An Bord Pleanála

Inspector's Report 310588-21

Development	Demolish existing pig houses, associated buildings & slurry stores & construct 3 fattening pig houses, 1 weaner pig house, associated slurry tanks, a covered pig loading race, a feed mixing shed, a feed silo shed with equipment rooms, office, canteen, showers & WC, a wastewater treatment system & associated site works.
Location	Caherbrack, Ballynamult, Co. Waterford.
Planning Authority	Waterford City & County Council
Planning Authority Reg. Ref.	20/393
Applicant(s)	Fenor Pig Farms Limited
Type of Application	Permission
Planning Authority Decision	Grant permission
Type of Appeal	Third Party v. Decision

Appellant(s)	(1) Concerned residents of Touraneena & Ballinamult (2) Wild Ireland Defence CLG (3) Noel & Kathleen Reynolds
Observer(s)	Gabriela Briner An Taisce (prescribed body)
Date of Site Inspection	10th September 2021
Inspector	Louise Treacy

1.0 Site Location and Description

1.1. The subject site has a stated area of 3.73 ha and is located at Caherbrack Pig Farm, Caherbrack, Ballynamult, Co. Waterford. The site is located c. 5.2 km south-west of Ballymacarbry, c. 1 km north-west of Ballynamult and c. 1.2 km east of the Tipperary County boundary. The lands in the vicinity of the subject site are predominantly rural and agricultural in nature, with pockets of commercial forestry and sporadic one-off rural dwellings. The western slopes of the Monavullagh Mountains are located approx. 4.5 km to the east of the site and the eastern slopes of the Knockmealdown Mountains are located approx. 4 km to the west.

1.2. The site is accessed directly from local road L5074 via regional road R671 which runs in a generally north-south direction to the west of the application site. Caherbrack Bridge forms part of the local access road to the pig farm, proximate to the junction with the R671. The bridge extends over the Drumgorey Stream which extends in a north-south direction along the eastern side of the R671 at a set-back of between approx. 58 – 73 m from the site boundary. Caherbrack House (a Protected Structure), a 2-storey farmhouse and associated agricultural buildings, adjoins the north-eastern site boundary adjacent to the local access road.

1.3. The existing pig farm buildings have a stated floor area of 7,027 m^2 and are generally clustered in the central area of the site at a setback of approx. 172 m from the local access road. The overall condition of the existing buildings is poor. Uncovered sludge tanks and a lagoon are located adjacent to the western site boundary, while a storage shed/barn, a 30 m wind turbine and associated generator room are located adjacent to the eastern site boundary.

1.4. A pig farm has operated on the subject site for approx. 40 years and is currently licensed by the EPA (IPPC Ref. No. P0414-01). Carrigroe Pig Farm is located approx. 1.25 km to the north-east of the site and is under the same ownership as the current appeal site. The EPA licence is for a 120-sow integrated pig unit (sows and progeny to slaughter) and covers the subject site at Caherbrack where 1200 breading sows and weaners are accommodated and the Carrigroe pig farm, where 6,300 fattening pigs are accommodated.

2.0 **Proposed Development**

2.1. The proposed development will consist of the demolition of the existing pig houses, associated buildings & slurry stores, and the construction of 3 no. fattening pig houses, 1 no. weaner pig house, associated slurry tanks, a covered pig loading race, a feed mixing shed, a feed silo shed with equipment rooms, office, canteen, showers & WC, a wastewater treatment system & associated site works.

2.2. The proposed development has a combined building footprint of 8,525 m^2. The layout of the proposed development within the site generally reflects that of the existing buildings. Each of the three pig fattening houses will measure 105 m x 16.5 m and will be 4.6 m high, with under floor scrapers to remove slurry. The weaner house is 105 m x 2.47 m x 5.3 m high, with under slat scrapers to remove slurry. The existing open air bank lagoon and overground circular tank adjacent to the western site boundary will be decommissioned and replaced with a bunded, mass concrete tank with leak detection facilities for the storage of pig manure. The scraped passages from the fattening and weaner houses will discharge to this tank. A storm water attenuation tank is also proposed adjacent to the western site boundary.

2.3. The new pig houses will be constructed with pre-cast concrete panels with insulated core construction above ground level and mass concrete below. The exhaust chimneys will extend approx. 1 m above roof apex height and in all the houses, the roofing material will be dark green in colour.

2.4. A roofed pig race and a satellite feeding room are proposed between the 2 no. southern-most fattening houses and have overall heights of 4.3 m and 3.7 m respectively. A feed silo and services building of 13 m in height is proposed adjacent to the fattening and weaner houses. It will accommodate 8 no. feed silos in the feed silo room, a generator room, a panel room, a store for parts, a showering area, an office and a canteen. A total of 8 no. car parking space are proposed adjacent to this building.

2.5. The existing barn, wind turbine, the wind turbine generator room and well pump house which adjoin the eastern site boundary will be retained. A liquid feed tank storage area and a wastewater treatment system are proposed adjacent this boundary, between the well pump house and the generator room.

3.0 Planning Authority Decision

3.1. Decision

3.1.1. Notification of the Decision to Grant Permission subject to 16 no. conditions issued on 25th May 2021.

3.1.2. Condition no. 3 requires the payment of a special financial contribution in the amount of €13,930 in respect of required improvements to road infrastructure (a section of local road L5074).

3.1.3. Condition no. 4 (b) requires the developer to submit and agree in writing with the Planning Authority, a schedule of mitigation measures and monitoring commitments as identified in the EIAR and EIAR addendum, and details of a time schedule for the implementation of the mitigation measures and associated monitoring.

3.1.4. Condition no. 4 (c) requires the operator to: (i) carry out annual analysis of on-site groundwater boreholes for E. coli, conductivity, ammonia, orthophosphate and nitrates; (ii) stormwater to be monitored quarterly for ammonia, orthophosphate, nitrates, suspended solids and COD; (iii) Drumgorey Stream to be monitored quarterly at 5 sites for ammonia, nitrates and orthophosphate; (iv) annual biological surveys to be carried out at 7 sites surveyed in the EIAR, with the stream sites to be monitored quarterly for ammonia, nitrates and orthophosphate.

3.1.5. Condition no. 6 (a) requires the permitted development to be operated in strict accordance with the requirements of the European Union (Good Agricultural Practice for the Protection of Water) Regulations, 2017.

3.1.6. Condition no. 9 (a) requires a Construction and Demolition Waste Management Plan (CDWMP) to be agreed in writing with the Planning Authority prior to the commencement of development.

3.1.7. Condition no. 9 (b) requires the developer to monitor all ground works associated with the demolition and removal of all slurry storage tanks and lagoons and where adjoining soils/lands are found to be contaminated, all such material shall be removed from site to a licensed disposal facility.

3.1.8. Condition no. 9 (c) requires the CDWMP to include a site drainage management plan incorporating a detailed silt management plan, a pollution prevention plan and a detailed water quality monitoring programme for the construction period.

3.1.9. Condition no. 11 requires all oxidisable and galvanised surfaces of the development to be painted a dark green matt colour and to be maintained so in perpetuity.

3.1.10. Condition no. 13 requires the developer to submit full details of the petrol/oil interceptors for the written agreement of the Planning Authority prior to the commencement of development.

3.1.11. Condition no. 14 requires archaeological monitoring of demolition, site clearance and ground works and a programme of pre-development archaeological testing in the area of proposed groundworks in advance of any construction.

3.1.12. Condition no. 15 requires the following details to be submitted and agreed in writing with the Planning Authority prior to the commencement of development: (a) details of a monitoring programme to be implemented regarding the structure of Caherbrack Bridge for the duration of the construction period, (b) details of measures to protect the parapet of the bridge from accidental damage during construction works, (c) detailed method statements for the repair of rubblestone parapet walls in the case of accidental damage.

3.1.13. Condition no. 16 requires the site access road (c. 170 m) to be strengthened with concrete and realigned to provide a 4 m buffer to the outbuildings associated with the Protected Structure (Caherbrack House) to the immediate north of the access road. The buffer shall be established with a fence and no vehicular or machinery encroachment shall occur within this 4 m buffer.

3.1.14. All other conditions are generally standard in nature.

3.2. Planning Authority Reports (13th August 2020 and 24th May 2021)

3.2.1. Planning Reports

3.2.2. Following the initial assessment of the planning application, the Planning Officer considered that Further Information was required in relation to 9 no. items as summarised below:

(1) A revised NIS which assesses the potential of the proposed development, including spread-lands, to impact on the conservation objective targets as set out for both the River Blackwater and Lower River Suir SAC. The revised NIS should include a map of the spread-lands and detail mitigation measures where risk to water quality is identified in Finisk 020 or Nier River and apply the appropriate test on determining potential for adverse impacts on the integrity of the Natura 2000 network.

(2) IFI concerns regarding the significant land spreading of pig slurry associated with the development and the potential impact on surface water quality in the receiving catchments. The applicant is requested to submit a full quantification of the areas of land required for land spread relative to the areas of land stated to be available and a robust management plan to ensure a supply of appropriate and available lands for disposal of effluent by land spreading.

(3) Total traffic movements during construction and operation, nature of all vehicle types and associated tonnages, timescale of construction works and associated traffic data, traffic associated with stocking and establishment of the facility and for 1 no. full operational year, traffic management proposals to ensure no conflicts of traffic movements.

(4) Demonstration that the required sightlines can be achieved at the site access.

(5) Proposals for the provision of a bound surface (such as tarmacadam or concrete) on the site access road.

(6) An Architectural Heritage Impact Assessment (AHIA) and updated EIAR which considers the impact of the development on Caherbrack House (Protected Structure), Caherbrack Bridge and a limekiln to the immediate north-east of the works.

(7) Proposals for dust, odour and noise monitoring.

(8) The EIAR does not include robust discussion around BATNEEC. The applicant is requested to fully consider the potential for further mitigation having regard to potential mechanical solutions.

(9) Clarification of the methodology used to undertake the site suitability assessment for the proposed packaged waste-water treatment system with soil polishing filter.

3.2.3. The applicant submitted a Response to the Request for Further Information on 19th March 2021 as summarised below.

3.2.4. **Item No. 1**: An NIS addendum was submitted which concludes that: (1) there are no significant cumulative effects and no predicted in-combination effects from the run-off of slurry on spread lands adversely affecting water quality and associated qualifying interest species in the catchments of the River Suir and River Blackwater SACs (Lamprey, Salmon, Twaite Shad, Otter and Crayfish); (2) there is no significant impact on air throughout the study area due to the spreading of pig manure from the proposed development; (3) as a result of the proposed mitigation measures, the proposed development will not cause adverse impacts to Blackwater River (Cork/Waterford) SAC, Lower River Suir SAC, Nier Valley Woodlands SAC, Comeragh Mountains SAC or Dungarvan Harbour SPA.

3.2.5. **Item No. 2:** The applicant submits that there is adequate capacity in the receiving environment for the pig manure arising from the proposed development with reference to supporting information contained within the EIAR and EIAR addendum.

3.2.6. **Item No. 3:** Traffic data was submitted relating to the construction phase of the project, including hourly, daily, monthly, and annual traffic movements. Peak and worst-case scenario events were considered. Daily traffic for the operational pig farm was also provided, including daily average and peak traffic. Seasonal variations due to pig slurry tanker traffic movements and worst-case scenario events were considered. Traffic management measures for the construction and operational phases of the proposed development are identified.

3.2.7. **Item No. 4:** Drawings have been submitted demonstrating that a sightline of 55 m is achievable in a northerly direction, with a maximum sightline of 35 m achievable in a southerly direction. It is also proposed to provide a concrete surface to the entrance splay area. It is noted that the proposed entrance enhancements and anticipated reduction in traffic volumes of c. 35 % will result in improved traffic safety on foot of the proposed development. The revised arrangements were discussed in advance with the Planning Authority Roads Department.

3.2.8. **Item No. 5:** It is confirmed that a concrete surface will be provided along the entirety of the access road.

3.2.9. **Item No. 6:** An AHIA has been submitted which identifies mitigation measures to be undertaken to address potential impacts on Caherbrack House, Caherbrack Bridge and the limekiln.

