An Bord Pleanála Oral Hearing

Córas Iompair Éireann/Iarnród Éireann

Dublin to Cork Railway Line Level Crossings

Brief of Evidence

Natura Impact Statement

Dr Susie Coyle

Cork Line Level Crossings Oral Hearing
Brief of Evidence of Dr Susie Coyle
Natura Impact Statement

1. QUALIFICATIONS AND ROLE IN THE PROPOSED PROJECT

1 My name is Susie Coyle. I am an Associate Director in Jacobs. I hold a Bachelor of Science (Hons) degree in Aquatic Bioscience from the University of Glasgow (2001) and a Doctor of Philosophy degree in the inheritance of body armour and risk taking behaviour in a freshwater fish from the University of Glasgow (2007). I am a Chartered Biologist with the Royal Society of Biology (since 2014). I am a full member of the Chartered Institute of Ecology and Environmental Management (since 2014) and a member of the Institute of Fisheries Management (since 2007). I have been a Committee member for the Chartered Institute of Ecology and Environmental Management Irish Branch since 2019.

2 I confirm that I have 15 years' consultancy experience managing ecological survey and assessment contracts as part of Environmental Impact Assessment Directive and Habitats Directive assessment processes. One of my primary roles is checking and reviewing Preliminary Impact Appraisal Reports, Environmental Impact Assessment Reports, Appropriate Assessment Screening Reports and Natura Impact Statements. I also coordinate the delivery of all ecological components of projects in Ireland and the UK. I have undertaken ecological surveys for multiple species to inform impact assessment. I have inputted to biodiversity chapters of Environmental Impact Assessment Reports, Appropriate Assessment Screening Reports and Natura Impact Statements for a range of projects. I have extensive field survey skills and technical knowledge and have held several personal licenses for freshwater pearl mussel and great crested newt. I am or have been a named agent on protected species licences for bats, kingfisher, badger, otter and red squirrel. This Statement reflects the assessment prepared in the Natura Impact Statement report.

3 Section 42A of the 2001 Act (as amended) addresses co-ordinated assessment. The 2001 Act provides for the carrying out of an EIA in respect of an application of a railway order and the Board is required where appropriate to co-ordinate the assessment with any assessment under the Habitat or Birds Directive.

4 I can confirm that the Natura Impact Statement, takes into account the available results of other relevant assessments, including the Environmental Impact Assessment Report, under European Union or national legislation with a view to avoiding duplication of assessments.

5 I have been involved in the Project since 2019 and have advised Iarnród Éireann on European site constraints since the Preliminary Design stage of the Project which considered alternative options for the proposed access routes at each level crossing location and I have carried out field surveys for the proposed Project.

6 The Natura Impact Statement was prepared with the benefit of inputs from a number of biodiversity specialists, including Corey Cannon, Anthony Robb and Dr Peter Gilchrist.

7 I confirm that this statement of evidence addresses the potential impacts on European site in the context of the screening of and/ or Appropriate Assessment [AA] to be carried out by An Bord Pleanála in respect of the Project.

2. OVERVIEW OF THE ISSUES IDENTIFIED IN THE NIS

Summary

8 Taking consideration of the Conservation Objectives of the European sites within the Zone of Influence, the nature, scale and location of the proposed Project, using the best scientific knowledge and with the application of the precautionary principle, it was determined that there was potential for Likely Significant Effects on a number of Qualifying Interests in two European sites. These sites were the Blackwater River (Cork/Waterford) SAC and Kilcolman Bog SPA. The Qualifying Interest species of the SAC were Water courses of plain to montane levels, Freshwater Pearl Mussel, Atlantic salmon, Otter, White-clawed Crayfish, Sea lamprey, River lamprey and Brook lamprey. The Qualifying Interest species of the SPA are Whooper Swan, Teal, Shoveler and, wetland and waterbirds.

9 Likely Significant Effects were identified on the two European Sites and their respective Qualifying Interest species, as presented above, that cannot be ruled out. In the absence of more detailed information and the requirement of mitigation measures for potential pollution and disturbance effects, the Blackwater River (Cork/Waterford) SAC and Kilcolman Bog SPA screened in for Appropriate Assessment. Therefore, progression to the next stage of the Appropriate Assessment process was required to allow for a more detailed examination of the implications of the proposed Project for the two European sites, in light of their conservation objectives.

10 The NIS examined in detail all aspects of the proposed Project with the potential to result in significant effects. The potential for adverse effects arising from the proposed Project on the integrity of Blackwater River (Cork/Waterford) SAC and Kilcolman Bog SPA in light of the site's conservation objectives, were examined.

