000 sites downstream of the works due to the nature of the works, the dilution and settlement of impacts, including silt, prior to reaching the marine 2000 sites in Dublin Bay and the significant instream distance between the proposed project and the SAC.

No significant effects on Natura 2000 sites are likely. A Natura Impact Statement is not required.

FINDING OF NO SIGNIFICANT EFFECTS REPORT

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| Details of project | Appropriate Assessment Screening for the on the Slope Remediation Project at Coghlanstown, Ballymore Eustace, Co. Kildare. |
| Name and Location of the NATURA 2000 sites within 15km. | Red Bog SAC 8.5km Wicklow Mountains SAC (Hydrological link) 10.0km Mouds Bog SAC 13.7km Pollardstown Fen SAC 14.2km South Dublin Bay SAC (hydrological link) 34.4km North Dublin Bay SAC (hydrological link) 38.9km Rockabill to Dalkey SAC (hydrological link) 37.2km Poulaphouca Reservoir SPA (hydrological link) 3.1km Wicklow Mountains SPA (hydrological link) 10.1km South Dublin Bay and River Tolka SPA (hydrological link) 34.2km North Bull Island SPA (hydrological link) 39.7km |
| Description of the Project | Kildare County Council is proposing a Slope Remediation Project at Coghlanstown, Ballymore Eustace, Co. Kildare due significant erosion of the toe of the slope by the River Liffey that has caused land slippage. |
| Is the Project directly connected with the management of the NATURA 2000 site? | No |
| Details of any other projects or plans that together with this project could affect the NATURA 2000 site | None |
| The assessment of significant effects | |
| Describe how the project is likely to affect the NATURA 2000 site | No significant effects are likely. |
| Response to consultation | N/A |
| Data collected to carry out the assessment | Site Visit and Supporting NPWS data. |
| Who carried out the assessment | Altemar Ltd. |
| Sources of data | NPWS website, standard data form, conservation objectives data, field surveys of the site and references outlined in the AA Screening Report. |
| Explain why the effects are not considered significant | Deemed to be not a significant effect due to the nature of the works and the distance of the proposed works to the nearest NATURA 2000 site with a downstream hydrological connection (34km direct and 70km via the course of the River Liffey.) |
| Level of assessment completed | Stage 1 Screening |
| Overall conclusions | |
| <p>No significant impact on NATURA 2000 sites or site specific conservation objectives are likely. A Natura Impact Statement is not required.</p> | |

DATA USED FOR THE AA SCREENING ASSESSMENT

NPWS site synopses and conservation objectives of sites within 15km and sites with a hydrological connection were examined. The most recent SAC and SPA boundary shapefiles were downloaded and overlaid on Bing road map and satellite imagery. A site visit was carried out including survey to determine if the site contained possible threats to a NATURA 2000 site.

REFERENCES

The following references were used in the preparation of this AA screening report.

1. Department of Environment Heritage and Local Government Circular NPW 1/10 and PSSP 2/10 on Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities March 2010.
2. Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities, Department of the Environment, Heritage and Local Government 2009; http://www.npws.ie/publications/archive/NPWS_2009_AA_Guidance.pdf
3. Managing NATURA 2000 Sites: the provisions of Article 6 of the Habitats Directive 92/43/EEC, European Commission 2000; http://ec.europa.eu/environment/nature/Natura2000/management/docs/art6/provision_of_art6_en.pdf
4. Assessment of Plans and Projects Significantly Affecting NATURA 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC; http://ec.europa.eu/environment/nature/Natura2000management/docs/art6/Natura_2000_assess_en.pdf
5. Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission; http://ec.europa.eu/environment/nature/Natura2000/management/docs/art6/guidance_art6_4_en.pdf
6. Guidance document on the implementation of the birds and habitats directive in estuaries and coastal zones with particular attention to port development and dredging; http://ec.europa.eu/environment/nature/Natura2000/management/docs/guidance_doc.pdf
7. The Status of EU Protected Habitats and Species in Ireland. http://www.npws.ie/publications/euconservationstatus/NPWS_2007_Conservation_Status_Report.pdf
8. NPWS (2018) Conservation objectives for Poulaphouca Reservoir SPA [004063]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht.
9. NPWS (2017) Conservation Objectives: Wicklow Mountains SAC 002122. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.