3.2.10. **Item No. 7:** Details of proposed dust and particulate, noise and odour monitoring have been submitted. The applicant also notes that, if planning permission is granted, the proposed pig farm must apply and operate under the conditions of an EPA licence.

3.2.11. **Item No. 8:** A list of 30 Best Available Technologies has been submitted with reference to the "Best Available Techniques Reference Document for the Intensive Rearing of Poultry or Pigs" (2017). Each technology is assessed for its applicability to the proposed development and confirmation provided where it is proposed to be implemented on site.

3.2.12. **Item No. 9:** A typographical error was made on the Site Characterisation Report concerning the stated date and time of excavation of the trial holes. A corrected Site Suitability Assessment has been submitted.

3.2.13. The Further Information Response includes an addendum to the EIAR on foot of the proposed scaling back of the Carrigroe Pig Farm (Response Item no. 10) and a response to the public submissions on the application (Response Item no. 11). A Bridge Assessment Report in relation to Caherbrack Bridge is also included. The assessment concludes that the bridge has no defects of significance and that a weight restriction is not necessary.

3.2.14. Having considered the foregoing, Waterford City & County Council determined that the applicant's Further Information Response contained Significant Additional Information and the application was readvertised to the public.

3.2.15. In assessing the applicant's Further Information Response, the Planning Officer considered that, having regard to the submitted EIAR and EIAR addendum, internal reports, prescribed bodies and 3rd party submissions received, the proposed development would not have a significant impact on the environment subject to the identified mitigation measures. As such, it was recommended that planning permission be granted for the proposed development.

3.2.16. **Other Technical Reports**

3.2.17. **Environmental Services:** Considers that: (1) the development will not result in any significant increase in emissions to air, with emissions from land spreading noted to be short-term and limited, (2) noise impacts will be similar to the existing operation, and (3) reduced dust impacts will arise compared with the existing operation.

3.2.18. **Comeragh Area Roads Department (31st July 2020 and 24th May 2021):** The report of 31st July 2020 recommends the following in relation to this appeal case: (1) drawings required to demonstrate available sightlines at entrance to the public road, (2) a special contribution to cover road improvements to take HGV loading on the L5074 should be attached to the value of €13,930.

3.2.19. Following the applicant's Further Information submission, no concerns arose.

3.2.20. **Road Design (11th August 2020 and 24th May 2021):** (1) It is not clear how submitted traffic predictions were arrived at, with further details required of the breakdown of traffic volume calculations; (2) clarification required of surfacing to access roads; (3) the applicant has failed to demonstrate that the required sightlines can be achieved or what sightlines are currently available; (3) during construction, no mud/muck or debris is to be brought out onto the public road.

3.2.21. Following the applicant's Further Information submission, this Department was satisfied their earlier concerns had been addressed.

3.2.22. **Water Services (12th August 2020 and 21st May 2021):** States that: (i) the proposed demolition and construction works mainly pose a threat to surface waters and that proper management will minimise the risk; (ii) the risk to ground waters, public and private water supplies is mainly from the spread lands, with no information provided in relation to same – notes that other legislation deals with this element of the development.

3.2.23. Following the applicant's Further Information submission, appropriate planning conditions are identified in the event planning permission is granted for the proposed development.

3.2.24. **Heritage Officer (11th August 2020):** Recommends that the NIS be revised to assess the potential of the proposed development to impact on the conservation objective targets for the River Blackwater. The NIS should include a map of the

spread lands and detail mitigation measures where risk to water quality is identified in Finisk 020. The appropriate test should be applied for determining the potential for adverse impacts on the integrity of the Natura 2000 network.

3.2.25. **Conservation Officer (13th August 2020 and 20th May 2021):** Further information recommended in relation to: (1) the submission of an Architectural Heritage Impact Assessment to include: (a) – a full description and photographic record of Caherbrack House (exterior) and structures within the curtilage. The report shall include photomontages of the proposed development to assess the possible visual impact on the Protected Structure, (b) - the assessment shall include a full description of Caherbrack Bridge, its condition, details of the possible physical impact of the increased loading on the historic rubblestone bridge during and after the proposed construction works at Caherbrack pig farm and any mitigation measures regarding temporary protection or stabilising works to ensure the protection of this element of the architectural heritage, (c) – the report shall be carried out by an appropriately qualified person with architectural conservation expertise, with engineering input as may be appropriate, (d) – the applicant to liaise with the Conservation Officer of Waterford County Council.

3.2.26. Following the applicant's Further Information submission, appropriate planning conditions were identified in the event planning permission is granted for the proposed development.

3.3. Prescribed Bodies

3.3.1. **Environmental Protection Agency (14th July 2020 and 6th September 2021):** Notes that the applicant's Industrial Emissions Licence may need to be reviewed or amended to accommodate the changes proposed in the planning application. Should a licence review application be submitted, all matters to do with emissions to the environment from the activities proposed, the licence review application documents and EIAR will be considered and assessed by the Agency.

3.3.2. Notes that recipients of organic fertiliser are responsible for the management and use of same in accordance with the applicable regulations (European Union (Good Agricultural Practice for Protection of Waters) Regulations, 2017 and Animal By-Products Regulations, (Regulation (EC) No. 1069/2009)).

3.3.3. **An Taisce:** Submits that: (1) the Good Agricultural Practice Regulations are insufficient for protecting water quality and that the NIS conclusion of no adverse impacts to the Blackwater River SAC with the implementation of mitigation measures is unsubstantiated, (2) ammonia emissions should be assessed against Ireland's legal obligations under the National Emissions Ceiling Directive, and (3) the cumulative impacts of the proposed development and the concurrent pig farm application at Carrigroe should be assessed.

3.3.4. An Taisce made a further observation (dated 5th May 2021) on the applicant's Significant Further Information submission. No new issues were raised.

3.3.5. **Inland Fisheries Ireland (6th May 2021):** Notes that: (1) visible signs of pollution were detected in Drumgorey Stream immediately due west of the Caherbrack site, (2) the integrity of the earthen slurry lagoon and tanks and the potential for surface flow of deleterious materials directly to the watercourse and the gradual leaching of nutrients to the stream are of concern, (2) particular care should be given to the excavation of soils in the environs of the slurry storage facilities as they may require specific treatment/containment or to be exported, depending on the level of slurry contamination which may have accumulated over the timespan of the existing storage structures, (3) IFI site investigations suggest that the attenuation of surface water drainage systems within the proposed development would be beneficial to the receiving environment due to its proximity and elevation from the neighbouring watercourse.

3.4. Third Party Observations

3.4.1. A total of 45 no. third party observations were made on the application by: (1) Robert & Catherine Walton, The Lodge, Touraneena, Ballinamult, Co. Waterford, (2) Keith May & Suzanne Baumann, Keianne Lodge, Boolavounteen, Ballinamult, Co. Waterford, (3) Hannah & Pat O'Connor, Knockmeal, Ballinamult, Co. Waterford, (4) Aoife Fitzpatrick, Knockmeal, Ballinamult, Clonmel, Co. Waterford, (5) Claire & JP Fitzpatrick, Sonas, Knockmeal, Co. Waterford, (6) Kate Fizpatrick, Knockmeal, Ballinamult, Clonmel, Co. Waterford, (7) Gerard and Carmel Myles, Priestown, Ballinamult, Clonmel, Co. Waterford, (8) Seamus & Breda Skehan, Cahernaleague, Ballinamult, Co. Waterford, (9) Aine & Kevin Hickey, Cahernaleague, Ballinamult, Co. Waterford, (10) Siamsa Sliabh gCua Development Group, Ballinamult, Co.

Waterford, (11) Pat and Pauline Ahearne, Kilcooney, Ballinamult, Co. Waterford, (12) Joan Sheehan, Knockmeal, Ballinamult, Co. Waterford, (13) Noel & Kathleen Reynolds, Drumgorey, Co. Waterford, (14) Brendan & Barbara O'Dwyer, Cahernaleague, Ballinamult, Co. Waterford, (15) Eileen O'Dwyer, Cahernaleague, Ballinamult, Co. Waterford, (16) Sean Fitzpatrick, Knockmeal, Ballinamult, Co. Waterford, (17) Mrs. N Windsor Smith, The Dale, Ballinamult, Clonmel, Co. Waterford, (18) Julia & Alan Kiely, Touraneena, Ballinamult, Co. Waterford, (19) Anita Coyne, Ballinamult, Dungarvan, Co. Waterford, (20) Hilda Nicell, Clonegegale, Ballinamult, Co. Waterford, (21) Kathleen and Declan Fitzpatrick, Knockmeal, Ballinamult, Co. Waterford, (22) Michael and Mary O'Sullivan, Knockanaha, Ballymacarbry, Co. Waterford, (23) Owen Reddy, Ballinamult, Co. Waterford, (24) Alana Coyne, Ballinamult, Dungarvan, Co. Waterford, (25) James Lonergan, Boolavonteen, Ballinamult, Co. Waterford, (26) Kay Tobin, Boolavoonteen, Ballinamult, Co. Waterford, (27) Una Mulcahy, Faun House, Knockmeal, Ballinamult, Co. Waterford, (28) Bridget O'Donnell, Boolavonteen, Ballinamult, Co. Waterford, (29) Liam Power, Boolavonteen, Ballinamult, Co. Waterford, (30) John and Fionnuala McGrath, Boolavonteen, Ballinamult, Co. Waterford, (31) Jospeh and Margaret Coffey, Knockmeal, Ballinamult, Co. Waterford, (32) Trevor Power, Ballinagulkee, Ballinamult, Co. Waterford, (33) Noel and Pauline Drohan, Knockaraha, Ballymacarby, Co. Waterford (34) Imelda Guiry, Knockatrelane, Ballymacarbry, Clonmel, Co. Tipperary, (35) Patsy and Phyllis McGrath, Boolavonteen, Ballinamult, Co. Waterford, (36) Eleanor and Sinead McGrath, Boolavonteen, Ballinamult, Co. Waterford, (37) Bernie Organ, Knockaraha, Ballymacarbry, Co. Waterford, (38) Amanda Walsh, Drumgorey, Ballinamult, Co. Waterford, (39) Eamonn and Una Lonergan, Boolavonteen, Ballinamult, Co. Waterford, (40) Darren Golding, Drumgorey, Ballymacarbry, Co. Waterford, (41) Raymond McGrath, McGrath Solicitors, Boolavonteen, Ballinamult, Co. Waterford, (42) Sheila Ryan, Boolavonteen, Ballinamult, Co. Waterford, (43) Sophie Coyne, Priestown, Ballinamult, Dungarvan, Co. Waterford, (44) Majella Geary, Boolavounteen, Ballinamult, Co. Waterford, (45) Noel Reynolds on behalf of the local community, Drumgorey, Ballymacarbry, Co. Waterford.

3.4.2. The points which are raised can be summarised as follows: (1) odour, noise and gas impacts, (2) health impacts, (3) environmental impacts, (4) impact on River

Blackwater SAC, (5) dangerous site access, (6) water contamination, (7) negative impacts on property values, residential amenity, tourism and community facilities, (8) traffic impacts, (9) lack of proper public consultation, (10) flawed EIAR, (11) non-compliance with development plan provisions for the rural community, (12) no air filtration system proposed, (13) excessive scale of development, (14) negative impact on other farming activities in the local area, (15) concerns regarding slurry storage and spreading, (16) negative health and visual impact of windmill structure, (17) project splitting, (18) unsuitable lands identified for slurry spreading area,

3.4.3. 3 no. representations were also made on the application by Cllr. John O'Leary, Cllr. Thomas Phelan and Cllr. John Pratt, all of whom object to the proposed development. The grounds of objection reflect the issues raised by the third-parties as summarised above.