11 In the absence of mitigation, it is likely that construction impacts i.e. pollution impacts, on Annex I QI habitat (Water courses of plain to montane levels) and on Annex II species (Freshwater Pearl Mussel, Atlantic salmon, Otter, White-clawed Crayfish, Sea lamprey, River lamprey and Brook lamprey), of the proposed project would undermine the conservation objectives and therefore the favourable conservation condition of the site. With the implementation of mitigation measures including best practice measures for pollution control, timing constraints to avoid sensitive periods for salmonids and monitoring by an Ecological Clerk of Works, the potential for adverse effects on site integrity to arise as a result of the proposed Project by negatively impacting on the conservation objective targets for these species (e.g. distribution, population structure and water quality) can be excluded.

12 In the absence of mitigation, it is likely that construction impacts i.e. disturbance to Whooper Swan, of the proposed project would undermine the conservation objectives and therefore the favourable conservation condition of the site. With the implementation of mitigation measures including timing of works to avoid the period when Whooper Swan may be present (October to March inclusive), retention of existing vegetation, screening where needed and the presence of an Ecological Clerk of Works to monitor and advice on works, the potential for significant effects to Whooper Swan as result of disturbance (visual) during construction of the proposed Project can be ruled out. The potential for adverse effects on site integrity to arise as a result of the proposed Project by negatively impacting on the conservation objective targets for the species (e.g. population trend and distribution) can therefore be excluded.

Screening for Appropriate Assessment

13 Articles 6(3) and 6(4) of the Habitats Directive (92/43/EEC) set out the decision-making tests for plans and projects likely to affect European sites. Article 6(3) establishes the requirement for Appropriate Assessment (AA). The Habitats Directive has been transposed into Irish law by the Planning and

Development Act 2000 (as amended) and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011).

14 The first step of the Appropriate Assessment process is to carry out a screening to establish whether, in relation to a particular plan or project, there is potential for Likely Significant Effect (LSEs) to any European site(s). Screening for Appropriate Assessment, also known as the Test of Likely Significant Effects, is the identification of the Likely Significant Effects upon a European site from a project or plan, either alone or in-combination with other projects or plans, in light of the site's conservation objectives.

15 The source-pathway-receptor model was used to identify the potential Zone of Influence ("ZoI") of the project informed by desk based review, consultation and field surveys. The determination of a ZoI for a project should be identified on a case by case basis as there may be an effect on European sites that are at a distance from the works. Considerations key in determining the potential ZoI include; ecological features within and in proximity to the proposed works, migratory/mobile species of the area, construction/operational activities that may cause a significant effect and linkages to European sites or sensitive habitats connected to those sites.

16 Screening to establish whether, in relation to a particular plan or project, there is potential for Likely Significant Effect (LSEs) to any European site(s) was carried out. In the context of the Precautionary Principle "Likely" means that an effect is 'likely' to occur where it cannot be conclusively demonstrated that said effect cannot occur. Where there is a delay or an interruption in achieving a European site's conservation objects a 'likely' effect is considered to be "Significant". Five European sites were considered in the screening for LSE.

17 Given the works outlined as part of the proposed Project and the QI for which these sites are designated, no potential effect pathways with potential for LSEs were identified for three of the five European sites. These were; Ballyhoura Mountains SAC: Designated for several terrestrial habitats. Given that there is no hydrological link or other possible pathway for impacts from the proposed Project, this site has been screened out; Carrigeenamronety Hill SAC: Designated for European dry heaths and Killarney fern there is no pathway for impacts between this site and its QI features and Glen Bog SAC: Designated for alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* there is no pathway by which the proposed Project could have impacts upon this site.

18 The proposed Project is hydrologically connected to the Blackwater River (Cork/Waterford) SAC. Likely Significant Effects have been identified from sediment laden run-off (any oils, cement or pollutants) for Qualifying Interests of the SAC; namely, water courses of Plain to montane levels, Freshwater Pearl Mussel, Atlantic Salmon, Otter, White-clawed Crayfish and Lamprey species directly through reduction in water quality or indirectly via impacts to prey sources (otter). Kilcolman Bog SPA could not be excluded on the basis that there is potential for Likely Significant Effects as a result of human-induced disturbance during construction/operation affecting foraging/ roosting QI bird species.