3.4.4. A further 85 no. observations were made on the applicant's Significant Further Information submission from: (1) Darren Golding, Ormonde Cottage, Drumgorey, Ballymacarbry, Co. Waterford, (2) Noel & Bridget O'Malley, Kilmore, Clashmore, Co. Waterford, (3) Amanda Walsh, Ormonde Cottage, Drumgorey, Ballymacarbry, Co. Waterford, (4) Noel Reynolds on behalf of the Local Community, Drumgorey, Ballymacarbry, Co. Waterford, (5) Eamonn & Una Lonergan, Boolavounteen, Clonmel, Co. Waterford, (6) Peter Sweetman on behalf of Wild Ireland Defense CLG, 113 Lower Rathmines Road, Dublin 6, (7) Majella Geary, Boolavounteen, Ballinamult, Co. Waterford, (8) Patsy & Phyllis McGrath, Boolavonteen, Ballinamult, Co. Waterford, (9) Niall & Anne Marie Power, 11 Tournore Park, Abbeyside, Dungarvan, Co. Waterford, (10) Celine Quinn & Family, No. 7 Vicars Avenue, North Boni NSW 2026, Australia, (11) Anita McGrath, Curtiswood, Ballymacarbry, Co. Waterford, (12) Patrick Raymond McGrath, McGrath Solicitors, c/o Phyllis McGrath, Boolavonteen, Ballinamult, Co. Waterford, (13) Bridget O'Donnell, Boolavonteen, Ballinamult, Co. Waterford, (14) James Lonergan, Boolavonteen, Ballinamult, Co. Waterford, (15) Aoife Fitzpatrick, Knockmeal, Ballinamult, Clonmel, Co. Waterford, (16) JP & Claire Fitzpatrick, Sonas, Knockmeal, Co. Waterford, (17) Laura Tobin, Boolavounteen, Ballinamult, Co. Waterford, (18) Una Mulcahy, Farm House, Knockmeal, Ballinamult, Co. Waterford, (19) Berit Walzer, Friedrich-Wilhelm-Strasse 27, D-12103, Berlin, (20) Alexandra Sgier CCFTCanis-Praxis-Dog Rehab HB, A & D. Sgier, Granbergstrask 136, 93 695 Jorn, Sweden, (21) Steffi Bergmann, Benkel 96,

CH-5044 Schlossrued, Switzerland, (22) Kathleen & Declan Fitzpatrick, Knockmeal, Ballinamult, Co. Waterford, (23) Gillian Hennessy c/o Una Mulcahy, Faun House, Knockmeal, Ballinamult, via Clonmel, Co. Waterford, (24) Ber Burke, Touraneena, Ballinamult, Co. Waterford, (25) Ber Burke, Touraneena, Ballinamult, Co. Waterford, (26) Eleanor & Sinead McGrath, Boolavonteen, Ballinamult, Co. Waterford, (27) Chris & Dawn Barham, Ballinamult, Dungarvan, Co. Waterford, (28) Cycling Ireland c/o Kathleen Fitzpatrick, Knockmeal, Ballinamult, Co. Waterford, (29) John & Fionnuala McGrath & Family, Boolavonteen, Ballinamult, Co. Waterford, (30) Gerard & Ann Commins, Doon, Ballinamult, Co. Waterford, (31) Liam Whelan, Lisroe, Cappagh, Modeligo, Co. Waterford, (32) Bozena & Ray Moore, Tinalira, Ballinamult, Clonmel, Co. Waterford, (33) Liz Foley, Dromore, Aglish, Cappoquin, Co. Waterford, (34) Tom Phelan & Family, Toureagh, Ballymacarbry, Co. Waterford, (35) Noel & Kathleen Reynolds, Drumgorey, Ballymacarbry, Co. Waterford, (36) Patrick Walsh, Croughateskin, Ballymacarbry, Co. Waterford, (37) Pat & Hannah O'Connor, Knockmeal, Ballinamult, Co. Waterford, (38) Pauline Cliffe & Patrick Ahearne, Cahernaleague, Ballinamult, Co. Waterford, (39) Eithne & John O'Shea, Cahernaleague, Ballinamult, Co. Waterford, (40) Seamus & Breda Skehan, Cahernaleague, Ballinamult, Co. Waterford, (41) Ruth & Paul Deegan, Ballymacarbry Upper, Co. Waterford, (42) Eileen O'Dwyer, Ballinamult, Co. Waterford, (43) Trevor Power, Ballinagulkee, Ballinamult, Co. Waterford, (44) Brendan & Tara McGourty, Cahernaleague, Ballinamult, Co. Waterford, (45) Mairead McCabe, Boolanvounteen, Ballinamult, Co. Waterford, (46) Marc Ó Cathasaigh, Tramore, Co. Waterford, (47) Bernie Organ, Knockaraha, Ballymacarbry, Co. Waterford, (48) Anita Buckley, Graigue, Aglish, Cappoquin, Co. Waterford, (49) Kay Tobin, Boolavounteen, Ballinamult, Co. Waterford, (50) Brendan & Barbara O'Dwyer, Ballinamult, Co. Waterford, (51) Liam Power, Boolavounteen, Ballinamult, Co. Waterford, (52) Sinead & Michael Desmond, Tooreach, Ballymacarbry, Co. Waterford, (53) Rachel Windsor Smith, The Dale, Ballinamult, Co. Waterford, (54) John J. Cahill, Cahernaleague, Ballinamult, Co. Waterford, (55) Ellen Shapiro, Tooraneena, Ballinamult, Co. Waterford, (56) Suzanne Baumann, Keianne Lodge, Boolavounteen, Ballinamult, Co. Waterford, (57) Joseph & Margaret Coffey, 32 Silversprings, Dungarvan, Co. Waterford, (58) Anna & Danny Thompson, Touraneena, Ballinamult, Co. Waterford, (59) Gerard & Carmel Myles, Priestown, Ballinamult, Co. Waterford, (60) Terrie Burke, Touraneena, Ballinamult, Co.

Waterford, (61) Veronica & Johnny Troy, 5 Newstreet, Lismore, Co. Waterford, (62) TJ & Sinead de Faoite, Cahernaleague, Ballinamult, Co. Waterford, (63) Sheila Ryan, Boolavonteen, Ballinamult, Co. Waterford, (64) Gabriela Briner, Caherbrack, Ballinamult, Co. Waterford (65) Hilda Nicell, Clonegegale, Ballinamult, Co. Waterford, (66) Gerard Connors, Béal na mMolt, Sliabh gCua, Co. Waterford, (67) Conor King, 8 Marymount, Pearse Road, Sligo, (68) N. Windsor Smith, The Dale, Ballinamult, Co. Waterford, (69) Michael F. Ryan, c/o Hilda Nicell, Clongegale, Ballinamult, Co. Waterford, (70) Hilda Nicell, Clongegale, Ballinamult, Co. Waterford, C. F. Bryan, 6 Bannawell Street, Tavistock, England, (71) Mrs. B. Windsor, Sarnia, Power's Cross, Touraneena, Co. Waterford, (72) B. Windsor, Sarnia, Power's Cross, Touraneena, Co. Waterford, (73) Patrick O'Connor, Tarmon Road, Ballindrimley, Castlerea, Co. Roscommon, (74) Kate Fitzpatrick, Knockmeal, Ballinamult, Co. Waterford, (75) Clodagh Beresford Dunne, Colligan Falls, Dungarvan, Co. Waterford, (76) Sean Fitzpatrick, Knockmeal, Ballinamult, Co. Waterford, (77) Kenneth & Kat Walsh, Clovelly, Fanisk, Co. Cork, (78) Tony Moloney, Fanisk, Killeagh, Co. Cork, (79) Beverley Bradnick, River View House, Colligan Bridge, Dungarvan, Co. Waterford, (80) Sarah O'Callaghan, Aisling, Ballinamult, Co. Waterford, (81) Sarah McCabe, Knockaun, Ballinamult, Co. Waterford, (82) Laura Johnson, Knockmeal, Ballinamult, Co. Waterford, (83) Valerie Power, 6 Strandside, Abbeyside, Dungarvan, Co. Waterford, (84) Siamsa Sliabh gCua Development Group, Ballinamult, Co. Waterford, (85) The Concerned Residents of Ballinamult & Touraneena, c/o JP Fitzpatrick, Knockmeal, Ballinamult, Co. Waterford.

3.4.5. Representations were also made by Cllr. Conor D. McGuinness, Cllr. John O'Leary, Cllr. Seanie Power, Cllr. James Tobin, Cllr. Thomas Phelan and Cllr. John Pratt. No new issues were raised.

4.0 Planning History

4.1. **Planning Authority Reg. Ref. 13/465:** Planning permission granted on 11th April 2014 for the erection of 1 no. 150 kW wind turbine (hub height 30 m), the construction of a site access track and all ancillary works.

4.2. **Planning Authority Reg. Ref. 99/951:** Planning permission granted on 6th September 2001 for the retention and extension of pig units.

4.3. Other Relevant Planning History

4.3.1. **Planning Authority Reg. 20/394; ABP Reg. Ref. 310586-21:** Planning permission sought for the demolition of existing pig houses, associated buildings and slurry stores and the construction of a 960 sow integrated pig farm (birth to slaughter) consisting of 7 pig houses, associated slurry tanks, a covered pig loading race, a feed mixing shed, a feed mill and workshop building, an electricity control building, a building with office, canteen, showers and WC, a wastewater treatment system and associated site works.

4.3.2. This site is located c. 1.25 km to the north-east of the current appeal site and is under the same ownership. Waterford City and County Council issued Notification of the Decision to Grant Permission for this development on 25th May 2021. This decision is also subject to an appeal before the Board.

5.0 Policy and Context

5.1. FoodWise 2025

5.1.1. Launched in 2015 and succeeding Food Harvest 2020, Foodwise 2025 sets out a 10-year plan for the agri-food sector. It identifies growth opportunities for the Irish agri-food and fisheries sector that are expected to arise due to significant population increases and greater access to international markets. It identifies the following growth projections for the industry over the next ten years including: 85% increase in exports to €19 billion; 70% increase in value added to €13 billion; 65% increase in primary production to €10 billion, and the creation of 23,000 additional jobs all along the supply chain from producer level to high-end value-added product development.

5.2. Climate Action Plan, 2019

5.2.1. The Climate Action Plan sets out a framework to guide the country towards decarbonisation. The long-term challenge for the agricultural sector is to meet the national policy objective of an approach to carbon neutrality which does not compromise the capacity for sustainable food production. Throughout Europe, reducing greenhouse gas emissions in agriculture has proved difficult, with only a 1% reduction since 2005. Irish agricultural emissions fell during the period 2005 – 2011, but have since risen sharply, driven by larger herds and rising milk production.

A number of measures are identified to start decarbonising the Irish agricultural sector, including, inter alia, through reducing farm emissions.

5.3. National Planning Framework (NPF), 2018

5.3.1. The NPF acknowledges the importance of ongoing investment in the agri-food sector, to underpin its sustainable growth, as set out in Food Wise 2025. The increase in agri-food exports, value added, primary production and creation of additional jobs are all encouraged. The NPF states that "the agri-food sector continues to play an integral part in Irelands economy and is our largest indigenous industry, contributing 173,400 direct jobs and generating 10.4% of merchandise exports in 2016". Agriculture has traditionally been the most important contributor to rural economies, and it remains important as a significant source of income and both direct and indirect employment. It is noted that agriculture must adapt to the challenges posed by modernisation, restructuring, market development and the increasing importance of environmental issues.

5.3.2. Policy objectives relevant to the proposed development include:

National Policy Objective 23: Facilitate the development of the rural economy through supporting a sustainable and economically efficient agricultural and food sector, together with forestry, fishing and aquaculture, energy and extractive industries, the bio-economy and diversification into alternative on-farm and off-farm activities, while at the same time noting the importance of maintaining and protecting the natural landscape and built heritage which are vital to rural tourism.

5.4. Regional Spatial and Economic Strategy (RSES) for the Southern Region, 2020

5.4.1. The RSES provides a long-term regional level strategic planning and economic framework in support of the implementation of the National Planning Framework for the future physical, economic and social development of the Southern Region and includes Metropolitan Area Strategic Plans (MASPs) to guide the future development of the Region's three main cities and metropolitan areas – Cork, Limerick-Shannon and Waterford.

5.4.2. It is noted that agriculture is both highly exposed and is a significant contributor of climate change. There is a need to align to the country's climate targets and to future proof the agricultural economy in the process.

5.4.3. **Regional Policy Objective 94:** It is an objective to support initiatives that advance an approach to achieve carbon neutrality for agriculture and land-use that does not compromise sustainable food production through:

(i) Programmes including the Green LowCarbon Agri-environment Scheme (GLAS) and the Beef Data and Genomics Programme (BDGP) under Ireland's Rural Development Programme 2014-20 and future iterations.

(ii) Support for the Departments of Agriculture, Food and the Marine, and Communications Climate Action and Environment to enhance the competitiveness of the agriculture sector with an urgent need for mitigation to reduce GHGs as well as adaptation measures. The All-of-Government Climate Action Plan and Ag-Climatise will guide action in this area.

5.5. Waterford County Development Plan 2011-2017 (as extended)

5.6. Land Use Zoning

5.6.1. All land outside of designated settlements is regarded as being subject to land use zoning "A-Agriculture" which has the objective "to provide for the development of agriculture and to protect and improve rural amenity". Agricultural structures are permissible under this zoning objective.

5.7. Agricultural Development

5.7.1. The Planning Authority will support and facilitate sustainable agricultural developments and improvements where the developments are considered in relation to their likely impact on the environment, landscape, character and amenity of the surrounding area.

5.7.2. The Council will normally permit development proposals for agricultural developments where: (1) they are appropriate in nature and scale to the area in which they are located, (2) the proposal is necessary for the efficient use of the agricultural holding or enterprise, (3) where the proposal involves the erection of buildings, there are no suitable redundant buildings on the farm holding which could accommodate the development, (4) the development is not visually intrusive in the local landscape, and, where the proposal is for a new building(s) and there are no suitable redundant buildings, the proposal is sited adjacent to existing buildings and suitably visually integrated in the holding; and (5) the proposal demonstrates that it

has taken into account traffic, environmental and amenity considerations and is in accordance with the policies, requirements and guidance contained in the development plan.

5.8. Landscape

5.8.1. The subject site is located in a “sensitive” landscape area with reference to the Scenic Landscape Evaluation map contained in Appendix 9 of the plan. This includes areas which are open and exposed with sparse or low growing vegetation cover which is insufficient to provide screening. Even if planting is introduced, the exposed nature of these areas will not support any significant tall vegetation. Due to this, any development would be visible over a wide area. The exceptions to this include broadleaved, mixed forest and transitional woodland scrub areas which do support tall vegetation with potential to screen development. These categories are sensitive due to their natural character and their longevity in the landscape; any loss to their structure (such as tree felling or clearance) would have a visual impact over a wide area.

5.8.2. Applications for development in these areas must demonstrate an awareness of these inherent limitations by having a very high standard of site selection, siting layout, selection of materials and finishes. Applications in these areas may also be required to consider ecological, archaeological, water quality and noise factors insofar as it affects the preservation of the amenities of the area.

5.9. Water

5.9.1. **Policy ENV 6:** It is a policy of the Council to preserve and protect groundwater and surface water quality taking into consideration the Groundwater Protection Scheme prior to approving development. Proposals for new development shall comply with the relevant EPA Code of Practice: Wastewater Treatment and Disposal Systems Serving Single Houses (2009).

5.9.2. **Policy ENV 7:** It is a policy of the Council to comply with the objectives, policies and Programme of Measures of the Water Framework Directive and the South-Eastern and South-Western River Basin District Management Plans.

5.10. Development Management Standards

5.10.1. **Site Access**: The site access adjoins a local road with an operating speed of 80 km. A sightline requirement of 55 m arises in this context.

5.10.2. **Agricultural Development**: In visually sensitive areas, agricultural buildings will be required to be sited as unobtrusively as possible, with the use of appropriate materials and colours. The use of dark colours (greens, reds, greys) is most suitable for farm buildings. The planting of shelter belts will be required to screen large scale sheds and structures.

5.10.3. Any proposals for farmyard development must make provision for runoff and where there is a danger of groundwater or surface water contamination, the Council will require appropriate treatment of runoff.

5.11. Draft Waterford City and County Development Plan 2022-2028

5.11.1. The draft Waterford City and County Development Plan 2022-2028 has been prepared and the final plan is expected to be adopted during summer 2022.

5.11.2. **Policy Objective ECON 12**: To facilitate farm or rural resource related enterprises and diversification, including food production and processing on farm/ agricultural holdings, mineral and aggregate extractive industry, aquaculture and marine, and proposals which support rural tourism initiatives which are developed upon rural enterprise, social enterprise, natural/ cultural heritage assets and outdoor recreational activities, subject to the capacity of the site and the location to facilitate the proposal. Subject to environmental policies and the development management standards of this Development Plan, the nature and scale of any proposed development will be assessed having regard to a number of factors, including nature and scale of the existing operation, building, or tourist attractions, source of material (where appropriate), traffic movements, water and wastewater requirements, capacity to reuse existing and redundant buildings, and likely impacts on amenity and the environment and the Natura 2000 Network.

5.11.3. **Policy Objective CA 01**: To support and implement the policies of the Waterford Climate Adaptation Strategy in collaboration with Waterford Climate Action Team the Climate Action Regional Office (CARO), and review/replace the strategy pursuant to the provisions of the Climate Action and Low Carbon Development Act.

5.11.4. **Policy Objective WQ 01**: We will contribute towards, as appropriate, the protection of existing and potential water resources, and their use by humans and wildlife, including rivers, streams, wetlands, the coastline, groundwater and associated habitats and species in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (as amended), the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (Groundwater) Regulations 2010 (as amended) and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same). To support the application and implementation of a catchment planning and management approach to development and conservation, including the implementation of Sustainable Drainage System techniques for new development.

5.11.5. **Landscape Policy Objective L02**: We will protect the landscape and natural assets of the County by ensuring that proposed developments do not detrimentally impact on the character, integrity, distinctiveness or scenic value of their area and ensuring that such proposals are not unduly visually obtrusive in the landscape, in particular, in or adjacent to the uplands, along river corridors, coastal or other distinctive landscape character units.

5.11.6. The site is located in a landscape area of increased sensitivity with reference to Fig. 10 (Waterford Landscape and Seascape Character Assessment).

5.12. **Development Management Standards**

5.12.1. **Rural Development**: In visually sensitive areas, the Planning Authority will require that:

(i) Agricultural buildings/ structures be sited as unobtrusively as possible, and the design, scale, siting and layout of agricultural buildings should respect, and where possible, enhance the rural environment.

(ii) Appropriate materials and colours are used. The use of dark colours, notably, dark green/reds and greys are most suitable for farm buildings.

(iii) The planting of shelter belts will be required to screen large scale sheds and structures.

(iv) Buildings should generally be located a minimum of 100 metres from the nearest dwelling other than the applicant's dwelling.

(v) The Council will generally seek to cluster agricultural buildings and structures together, and siting to assimilate effectively into the landscape.

(vi) Any proposals for farmyard developments must make provision for runoff, and where there is a danger of groundwater or surface water contamination, the Council will require appropriate treatment of runoff. The Council shall have regard to the European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2009 (S.I 101 of 2009) in relation to acceptable agricultural practice standards.

5.13. Natural Heritage Designations

5.13.1. The following designated sites are proximate to the subject site:

- Blackwater River (Cork Waterford) SAC (site code: 002170) approx. 0.8 km to the south-west at its closest point. Blackwater River (Cork/Waterford) SAC is connected to Blackwater Estuary SPA (site code: 004028) at its southern-most extent, approx. 25 km to the south-west of the subject site.
- Lower River Suir SAC (site code: 002137) approx. 5.2 km to the north.
- Nier Valley Woodlands SAC (site code: 000668) approx. 7 km to the north-east.
- Comeragh Mountains SAC (site code: 001952) located approx. 7 km to the west.
- Dungarvan Harbour SPA (site code: 004032) is located approx. 13.5 km to the south-east of the application site.

5.14. EIA Screening

5.14.1. An EIAR was submitted with the application as it exceeds the threshold specified under the Planning and Development Regulations, 2001 (as amended), Schedule 5, Part 1, Class 17 (b) which sets out the categories and scale of development that require mandatory EIA as follows: Installations for the intensive rearing of poultry or pigs with more than 3,000 places for production pigs (over 30 kilograms)".

6.0 The Appeal

6.1. Grounds of Appeal

6.1.1. 3 no. third-party appeals have been lodged against the decision of Waterford City and County Council to grant permission for the proposed development by: (1) Environmental Management Services on behalf of The Concerned Residents of Touraneena & Ballinamult (2) Peter Sweetman & Associates on behalf of Wild Ireland Defence CLG, and (3) Noel & Kathleen Reynolds, Drumgorey, Ballymacarbry, Co. Waterford.

6.1.2. The third-party appeal from Environmental Management Services on behalf of **The Concerned Residents of Touraneena & Ballinamult** can be summarised as follows:

- There is significant groundwater vulnerability around the site and a high probability that the proposed wastewater discharge would be directed to bedrock rather than achieving polishing in subsoil.
- The applicant proposed changes to the adjacent pig farm at Carrigroe as part of their Further Information submission. The Board should not take the scaled back project into account, as to do so would allow the applicant to engage in project splitting.
- The Board should take account of the relationship between the proposed pig farms at Carrigroe and Caherbrack, as they are considered by the EPA as a single licensable development. Therefore, the cumulative impacts of both developments, including land spreading and traffic, must be considered.
- The applicant did not respond adequately or comprehensively to the Planning Authority's Request for Further Information, including the proposed land spreading of slurry, traffic volumes and impacts on Caherbrack House and Caherbrack Bridge.
- No proposals provided for dust, odour or noise monitoring.
- Concerns that proposed water quality sampling downstream of the site would only be required for a 3-year period. All environmental monitoring should be undertaken at least quarterly.

- The proposed development would impact adversely on the vision of sustainable rural communities presented in the County Development Plan.
- The proposed development would be inconsistent with development plan policies which promote walking and cycling in rural areas.
- Adequate protection of groundwater and surface water quality cannot be ensured by a condition attached to a grant of permission.
- The land-spreading of pig slurry is an intrinsic part of the project for which planning permission is being sought and was not considered in the applicant's NIS.
- The NIS failed to obtain up-to-date scientific information on which to base its conclusion that the existing pig farm has had no significant impact on baseline water quality.
- A list of farmers who have committed to take slurry from the proposed pig farm(s) has not been provided and the map of available slurry spread-lands is inaccurate and cannot be relied upon.
- EPA site inspections of the combined pig farms noted that the organic fertiliser register was not being maintained, which is not in compliance with the applicant's licence.
- The nutrient levels in the surrounding intensive dairying land are already so high, that the use of further pig slurry on these lands is precluded.
- The proposed pig farm should be considered as a new development and not a replacement of one that is in full operation.
- The proposals for the pig farm access junction are not in accordance with TII and Planning Authority development standards for rural road layouts.

6.1.3. The appeal submission includes hydrology and hydrogeology observations as contained in a report prepared by Parkmore Environmental Services, a Roads, Traffic and Access Appraisal prepared by Malachy Walsh and Partners Engineering and Environmental Consultants, EPA reports concerning the application site and a copy of the WFD River Basin Management Plan (3rd Cycle). The content of these reports has been reviewed and noted in the assessment of this appeal case.

6.1.4. The third-party appeal from Peter Sweetman & Associates on behalf of **Wild Ireland Defence CLG** can be summarised as follows:

- The slurry spread lands are a constituent part of the development and have not been considered in this application.
- The EIAR does not fulfil the requirements of the EIA Directive.
- The NIS relies on but does not contain compliance with the Nitrates Regulations as mitigation for the spreading of slurry.
- The Appropriate Assessment (AA) carried out by the Planning Authority did not fulfil the requirements of the judgement of the CJEU in case 258/11. It contains lacuna and is not complete as it did not cover the spreading of slurry and the emission of ammonia.
- Water catchments along the south/south-east coasts are of concern with respect to elevated nitrogen concentrations, including the Blackwater and Suir catchments. This proves that compliance with the Nitrates Regulations is not adequate mitigation.
- The AA carried out by the Board cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on protected sites.
- Much of the information presented in the EIAR is outdated and the established baseline does not reflect current groundwater or surface water quality conditions. More recent water quality assessments were carried out after a period of low stocking numbers of pigs and therefore do not reflect historical pig numbers and the volume of slurry generated.
- The EIAR surface water data relating to the Drumgorey Stream is not representative of this river or surface water quality downstream of the pig farms.
- Outdated Water Framework Directive information has been presented on the status of surface waters and the risk to water quality.