19 Not-withstanding the distance to the closest site to the Blackwater River (Cork/Waterford) SAC and the low levels of any sediments, given the level of certitude required, together with the exclusions to mitigation, it was established that the proposed Project should progress to more detailed examination of effects on the integrity of the European Sites through Appropriate Assessment (AA) and the preparation of a Natura Impact Statement. In order for AA to comply with the criteria set out in the Habitats Directive.

20 The proposed Project will not impact on any European site. There are no Ramsar sites or Marine Protection Areas (MPAs) within the ZoI of the proposed Project. The closest European site is the Blackwater River (Cork/Waterford) Special Area of Conservation (SAC) located approximately 240m from the proposed crossing at XC219 Buttevant. The crossing at XC219 Buttevant is hydrologically linked to the Blackwater SAC by the Pepperhill River and an unnamed ditch immediately west of this river. This next nearest site

is Kilcolman Bog Special Protection Area (SPA) located approximately 4.3km from XC219 Buttevant. There are several records of Qualifying Interest (QI) bird species within 2km of a number of level crossing sites. Teal was recorded within 2km from Buttevant and Ballycoskery, Shoveler was recorded within 2km from Buttevant and Whooper Swan was recorded within 2km from Shinanagh and Buttevant. No Whooper Swans or any other QI species were recorded during surveys in January or February 2020 at any of the of level crossing sites. Field surveys recorded sixteen Whooper Swans representing 12% of the SPA population (based on the I-WeBS baseline population) approximately 300m north of the proposed crossing alignment at XC219 Buttevant on 3 and 4 March 2020. All birds were recorded foraging in a flooded grassland field north of the Awbeg River. This was the only record of Whooper Swan in close proximity to any of the proposed level crossings sites. Teal and Shoveler were only recorded at Kilcolman Bog SPA.

21 The above two European sites (Blackwater River (Cork/Waterford) SAC and Kilcolman Bog SPA) encompassed all European sites considered to be within the ZoI of the proposed Project.

22 The proposed Project is hydrologically connected to the Blackwater River (Cork/Waterford) SAC. Likely Significant Effects have been identified form sediment laden run-off (any oils, cement or pollutants) for Qualifying Interests of the SAC; namely water courses of Plain to montane levels, Freshwater Pearl Mussel, Atlantic Salmon, Otter, White-clawed Crayfish and Lamprey species directly through reduction in water quality or indirectly via impacts to prey sources (otter). Kilcolman Bog SPA could not be excluded on the basis that there is potential for Likely Significant Effects as a result of human-induced disturbance during construction/ operation affecting foraging/ roosting QI bird species.

Natural Impact Statement: Appropriate Assessment

23 The second step of the Appropriate Assessment process is to determine whether a plan or project could have adverse effects on the conservation objectives and therefore the integrity of a European site, either alone or in-combination with other projects or plans. The best scientific knowledge available at the time is used for the assessment. All aspects of the project with the potential to result in significant effects are assessed. Where adverse effects are identified, mitigation is identified to avoid any potential adverse effects.

24 The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of annexed habitats and annexed species of community interest for which an SAC or SPA has been designated.

25 The Blackwater River (Cork/Waterford) SAC is designated for a number of Annex I habitats and Watercourses of plain to montane levels only was identified as being exposed to potential risk from the proposed Project and thus assessed at this stage. In terms of Annex II species all QI species of the SAC, with the exception of Killarney Fern and Twaite Shad, were identified as potentially at risk. Site specific conservation objectives were available for the assessment as detailed in Table 5.1, Section 5 of the NIS.

26 The only QI of Kilcolman Bog SPA potentially exposed to risk from the proposed Project is the Annex II species, Whooper Swan. Generic conservation objects only are available and the site level status for Whooper Swan has been derived from Kilcolman Bog SPA Natura 2000 site synopsis form and presented in Table 5.2, Section 5 of the NIS. Key conditions supporting favourable conservation status is foraging/roosting sites and stopping/staging sites, and one of the primary threats to key conditions is disturbance.

27 The potential for adverse effects arising from the proposed Project was identified from potential pollution effects during construction on the integrity of Blackwater River (Cork/Waterford) SAC. Generic mitigation

measures in the form of pollution prevention measures will prevent impacts to any of the QI of the SAC and additionally, from specific measures that will be undertaken at Buttevant to protect fish species and White-clawed Crayfish. This will include the presence of an Ecological Clerk of Works ("ECoW") to supervise and advise on all works who will monitor dewatering of watercourses and rescue and remove protected species to a safe location upstream of works. During dewatering, water will be pumped through a silt buster or onto the field to avoid sediment from becoming suspended within the watercourse. Timing restrictions of instream works will apply to avoid the sensitive period for salmonids. Works will be in consultation with Inland Fisheries Ireland. With the implementation of all mitigation as detailed in the NIS and Construction Erosion Management Plan there will be no Adverse Effects on the integrity of this European site.