- The pig farms and land spreading areas are hydraulically connected to downstream SACs and there is a high risk that on-farm activities and runoff from land spreading areas could negatively impact the downstream water bodies and their qualifying interests, including the freshwater pearl and mussel.
- It is nearly impossible to ensure that the proposed pig farm can be operated in a climate neutral way, which is a key issue given the very recent approval of the Climate Action and Low Carbon Development (Amendment) Bill 2021.
- There are more than 70 houses within 1km of the site, with closest residents disproportionately affected by noise, dust, smell and traffic impacts on foot of the proposed development.
- Disease and / or biosecurity risks of importing pig slurry onto farms. Communicable disease outbreaks are possible as a consequence of the proposed large number of confined pigs being imported into the region.

6.1.5. The third-party appeal from **Noel & Kathleen Reynolds** can be summarised as follows:

- Project splitting, with inadequate cumulative/in-combination EIAR assessment of the proposed development and that which is proposed on the neighbouring pig farm at Carrigroe.
- The NIS fails to consider the impact on the development on Nier Valley Woodlands SAC and Dungarvan Bay SPA and fails to establish a baseline for the condition of soils in the proposed land spreading area.
- The NIS relies on assumptions that slurry spreading to date has not caused any adverse effects and farmers receiving slurry have / would continue to spread it using best available methods.
- The proposed development would result in a loss of local employment and damage all aspects of the environment.
- Increased traffic, malodour and noise will threaten the attractiveness of the local community, damage local businesses dependent on tourism and significantly impair the enjoyment of local amenities.

- The development will threaten the quality of ground and surface water, plant, animals and habitats within SACs.
- Increased traffic will hinder the ability of the local community to undertake safe walking and cycling trips.
- The proposed development should be assessed in the context of a greenfield site due to the reduced use/capacity of the existing facility, particularly since 2017.
- The baseline established in the EIAR does not reflect current groundwater and surface water quality conditions.
- The identified land spreading area is not accurate.
- The amount of slurry to be produced by the proposed development significantly exceeds the amount produced in recent years.
- Inaccurate slurry spreading records based on the EPA Organic Fertiliser Register.
- Soiled water will discharge from the development into Drumgorey Stream.
- No provision for the secure storage of pig carcasses.
- No evidence that biofiltration and/or chemical scrubbing were considered to mitigate threats to human health.
- The existence of adequate water supply to serve the site has not been established.
- The proposed site access is a threat to the physical integrity of the outbuildings at Caherbrack House and will detract from the visual amenity of this Protected Structure.
- Construction and operational traffic will threaten the physical integrity of Caherbrack Bridge and a documented limekiln at the site.
- The EPA Batneec Guidance Note for the Pig Production Sector has not been adequately considered.

6.1.6. The appeal submission is accompanied by an oral hearing request, a copy of the third-party appeal submitted by Environmental Management Services on behalf of

The Concerned Residents of Touraneena & Ballinamult, including the hydrology and hydrogeology report prepared by Parkmore Environmental Services, the Roads, Traffic and Access Appraisal prepared by Malachy Walsh and Partners Engineering and Environmental Consultants, EPA reports concerning the application site, a Batneec Guidance Note for the Pig Production Sector and the WFD River Basin Management Plan (3rd Cycle). The content of these reports has been reviewed and noted in the assessment of this appeal case.

6.2. Applicant Response

6.2.1. An appeal response was received from Con Curtin Agricultural Consultants on behalf of the applicant on 14th July 2021 which can be summarised as follows:

- The pig farm has existed at this site for 40 years but requires investment in housing and slurry storage to address a past deficit in investment.
- The proposed development seeks to upgrade the existing pig farm to achieve the highest environmental and production performance standards and to ensure it conforms to any EPA licence.
- The EIAR and NIS provide a comprehensive baseline description. The pig farm has been in existence for 40 years and there is a high degree of certainty that the baseline assessment captures any impacts of the existing development.
- Predicted impacts are assessed locally at the development site and within the wider study area where slurry is land spread. Post mitigation impacts on human health and population, biodiversity, land and soils, water, air, climate, material assets, landscape and cultural heritage are not significant from the proposed development.
- The proposed development will result in improvements or reductions in impacts at the subject site including, regular removal of slurry using under slat scrapers combined with separate covered slurry stores, which will reduce NH_3 emissions by more than 30%.

- The proposed separation distance to the Blackwater River (Cork/Waterford) SAC provides certainty that the aerial deposition of NH_3 will not have significant effects.
- The replacement of the earth-banked lagoons with concrete slurry storage tanks with leak detection facilities will improve the ability to monitor the groundwater quality under the tanks and result in a higher degree of certainty of the integrity of the slurry stores.
- The traffic generated by the Caherbrack pig farm will reduce as the existing 1200 sow breeding operation will be replaced by a finishing unit. The volumes of traffic generated by both pig farm sites will not significantly change the total traffic on the local roads and the site access will be significantly improved. Slurry transport traffic from both pig farms will decrease by 14% on foot of the scaled back proposal on the Carrigroe site.
- The quantity of ground water used at the proposed development will not change significantly and will not adversely affect local supplies.
- The environmental effects on the wider study area and the land-spreading areas are addressed in the NIS and EIAR – lands unsuitable for spreading have been excluded, aquifer vulnerability has been mapped and soil types have been mapped.
- The baseline water assessment includes the impact of both existing pig farms.
- The volume of manure which will be generated will be 8,800 m^3 compared with 11,310 m^3 in the existing facility. As a result, impacts to water and biodiversity due to the hydraulic loading of pig slurry will reduce.
- The volume of pig slurry from both pig farm sites will not change significantly (19,828 m^3 existing and 19,500 m^3 proposed) and the hydraulic loading of the slurry and impacts of land-spreading will not change significantly.
- In a worst-case scenario without mitigation, aerial deposition of NH_3 in the study area would increase by < 2% of the baseline, which is insignificant. Both pig farm developments will reduce total NH_3 emissions by 18% compared to the existing situation.

- Water quality has reduced in Co. Waterford since 2015 but pig herd numbers have been constant, accounting for 4% of the stocking rate within the county.
- In addition to compliance with the Nitrates Regulations, the proposed development will have to comply with any EPA licence conditions.
- Separate planning applications were submitted for each of the pig farm developments due to the 1.25 km separation distance between the sites. This approach does not constitute project splitting, with the cumulative effects of both developments considered in the assessment of each site.
- Local environmental emissions will be reduced, and as such, it is incorrect to state that the proposed development will have a negative impact on tourism.
- None of the risks to human health which have been identified by the appellants have been substantiated.
- The volume of pig manure produced by both pig farm sites will not change significantly, nor will the nutrient loading to the study area. The available nutrients in pig manure fertilizer must replace chemical fertilizer. When applied correctly, the nuisance impact from land-spreading will not change significantly.
- There will be substantial improvements to the site access and the survey of Caherbrack Bridge has confirmed that it is in sound condition.
- The appeal submission from Environmental Management Services states that the entire study area is in breach of the nitrates regulations, which is incorrect.
- Traffic volumes are not significant in the context of local traffic. Traffic to the pig farm will reduce from 39 to 26 AADT, therefore the proposed site traffic will not increase journey times or increase the risk of collisions as asserted by the appellants.
- The applicant's design team have appropriate professional competencies to complete and submit this planning application.
- The proposed slurry tanks will be constructed of reinforced concrete and will have leak detection facilities. There will be 30+ weeks on-site slurry storage

to ensure slurry will not be spread in the closed period. The spread lands have been assessed in their entirety for risk to groundwater from land spreading, with all unsuitable areas excluded.

- The applicant has demonstrated how the proposed development incorporates BAT in response to Item No. 8 of the Request for Further Information and in Chapter 2, Volume 2 of the EIAR.
- The NIS addendum addresses the potential impacts from land spreading within the study area and all adjoining protected sites.
- Employment on the site will reduce from 7 to 3 jobs. While the number of existing jobs in both pig farms will decrease from 10 to 7, all jobs would be lost without the required investment in these farms.
- The proposed development will be landscaped to minimise visual impacts. Local emissions of NH_3 will reduce significantly. The proposed development will reduce traffic significantly, will improve the integrity of slurry storage and overall, will improve the environmental performance of the site. As such, it is refuted that the proposed development will threaten the attractiveness of the local community, damage local tourism businesses or impair local amenities.
- The potential impacts on Caherbrack House, Caherbrack Bridge and the limekiln have been fully assessed. Impacts on the agricultural building on the Caherbrack House site are mitigated by the laying of a 200 mm concrete surface on the entrance road to accommodate heavy construction traffic, a fence to demarcate the farm outhouse and a speed limit on the entrance lane. During the operational phase, the existing situation will be improved due to improved road access and reduced traffic.
- The Caherbrack Bridge assessment report concludes that the bridge has good geometry, no major distortions and is in good condition.
- An attenuated storm water system is proposed which represents an improvement compared to the existing handling system. There will be no soiled yards in the proposed development, with all pig walk-ways being slatted and covered. The slurry extraction point will have a small, raised slurry

apron which will slope back to the tank. Pig carcasses will be stored in purpose-built sealed skips.

- There are no significant risks to human health. There are no high antibiotic residues in pig manure and dust emissions from pig buildings is not a public health issue. There are no real health risks from land spreading and there is no significant risk of pig diseases spreading to humans.

6.3. Planning Authority Response

6.3.1. None received.

6.4. Observations

6.4.1. Observations on the appeal were received from: (1) An Taisce (prescribed body) and (2) Gabriela Briner, Caherbrack, Ballinamult, Dungarvan, Co. Waterford. No new issues were raised.

6.5. Further Responses

6.5.1. Further responses on the appeals were made by: (1) The Concerned Residents of Touraneena & Ballinamult and (2) Noel & Kathleen Reynolds. No new issues have been raised. Each party notes their support for the other third party appeals submitted in relation to this case.

6.5.2. A further response was also received from Curtin Agricultural Assessments on behalf of the applicant which confirms that the applicant does not wish to make any observations on the EPA's submission of 6th September 2021.

6.5.3. Further responses on the EPA submission of 6th September 2021 were also received from: (1) Gabriela Briner, (2) Jack O'Sullivan Environmental Management Services on behalf of The Concerned Residents of Touraneena & Ballinamult and (3) Noel and Kathleen Reynolds.

6.5.4. The observers raise concerns that the spreading of pig manure on lands outside the red line boundary is outside of the EPA's control. It is considered that the EPA's submission has not provided meaningful feedback on the proposed development and its potential environmental and residential amenity impacts. It is considered that the EPA's submission did not fulfil the requirements of the Environmental Protection

Agency Act, 1992 (as amended) or the requirements and objectives of the Memorandum of Understanding between the Board and the Agency.

7.0 Assessment

7.1. The appellants have provided lengthy and detailed appeal submissions, which have been noted and considered in my assessment of this case. Having regard to the information presented by the parties to the appeal and during the course of the planning application, and having undertaken an inspection of the appeal site, I consider that the key planning issues in the assessment of the appeal can be addressed under the following general headings:

- Environmental Impact Assessment
- Project Splitting / Cumulative Impacts
- Impact on Caherbrack House and Caherbrack Bridge
- Groundwater Impacts
- Surface Water Impacts
- Impacts on Local Community, Tourism and Local Businesses
- Site Access / Traffic Impacts
- Climate Change Impacts
- Use of BAT / BATNEEC
- Appropriate Assessment

7.2. Each of these issues is addressed in turn below.

7.3. Environment Impact Assessment (EIA)

7.3.1. The EIAR contains 4 volumes, grouped as follows:

- Volume 1: Non-technical Summary
- Volume 2: Environmental Impact Assessment Report
- Volume 3: Appendices
- Volume 4: Figures and Drawings

7.3.2. In accordance with Article 5 and Annex IV of the EU Directive, the EIAR provides a description of the project comprising information on the site, design, size and other relevant features of the project. It identifies, describes and assesses in an appropriate manner, the direct and indirect significant effects of the project on the following environmental factors: (a) population and human health; (b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC; (c) land and soils; (d) water (hydrology and hydrogeology), (e) air quality; (f) climate; (g) material assets including the public road network, public utilities, towns/settlements, property and commercial businesses, tourist services, farms and agricultural land, forestry and woodland, cultural heritage and waste facilities; (h) landscape and visual; (i) cultural heritage (archaeology). It also considers the interaction between the factors referred to in points (a) to (i) above.

7.3.3. It provides an adequate description of forecasting methods and evidence used to identify and assess the significant effects on the environment. It also provides a description of measures envisaged to avoid, prevent or reduce and, if possible, offset likely significant adverse effects. The mitigation measures are presented in each chapter and are summarised in Chapter 18 (Schedule of Commitments) of the EIAR, and where proposed, monitoring arrangements are also outlined. Environmental Interactions, Cumulative Effects and Transboundary Effects are addressed in Chapter 12. Any difficulties which were encountered in compiling the required information are set out under the respective environmental topics. A summary of residual impacts and environmental commitments (Mitigation) is provided in Chapter 13.

7.3.4. I am satisfied that the information provided is reasonable and sufficient to allow the Board to reach a reasoned conclusion on the significant effects of the project on the environment, taking into account current knowledge and methods of assessment. I am also satisfied that the information contained in the EIAR complies with the provisions of Articles 3, 5 and Annex (IV) of EU Directive 2014/52/EU amending Directive 2011/92/EU.

7.3.5. I am satisfied that the EIAR has been prepared by competent experts to ensure its completeness and quality. I note the qualifications and expertise demonstrated by the experts involved in the preparation of the EIAR which are set out in Volume 2,

Chapter 1, Table 1.1. The information contained in the EIAR and supplementary information provided by the developer, adequately identifies and describes the direct, indirect effects and cumulative effects of the proposed development on the environment and complies with Article 94 of the Planning and Development Regulations 2000, as amended.

7.3.6. I am satisfied that the information provided in the EIAR is sufficiently up to date and is adequate for the purposes of the environmental impact assessment to be undertaken.

7.4. Vulnerability to Risk of Major Accidents and / or Disaster

7.4.1. The requirements of Article 3(2) of the Directive include the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disaster. The EIAR addresses the risks from climate change/natural disasters and of accidents and environmental incidents. There is no risk of flooding, subsidence, landslides or earthquakes at the site. The construction materials of the building will conform to relevant technical specifications and leak detection facilities will be provided under the proposed slurry tanks. The existing wind turbine will be maintained regularly and decommissioned/replaced at the end of its production lifecycle.

7.4.2. The following procedures are in place to minimise the risk of on-site spillage of pig manure including: (1) primarily stored in underground concrete tanks minimising the risks of spills; (2) regular servicing of handling equipment and pumps; (3) all liquid storage tanks on site are bunded; and (4) an emergency response procedure, with a requirement to contact the EPA or Local Authority. The risk of off-site manure spillages is minimised by employing reputable contractors and farmers and regular inspections of their slurry equipment.

7.4.3. Staff will be trained and supervised to adopt work practices which avoid risks to health and safety and minimises risks of workplace accidents. An up-to-date safety statement will be maintained on site. Continuous checking of equipment and electrical installations will take place to minimise the risk from fire. There have been no environmental incidents, accidents or natural disasters (fire) at this facility in the past 20 years.

7.4.4. It is considered that having regard to the nature, scale and location of the development, there are unlikely to be any effects deriving from major accidents or

disasters and I am satisfied that this issue has been addressed satisfactorily in the EIAR.

7.5. Alternatives

7.5.1. Alternative development scenarios are considered in Volume 2, Chapter 3 of the EIAR. The existing pig farm is stated to be in urgent need of refurbishment to maintain adequate environmental and production standards. In a "**do-nothing**" scenario, the benefits of the proposed capital expenditure of €3 million will not accrue to the economy, the future viability of the pig farm would be in serious doubt, the existing employment would be jeopardy and the additional employment and economic activity accruing from construction work would not occur. The economic benefits of pig manure fertiliser supplied to local farmers would also be in jeopardy. It is considered that the urgent viability and economic requirements justify a "**do-something**" scenario and that environmental impacts can be managed at an acceptable level.

7.5.2. Having considered alternative sites, none were considered as suitable to accommodate the proposed development as the existing site, which represents the best use of existing resources. There are no **alternative locations** within the applicant's existing sites in East Waterford which would accommodate the scale of the proposed development and it is noted that the intensification of these sites would increase disease and environmental pressures. Leasing an existing fattening operation is not a viable option as none are located close enough to the applicant's breeding farm in Matthewstown, Fenor, Co. Waterford.

7.5.3. With respect to **alternative layouts**, it is stated that there is limited space for new pig houses within the site boundary, with the proposed location offering the advantage of very low visual impact and being located furthest from neighbours. A range of **alternative designs** were considered, with the most up-to-date concepts selected for use. Having considered **alternative processes**, it is considered that the standard indoor system with ventilated houses and slatted floors is the only economically viable production system, with the Irish climate and soil types identified as being unsuitable for outdoor production. Alternative mitigation measures are also considered in relation to pig diets and potential treatment and processing of pig manure.

7.5.4. The level of detail concerning the consideration of alternatives is reasonable and commensurate with the project. I am satisfied that the requirements of the Directive in terms of the consideration of alternatives have been discharged.

7.6. Likely Significant Effects on the Environment

7.6.1. The likely significant effects of the development are considered under the following headings, as set out in Article 3 of the EIA Directive 2014/52/EU:

- Population and human health
- Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC
- Land, soil, water, air and climate
- Material assets, cultural heritage and the landscape
- The interactions between the factors referenced above

7.6.2. In total, the main EIAR includes 13 chapters. Chapters 1 and 2 introduce the project and provide a description of the proposed development and the alternatives considered. Chapters 3 – 11 address population and human health, biodiversity, land and soils, water, air, climate, material assets, landscape and cultural heritage respectively. Chapter 12 addresses interactions, cumulative and transboundary effects, while Chapter 13 summarises the impact of the proposed development before and after mitigation for each of the environmental topics and the required mitigation measures to be employed. A list of reference material is provided at the end of each chapter.

7.6.3. Each of the above chapters are considered in detail below, with respect to the relevant headings set out in the Directive.

7.7. Chapter 3: Human Population and Human Health

7.7.1. This chapter considers potential impacts on human socio-economic activities and assets and on local community health. A study area of 55 townlands is identified which includes rural dwellings and settlements, farms, commercial businesses, tourism assets, public water sources, ecosystem services and cultural heritage assets. Five small settlements are identified in the study area, including Ballymacarbry and Fourmilequater to the north and Ballynamult, Tooraneena and

Kilbrien to the south. Ballynamult and Tooraneena are located closest to the pig farm (0.75km and 1.75km respectively). A further 520 rural dwellings are located within the study area, with 39 of these located within 1km of the pig farm boundary.

7.7.2. There is a potential slight adverse impact on human population due to poor land spreading practices and potential impact on water supplies. The local farming community benefit financially from the free supply of manure from the existing pig farm. Slurry supplies will reduce from the existing site but additional supplies from the Carrigroe pig farm site will generally maintain existing slurry production levels. Local commercial businesses will generally benefit from increased activity and employment. The 7 existing jobs on site will reduce to 3 on foot of the proposed development. In the absence of the proposed development, all jobs could potentially be lost from the site. The proposed development investment also has the potential to sustain 27 jobs in the medium term (7 years).

7.7.3. There are no sensitive tourist assets located close enough to the pig farm to be directly affected by the pig house emissions. There are commercial forests and native woodland proximate to the site boundary and throughout the study area. The Ammonia (NH_3) emissions from the site will reduce on foot of the proposed development, and as such, the impact from emissions to air on these areas in the absence of mitigation will not be significant. The Nier River and River Suir have high ecosystem services value from an angling, kayaking and tourism perspective. Poor practices in the application of pig manure could result in slight adverse effects on the natural water environment in the absence of mitigation. Land spreading will not affect existing above or below ground cultural heritage assets. In the absence of mitigation, there is the potential to damage unknown archaeological assets during the construction phase of the project, resulting in a moderate adverse impact. Without mitigation, the proposed development will not significantly impact local traffic and journey times.

7.7.4. Many of the rural dwellers in the study area rely on untreated private ground water supplies. Poor practices in the application of pig manure could lead to adverse effects on the natural water environment resulting in slight adverse impacts on human health in the absence of mitigation. There will be no health effects for the emission levels predicted for ammonia, while emissions of carbon dioxide, methane, and nitrous oxide will not add significantly to global warming. Five houses are

located within the identified odour contour limit value, which is assessed as a not significant - slight adverse impact due to odour nuisance before mitigation. In the absence of mitigation, the potential impact on the health of workers during the construction and operational phases is slight to moderate adverse. Only personnel operating inside the boundary of the pig farm may be exposed to noises which could exceed HSA guidelines and without mitigation, could lead to slight adverse impacts on human health.

7.7.5. Mitigation measures identified for the construction phase of the proposed development include:

- the requirement for construction contractors to have a safety statement and active safety policy for their workers.
- the use of personal protection equipment.
- the use of a water tanker to douse exposed soil during dry weather.
- silt control measures to prevent sediment run-off.
- the use of wheel wash facilities.
- defined construction hours.
- the use of noise screening, with advance notice to adjoining landowners if rock breaking is required.

7.7.6. Mitigation measures during the operational phase will include:

- the application of pig manure in strict adherence to S.I. 605 of 2017 which will minimise impacts on water quality and human health.
- slurry storage of 30+ weeks will enable slurry to be stored when conditions are unsuitable for land spreading.
- land spreading of manure will neutralise pathogen risk through its exposure to sunlight and weathering.
- low trajectory spreading will minimise aerosol production.
- low emission housing design will minimise emissions of odour and ammonia.
- the use of low protein diets, high cleanliness standards and an odour management plan will reduce odours.

- Noise emissions will be mitigated by the separation distance arising to any sensitive receptors.

7.7.7. Residual impacts are considered not significant with standard mitigation measures in place. The cumulative effects of the proposed development and the concurrent proposal at Carrigroe Pig Farm have been considered. There are no other pig farms in the study area, with the nearest located 12.75 km south of the proposed development. This farm and the poultry houses located outside the study area are considered remote enough to not cause significant cumulative effects.

7.7.8. Potential cumulative effects on human population include traffic impacts on the local road network. However, the cumulative operational phase traffic to both pig farms is expected to decrease by 9 trips per day, and as such, is not a significant impact. Cumulative impacts from emissions to air are not significant due to the low emission pig house design in both proposed pig farm sites and the use of low protein diets. The Carrigroe pig farm will not add significantly to potential noise impacts on humans at the subject site and will not add significantly to potential visual and landscape impacts and human enjoyment of the local landscape. There is the potential for a cumulative nuisance effect when pig and cattle manure are applied at the same location. With adherence to SI 605 of 2017 (as amended) the application of organic fertilisers will only apply at a frequency of a few times a year. The cumulative impacts on climate are not significant. It is concluded that the neither the pig buildings nor the land spreading of manure will have a significant residual effect on socio-economic activities and assets and on the local community health environment when standard mitigation measures are employed.

7.7.9. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of population and human health can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on human health and human population.