28 The potential for adverse effects arising from the proposed Project was identified from disturbance during construction on the integrity of Kilcolman Bog SPA. Construction works at CX219 Buttevant level crossing would generate disturbance as a result of machinery operation/ operator movement and during operation of the proposed Project. Specific mitigation measures proposed at Buttevant is that timing of works should be carried out outside the period when Whooper Swans are present in Ireland which is October to March (inclusive). Where this is not possible there should be retention of existing screening vegetation. If it is not possible retain this screening, then artificial screening will be put in place erected in early September and supervised by an ECoW. The screening would remain in place for the duration of works. With the implementation of the above mitigation measures and the mitigation measure set out in full in the NIS, the potential for significant effects to Whooper Swan as result of disturbance (visual) during construction of the proposed Project can be ruled out.

29 An assessment of plans and projects with potential to have in-combination effects was carried out as presented in Section 6 of the NIS. No in-combination effects are predicted.

30 In conclusion, the proposed development, with the implementation of mitigation measures, would not alone or in combination with other plans and projects, with regards to the best scientific knowledge, have an adverse effect on the site integrity of the Blackwater River (Cork/Waterford) SAC and the Kilcolman Bog SPA, in view of their conservation objectives.

3. SUBMISSIONS/OBJECTIONS RECEIVED AND RESPONSES

XC212

Submission: Bernadette Leahy, Michael O Kelly and Margaret McNamara on the issue of Ballycoskery village being situated between two SAC.

31 There are two European sites close to Ballycoskery.

32 One is the Blackwater river special area of conservation which is intersected by streams passing through Ballycoskery, the other is the Ballyhoura Mountains SAC. The Ballyhoura Mountains SAC is home to the Hen Harrier, 20% of whose national population is located in Cork. Whooper Swans are also to be found in the local area.

33 The works make a severe negative impact on the landscape and the natural environment of Ballyhea Village at Ballycoskery. It is close to the SAC area of the Blackwater Valley and to the SAC Ballyhoura Mountains. The massive scale proposed development would constitute a gross intrusion on this landscape.

Response

34 Both the EIAR and NIS fully considered this matter, and it was concluded that there would be no significant effect. The Natura Impact Statement for the proposed Project provides a full assessment of any Special Area of Conservation and/or Special Protection Area that screened in for Appropriate Assessment and this includes Blackwater (Cork/Waterford) SAC of which the Blackwater Valley is included. Ballyhoura Mountains SAC was screened out of the assessment due to there being no hydrological link between the proposed Project and the SAC. There is no suitable habitat to support Hen harrier within or in proximity to Ballycoskery and the species is not a Qualifying Interest of this SAC.

35 The nearest SPA where Whooper Swan is a Qualifying Interest species is Kilcolman Bog SPA which is approximately 7km to the southeast. Desk based assessment identified the presence of Whooper Swan in the area. Consultation with National Parks and Wildlife Services (NPWS) on the scope of Wintering Bird surveys was undertaken in November and December 2019. NPWS indicated that the current state of knowledge regarding Whooper Swan was not sufficient to rule out impacts at rail crossings (particularly at XC219 Buttevant and XC215 Shinanagh) and it was agreed that Wintering Bird surveys were required to inform the NIS. Surveys were undertaken January – March 2020. No Whooper Swans or any other qualifying interest species were recorded during surveys in January or February 2020 at any of the of level crossing sites. Field surveys recorded sixteen Whooper Swans representing 12% of the SPA population (based on the I-WeBS baseline population) approximately 300m north of the proposed crossing alignment at XC219 Buttevant on 3 and 4 March 2020. All birds were recorded foraging in a flooded grassland field north of the Awbeg. This was the only record of Whooper Swan in close proximity to any of the proposed level crossings sites.

36 The conclusion of the NIS was that there would be no adverse effects on site integrity for the Blackwater River (Cork/Waterford) SAC and Kilcolman Bog SPA with the implementation of mitigation measures (see Section 5.3 and proposed mitigation measures in Section 5.3.8 of the NIS).