7.8. Chapter 4: Biodiversity

7.8.1. There are 4 no. SAC's and 1 no. SPA within 15 km of the subject site. The site has a hydrological connection to Blackwater River (Cork/Waterford) SAC via site drainage to the Drumgorey Stream, which flows to the Finisk River (part of the SAC), approx. 750 m to the south of the site. A site habitats inspection was carried out in August 2019, with no rare species noted. Buildings and Artificial Surfaces account for the majority of the site, which is of no ecological importance. Other habitats recorded within the site include Plantation Woodland, Scrub/Grassy Meadows and Verges Mosaic, Improved Agricultural Grassland, Treelines/Hedgerows, Recolonising Bare Ground and Artificial Lakes and Ponds. No rare flora species were recorded during the site survey, nor are they expected to occur given that the site habitats are relatively common or of no ecological importance.

7.8.2. A bat survey undertaken on site did not identify any evidence of bats at any potential entry point to the buildings which are proposed for demolition. No evidence of otter was recorded on the site. Twelve other species of terrestrial mammal have been recorded within a 10km radius of the site, with the potential for pygmy shrew to occur. Two other protected mammal species with no official records are likely to be present in the area, Irish stoat and hedgehog. Amphibians and reptile species are unlikely to occur on site due to the lack of suitable clean water habitat. The site of the proposed development is of local value for a range of terrestrial bird species that are relatively common in the Irish countryside. No high impact invasive plant species were recoded.

7.8.3. During the construction phase and before mitigation, potential impacts could arise from increased noise and disturbance from site activities which could result in the disturbance/displacement of birds and mammals. Impacts on water quality could also potentially arise during the construction and operation of the proposed development.

7.8.4. Pre-mitigation impacts on Natura 2000 sites are considered separately in the NIS, while impacts on water quality are addressed in Chapter 6 of the EIAR. With respect to pre-mitigation impacts on terrestrial habitats, those within the site boundary are relatively common and no Annex I habitats or rare or uncommon habitats or floral species will be directly affected by the proposed works. Pre-mitigation impacts on protected mammal species are not significant. The pre-mitigation impact on

terrestrial birds in habitats within and adjoining the site is predicted to remain not significant during the construction and operational phases of the proposed development. Given that the habitat species within the site boundaries are relatively common in the surrounding landscape, any impact on invertebrate species as a result of the proposed works are not significant. If left unmanaged, there is potential for significant negative impacts as a result of the introduction of highly invasive plant species during construction.

7.8.5. The proposed mitigation measures include:

- the undertaking of demolition works outside of the bird nesting season,
- the storage shed adjacent to the wind turbine will be retained and left open (bat mitigation),
- the restriction of noise to normal working hours at the site, and
- the use of wheel wash facilities to ensure that vehicles entering and exiting the site are clean (invasive plant species).

7.8.6. Mitigation measures for uncontrolled surface water runoff and accidental spills of fuels, oils and greases are addressed in Chapter 6 of the EIAR. With mitigation, any residual impacts on the habitats and species that occur on the site due to the proposed development are considered neutral in the long-term and the predicted residual impact on flora and fauna will not be significant.

7.8.7. The cumulative impacts on biodiversity of the proposed development and that of the neighbouring pig farm at Carrigroe are not significant. The assessment of land spreading of pig manure from these developments, the next nearest pig farm in Cappagh and poultry houses outside the study are not significant. Overall, the post mitigation impact on ecology and biodiversity from the proposed development is considered not significant.

7.8.8. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of biodiversity can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on biodiversity.

7.9. Chapter 5: Land and Soils

7.9.1. The pig farm is located on Ballytrasna formation sub-soil and the soil type is a Humic Podzolic. The land at the pig farm is predominantly 'built-on' and is not used for agricultural production. Humic Brown Podzolic soil accounts for 53% of the study area and 62% of the net land spreadable area, followed by Surface Water Gley, Ferric Podzol Soils, Alluvial Soil, Brown Earth soil types, Luvisol soil type and Rock and Peat. The soils of the study area have the capacity to take the planned application rates of pig manure, provided the land is not compacted and not saturated at the time of application.

7.9.2. The wider study area encompasses a total land area of 9,768 ha, with 5,294 ha identified as being suitable for fertiliser application in accordance with S.I. 605 of 2017 (as amended) and minimising risk to water. The main determining factor for the application of pig manure is the Phosphorous (P) requirement of the spread lands and the organic nitrogen (N) rate of customer farms. The organic N on receiving farms cannot exceed 170 kgs/ha.

7.9.3. At full production, both pig farm sites will produce 19,500 m^3 of pig manure which would require a land spread area of 1,045 ha. The current customer base for pig manure is approx. 1,685 ha, with a P requirement of approx. 24,938 kgs. The Caherbrack site will produce approx. 8,800 m^3 of pig manure and the Carrigroe site will produce approx. 10,700 m^3 – 15,600 kgs of P each year from both units.

7.9.4. Within the entire study area, there is a requirement for 78,351 kgs of P, which can be supplied by either chemical fertiliser or pig manure. The existing pig farms supply approx. 20% of this requirement, with no significant change arising on foot of the proposed development. This demonstrates that the study area has adequate capacity for pig manure. Adherence to the existing regulations by farmers using the pig manure will ensure that it will not contribute to the eutrophication of surface waters.

7.9.5. There will be no change to the baseline land and soils environment in a do-nothing scenario. The construction of the proposed pig farm will require an additional 1.0 ha of agricultural land, which is not significant. The land will remain in agricultural production and will result in an increase in agricultural output. When applied to

replace chemical fertiliser, the proposed pig manure application rates will not significantly affect the existing soil nutrient status.

7.9.6. The mitigation measures which are identified with respect to land and soils include:

- the maintenance of a pig manure export register and a record of slurry movement,
- adherence to the mandatory regulations as specified in SI 605 of 2017 (as amended),
- a 50 m buffer around rural dwellings to avoid impacts on unknown private wells,
- the average manure application rate of 18.5 m^3 will not exceed the 25 m^3 rate specified on karstic land,
- areas mapped as “rock at or near surface or karst” are excluded from land spreading, and
- pig manure will be applied in suitable weather conditions.

7.9.7. The residual impacts on Land and Soils are considered not significant before or after mitigation measures are employed. Replacing chemical fertiliser with organic manure will enhance the organic matter content of the soil and prevent degradation. The proposed development will not result in a significant increase in pig manure produced at the site. Where the pig manure is used in accordance with SI 605 of 2017 (as amended), this will not have a significant effect on soil nutrients.

7.9.8. The cumulative impacts of the proposed development together with Carrigroe Pig Farm have been considered. The cumulative effects caused by the application of pig manure from both farms will not significantly affect Land and Soils. The land spreading of cattle manure in the study area is considered as part of the baseline environment. There is potential for cumulative effects when both manures are applied in the same location. With adherence to SI 605 of 2017, organic manures are applied to supply only what is required by the cropping on the receiving farm. Pig manure organic nitrogen accounts for approx. 4.3% of total organic N in Co. Waterford. The total production of organic nitrogen at both proposed pig farms will account for approx. 0.5% of the total organic N in Co. Waterford. Therefore, the cumulative impact from land spreading is not significant.

7.9.9. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of land and soils can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on land and soils.

7.10. Chapter 6: Water

7.10.1. The site of the proposed pig farm is underlain by the Ballytrasna Formation which supports locally important aquifers which are generally moderately productive. The existing water abstraction rate is approx. 15,000 m^3 per annum / 45 m^3 per day. Local recharge rates of 480 m^3/day have been recorded at Curraghateskin (Ballymacarby/ Ballyrohan Public Water Supply Scheme).

7.10.2. Throughout the study area (55 no. townlands) the dominant bedrocks are the Ballytrasna Formation and the Knockmeal Formation, which underlie approx. 80% of the study area and support locally important aquifers which are generally moderately productive. The Kiltorcan formation underlies approx. 5 % of the study area and supports regionally important aquifers which are high yielding. Waulsortian Limestones underlie approx. 1% of the study area and support regionally important aquifers. After deductions are made for areas such as fields adjoining SAC areas, buffers around dwellings and water features, roads, forestry, etc, approx. 7%, 92% and 1% respectively of the net spreadable agricultural area overlies regionally important, locally important and poor aquifers.

7.10.3. The groundwater vulnerability at the subject site is rated as “extreme”. The majority (71%) of the spreadable agricultural area has a high vulnerability, 18% has an extreme vulnerability and 11% has low or moderate vulnerability. Approx. 7% of the study area to the north-west is classified as regionally important aquifers and 1-1.5% of this area has extreme vulnerability and regionally important aquifers.

7.10.4. Groundwater at the existing site is monitored as a condition of the IPPC license and by way of the main well at the north-east of the site and a borehole just west of the site boundary adjoining the Drumgorey Stream. The results of this monitoring between 2008 and 2013 indicate that nitrates levels are raised but do not exceed guideline standards and is reflective of water quality in the wider region and study

area. Chemical Oxygen Demand is generally satisfactory, and the trend is stable. Ammonia levels are also satisfactory and stable. No E. coli are present.

7.10.5. The groundwater status of the study area is good. The trends in water quality indicate that 5% of the area is “at risk” of not maintaining this good status, with agriculture identified as the main pressure. A total of 38% of the study area is being reviewed due to trends in groundwater quality, with human activity identified as the main pressure for these waterbodies. The remaining 57% of the study area is not at risk of losing its good quality status.

7.10.6. A total of 8 no. very high sensitivity public water supplies have been identified within the study area or directly adjoining it. The average nitrates level within the study area is raised but does not exceed the threshold value. Ammonia levels are satisfactory and stable. Groundwater P is generally low for the study area, and in general, no E.coli are present.

7.10.7. Ten surface water bodies (river sub basins) have been identified as the most relevant available data for the study area. A review of this data for WFD waterbody status (2010-2015) indicates that the study area has significantly more good quality and less poor-quality water bodies and a much higher proportion of waterbodies not at risk, compared with wider regional data (Suir_16, Colligan-Mahon_17 and Blackwater Munster_18).

7.10.8. The pig farm is located within the townland of Caherbrack. There are 3 no. watercourses located in this townland including (i) an unnamed stream which flows west along the northern boundary of the townland and joins the Drumgorey Stream, (ii) the Drumgorey Stream to the west of the site which flows directly south to join the Finisk River at Ballynamult and (iii) a tributary stream to the Cahernaleague Stream which rises south of the site. The Drumgorey Stream is monitored since 2008 as a condition of the existing pig farm IPPC license, with nitrates and ammonia results being generally acceptable in 2008, 2012, 2013 and 2014. There are no EPA monitoring stations on the Drumgorey Stream, with the most representative recently monitored station on the Finisk River being ‘Br u/s Ballinmult Br’ which recorded a ‘Q4-Good Status’ in 2018. A Q-Value sample of the Drumgorey Stream taken in December 2019 approx. 53 m upstream of the confluence with the Finisk River and downstream of the existing pig farm gave a result of Q4 ‘Good Status’.

7.10.9. No change to the baseline water environment is predicted in a “do-nothing” scenario as the study area river quality is stable and groundwater quality is good. Groundwater is generally of acceptable quality in the existing site and pig manure will be stored in leak-proof slatted tanks. There will also be an on-going groundwater monitoring programme at the pig farm site. Therefore, the pre-mitigation impacts on groundwater are not significant. Excavations for the construction of the proposed houses and tanks will not significantly affect the hydrology of the surround land. The groundwater requirement will not change significantly compared to the existing pig farm and will not significantly alter the local groundwater supply. The installation and operation of a new septic tank system will have no significant effects on groundwater when constructed to specification.

7.10.10. Any risk to groundwater in the study area mainly arises from the misuse of pig manure, poor practice land-spreading and non-adherence to SI 605 of 2017 (as amended). The existing pig farm has been in operation for more than 30 years and there is no evidence that it has adversely affected the groundwater quality. The proposed development will not change this effect and the pre-mitigation impact on groundwater in the study area is not significant.