37 The massive scale proposed development is not strictly a biodiversity issue this is a **LANDSCAPE** issue.

XC219

Submission: Cork County Council and Colm Moore

38 In recognition of the presence of otters, and potential for lampreys and white clay crayfish [sic], the proposed culverts should be redesigned to protect and enhance local biodiversity via arched culverts with mammal ledges as per National Road Authority Guidelines for the Crossing of Watercourse During Construction of National Road Schemes.

39 Provide wildlife passes under the railway and each new road and at bridges and culverts.

Response

40 Otters are known to be present within the study area of this crossing location. No Otter resting places (couches or holts) or breeding sites (natal dens) were identified during the surveys. However, there is suitable, although suboptimal, habitat at this location to provide suitable resting habitat for Otter.

41 Baseline surveys have been undertaken throughout the study area to identify the presence of specie of conservation interest. These findings, in conjunction with consultation with statutory consultees, informed the design. Consultation will continue to be engaged during detailed design and construction and where deemed appropriate wildlife passes can be incorporated into the final design.

42 Consultation was undertaken with Inland Fisheries Ireland (IFI) which informed culvert design. IFI will continue to be engaged during detailed design and construction.

43 The conclusion of the Natura Impact Statement was that with the mitigation measures presented in Section 5.3 of the report there would be no adverse effects on the integrity of the Blackwater River (Cork/Waterford) SAC, either alone or in-combination with other plans or projects in light of the site's conservation objectives.

Generic

Submission: Comment No1

44 Blackwater River (Cork/Waterford) Special Area of Conservation: Three crossings are hydrologically connected to the Blackwater River SAC with potential for surface water related impacts to the SAC associated with works. (Crossing at XC219 Buttevant; Crossing at XC212 Ballycoskery; Crossing at XC209 Ballyhay). Mitigation is proposed to deal with such impacts within the NIS. It is recommended that these mitigation measures are incorporated into the Construction Environmental Management Plan and are adhered to in full.

Response

45 Noted. Control and mitigation measures are outlined in Appendix 1I, in Volume 5 of 5 of the EIAR and Section 5.3 of the Natura Impact Statement and the Construction Environmental Management Plan and will be adhered to in full.

Generic

Submission: Comment No2

46 Kilcolman Bog Special Protection Area: Suitable supporting habitat counts for Whooper Swan, an SCI for site, was recorded adjacent to the XC219 Buttevant site. Works cannot take place outside the wintering period, therefore mitigation in the form of screening is proposed within the NIS. It is recommended that these mitigation measures are incorporated into the final Construction Environmental Management Plan and are adhered to in full.

Response

47 Noted. Mitigation measures for Whooper Swan as detailed in the NIS in Section 5.4.1 will be incorporated into the final Construction Environmental Management Plan and will be adhered to in full.

Generic

Submission: Comment No1

48 Include conditions relating to the continued protection of the natural heritage of the area, with particular regard to the Blackwater River (Cork/Waterford) Special Area of Conservation, and the Kilcolman Bog Special Protection Area and specify full and strict adherence to the proposed mitigation as set out in the submitted Natura Impact Statement and shall be incorporated into the Construction Environmental Management Plan and all related project management plans and method statements.

Response

49 Noted. Mitigation measures as set out in the EIAR and NIS will be incorporated into the final Construction Environmental Management Plan and all relevant documents and will be adhered to in full.

4. CONCLUSION

50 In relation to the issues raised in submissions and observations, eight submissions specifically related to the Natura Impact Statement raised concerns about the potential effects as a result of the project. These relate to:

- The closeness of two Special Area of Conservation (SAC) to Ballycoskery:
- Culvert design and impacts to otter in particular; and
- Implementation of mitigation measures in the Construction Environmental Management Plan.

51 Irish Rail's response to these general issues may be summarised as follows:

- Section 5 of the NIS presents the information required to inform AA and includes the European sites at risk and mitigation measures that will be implemented such that there will not be any adverse effects on site integrity.
- All mitigation measures will be incorporated into the Construction Environmental Management Plan and implemented in full.

52 The conclusion of the NIS was "*Based on the best available scientific information and professional judgement, and on the full application of the mitigation as described in Section 5.3.7, it is considered that there will be no adverse effects on the integrity of the Blackwater River (Cork/Waterford) SAC and Kilcolman Bog SPA, either alone or in-combination with the other plans and projects in light of the site's conservation objectives."*

53 In this Brief of Evidence, in response to the submissions received, Irish Rail's specialist, Dr Susie Coyle, has considered the potential impacts again. Following this review, she has concluded that the impacts identified were appropriate and the measures identified in the CEMP will address the concerns raised by respondents.