7.10.11. The source of surface water from the site of the proposed development is natural drainage and run-off from green areas and from storm water generated on hard-standing and roof surfaces. The existing storm water is diverted to ground via a soak-away, while the proposed storm water run-off will be diverted to the Drumgorey Stream. The existing EPA license requires that the storm water quality is monitored by measuring COD, with the results from 2008-2014 indicating that the levels were generally low and satisfactory. The Q-value sample of the Drumgorey Stream taken in December 2019 gave a result of Q4 ‘Good Status’, which indicates that the development is currently having no negative effects on this watercourse.

7.10.12. The results of 7 surface water samples collected by the applicant in October and December 2019 and the 8 EPA monitoring stations which are relevant to the study area between 2016-2018, found the following water quality status: 26.6% were high quality, 46.6% were good quality, 20% were moderate quality and 6.6% were poor quality. This equates to 64% of high or good quality, which is in line with or exceeds expectations for the region.

7.10.13. Trends in average regional nitrate concentrations during 2007-2017 showed a 'Stable' or 'Weak Downward' trend. Trends in regional phosphate for the same period were mainly 'Stable' overall. Overall, the data reflects a relatively stable situation with regard to current concentrations within the region and within the study area. The pre-mitigation impact from the existing pig farm is slight adverse due to the potential of pig manure to impact on water quality if not applied correctly. The proposed development will not change the existing potential pre-mitigation impact.

7.10.14. A range of mitigation measures are proposed with respect to water during the construction phase of the development including:

- an incident response plan with appropriate procedures in the event of spillage of fuel or other harmful material.
- the use of sediment erosion and pollution prevention techniques.
- the use of a dousing tanker to mitigate dust.
- refuelling of tankers off-site where possible.
- inspection of machinery for leaks.
- the agreement with the Local Authority of a construction and demolition environment management plan in advance of construction.
- off-site handling of washout from concrete mixers, and
- the removal of any contaminated soil by an approved waste contractor.

7.10.15. The operation phase mitigation measures for the pig farm site include the following:

- continued monitoring of surface and ground water quality.
- storage of pig manure in leek proof tanks with integrity testing as required under the IPPC license.
- regular inspection of the septic tank.
- concreted pig manure take-off points with run-off from pig walk-ways drained to slurry tanks.
- good operational practices with a high degree of cleanliness.

- the use of an under-slat scraping system to minimise emissions, and
- monitoring of on-site water usage to minimise wastage.

7.10.16. The proposed operational phase mitigation measures for land spreading include the following:

- engagement with customer farmers to ensure best practices are adhered to.
- monitoring of slurry spreading equipment for leaks.
- 30+ weeks on-site manure storage.
- Reduced protein level in pig diets will reduce nitrogen levels in manure thus reducing potential NO_3 leaching.
- adherence to application rates and procedures specified in SI 605 of 2017 (as amended).
- the maintenance of a manure register for EPA inspection.
- maintenance of appropriate buffer zones around private wells, public water sources and karst features (25 m, 200 m and 15 m respectively) to protect ground waters.

7.10.17. The residual impact from the proposed pig farm development on hydrology and groundwater is not significant. The operation of the proposed development will have a similar or lower impact on surface waters due to lower emissions from the pig houses, more modern buildings and management standards and higher environmental standards in the application of manure. With the mitigation of adherence to SI 605 of 2017 (as amended), pig manure will replace chemical fertiliser and land spreading and will not significantly affect the baseline surface water quality.

7.10.18. The assessment has considered the potential effects of the combined application of 19,500 m^3 of pig manure from the subject site and the proposed development at Carrigroe pig farm. The in-combination effects of both pig units on the baseline water environment is taken into account. The direction of groundwater flow is south and therefore it is possible that groundwater quality at the Caherbrack site could be affected by the Carrigroe site. Monitoring of groundwater at the Caherbrack site does not indicate any negative cumulative impact from the Carrigroe

site. The potential cumulative effects on surface waters can be gauged by the water quality of Drumgorey Stream, which starts upstream from both pig farms. The water quality downstream from both pig units is satisfactory based on water sampling undertaken by the applicant in December 2019.

7.10.19. The next nearest pig farm and poultry houses outside the study area are remote enough to not cause significant cumulative effects. The land spreading of cattle manure in the study area is considered part of the baseline environment. SI 605 of 2017 (as amended) takes into account the addition of manure organic nitrogen to the existing loading on farms. The proposed Carrigroe and Caherbrack developments will increase the organic N for County Waterford by approx. 0.6% as stated in the addendum to the EIAR. Having considered the potential impacts of the Carrigroe pig farm development and other potential cumulative impacts from agricultural organic nitrogen on water, there are no significant cumulative effects.

7.10.20. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of water can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on water.

7.11. Chapter 7: Air

7.11.1. The rural air quality in this area is rated as “good” by the EPA Air Quality Index for Health. The sensitive receptors in the receiving environment include agricultural land holdings, rural dwellings, commercial businesses, tourist services, settlements, public water services, ecosystems and cultural heritage assets. The main gaseous emissions from the proposed development are ammonia (NH_3), methane (CH_4), nitrous oxide (N_2O), dust, particulate matter (PM) and malodour from land spreading and the pig houses.

7.11.2. The existing pig farm produces 10.8 t per year of NH_3 of which 1.8 t/pa is estimated to be emitted from the lagoon and uncovered circular tank. Approx. 3.6 t of NH_3 is deposited over the study area by land spreading, while 7,200 kgs is emitted from the pig houses and uncovered tanks/lagoons and deposited within a few kilometres of the pig farm at average rates of approx. 10 kg/ha/year. Before mitigation, the NH_3

from housed pigs is projected to increase by 60% with an overall increase of approx. 2,580 kgs over 1-2 kms or 4 kgs/ha in the vicinity of the pig farm. Ammonia deposition can have adverse human health impacts and potentially lead to nutrient enrichment and acidification of surface waters and sensitive habitats leading to modifications over time.

7.11.3. Methane (CH_4) gas is produced from the digestive process of organic matter and the anaerobic decomposition of organic matter in manure. The methane dissipates to the atmosphere where it contributes to the greenhouse gas effect and is not locally deposited. The baseline level of CH_4 in the study area is 65 kgs/ha/yr. The existing pig unit produces 68.4 t of CH_4 per year which is dissipated to the atmosphere of the study area at a rate of approx. 7 kgs/ha/yr. CH_4 is projected to increase by 40% before mitigation to 96 t/pa representing an increased loading of 3kgs CH_4/ha/yr when allocated to the study area. This increase is based on standard slatted housing and the additional pigs to be housed on the site.

7.11.4. N_2O gas is released from agricultural soils due to the breakdown of chemical and organic nitrogen. Once released into the atmosphere it contributes to the greenhouse gas effect, is not locally deposited and is associated with poor air quality. The baseline level of N_2O in the study area is 13 kgs/ha/year. The existing pig production unit produces 62 kgs per year of N_2O which is dissipated to the atmosphere of the study area at a rate of approx. 0.006 kgs N_2O/ha/yr. It is projected to increase by 40% to 87 kgs per year, representing an increased loading of 0.002 kgs N_2O/ha/yr when allocated to the study area.

7.11.5. Dust particles emitted from pig houses are made airborne by the mechanical disintegration of solid particles, ranging in size from less than 1 µm to greater than 100 µm. Dust can contribute to malodour emissions. Particulate matter is also found in the emissions from pig buildings but at very low levels which are readily dissipated in the atmosphere to harmless levels.

7.11.6. At land spreading locations, odour results from the decay of pig manure on the ground and the production of aerosols during spreading. Odour nuisance from land spreading is related to weather conditions, the rate of application and proximity to sensitive receptors. Effects are generally dissipated in a few hours and are temporary. Odour emissions from pig buildings are from the pigs themselves and

from the storage of manure. Odour nuisance from pig houses is generally related to the extent of the source, weather conditions and proximity to sensitive receptors. While effects may not persist indefinitely, they are viewed as permanent. Odour may also arise from the storage of carcass material on site, particularly if not stored in sealed containers and collected regularly.

7.11.7. Very small quantities of sulphur dioxide will be produced by the combustion of fuels at the proposed development. Hydrogen sulphide may be vented from the site during slurry agitation and pumping. Carbon monoxide is also produced from the decomposition of slurry. Non-methane volatile organic compounds are produced from slurry storage, which when combined, create odour and are emitted via ventilation in very small quantities.

7.11.8. There is no change to the baseline environment in a “do-nothing” scenario. In the absence of mitigation, the ambient deposition of ammonia does not significantly affect agricultural production or food quality. There are also no known significant effects on rural dwellings on foot of the pre-mitigation additional ammonia loading. Without mitigation, the increased ammonia emissions will have no significant effects on commercial businesses, tourism services, settlements, public water sources, ecosystems or cultural heritage sites. Without mitigation, methane and nitrous oxide levels in the atmosphere within the study area will not have measurable effects on agricultural land, rural dwellings, commercial businesses, tourism services or settlements, public water services, ecosystems, or cultural heritage sites. The potential effect on global warming is imperceptible.

7.11.9. Pre-mitigation construction dust emissions are unlikely to cause significant effects on human health or adjoining ecosystems due to the short duration of the construction period. For construction workers, dust arising during demolition has a potential slight-moderate adverse effect without mitigation. Dust from pig houses can get washed into stormwater runoff, and without mitigation, has the potential to cause a not significant-slight adverse impact on receiving waters. Five dwellings are located within the contour of the recommended odour limit value, with 1 no. further dwelling located just outside this contour. A not significant- slight adverse impact will arise to these dwellings before mitigation.

7.11.10. Pre-mitigation, sulphur dioxide will be emitted in such small quantities as to have no significant effect. The pre-mitigation effect of non-methane volatile organic compounds is not significant. Hydrogen sulphide and carbon monoxide could have a moderate adverse – significant adverse impact on farm worker's health in the absence of mitigation.

7.11.11. The following mitigation measures are proposed during the construction phase:

- The use of PPE to mitigate construction and demolition dust.
- The use of licensed contractors to remove asbestos roofing.
- Demolition material will be segregated and stored in skips to minimise dust production.
- A water tanker will douse exposed soil during dry weather conditions to prevent dust nuisance and material drop heights will be minimised.
- Construction works will be confined to normal operational hours.

7.11.12. The following mitigation measures are proposed for land spreading emissions during the operational phase:

- The use of low emission spreaders such as trailing shoe and band spreaders, where possible, with low trajectory splash plates.
- Appropriate timing of pig manure applications and adherence to set-back distances of 50 m from dwellings and 200 m from sensitive receptors such as schools.
- Notification of neighbours regarding planned pig manure applications in sensitive areas.
- Keep application rates to those specified in SI 605 of 2017 (as amended) to replace chemical fertiliser.
- Reduced protein (1%) in pig diets compared to conventional diets.

7.11.13. The following operational phase mitigation measures are proposed for emissions from the pig houses:

- Surface water monitoring programme to mitigate potential adverse effects of dust on surface water.
- The use of an automatic wet feed system to reduce dust in the internal and external environment.
- Feed silos and augers will be completely housed in the new milling building (these are currently uncovered).
- Good operational practices to minimise odours.
- Storage of pig carcasses in airtight containers, which will be collected at least every 2 weeks.
- Low emission housing design.
- The use of probiotic feed additives to reduce/replace protein content in growing pig diets.
- Covering of all slurry stores.
- The use of high-powered fans in the ventilation system will aid dispersion of odour, remove harmful concentrations of dust, particulate matter and toxic gases.
- Adherence to the Code of Good Agricultural Practice for reducing Ammonia Emissions from Agriculture (2019).

7.11.14. The following operational phase mitigation measures are proposed for emissions within the pig houses:

- Administrative controls will minimise the source of and exposure of workers to dust, NH_3 and particulate matter and ensure adequate cleaning of pig houses, safety and awareness training and the provision of PPE.
- Procedures for the safe handling of slurry and warning signs will be used to protect workers from the effects of H_2S and CO.

7.11.15. The residual impacts of the proposed development are considered not significant when mitigation measures are employed. The post mitigation cumulative

effects of the proposed development and the concurrent development proposed at Carrigroe pig farm are not significant for NH_3, GHG emissions, dust, $PM_{2.5}$ and PM_{10} and other gases such as SO_2, H_2S and CO and non-methane volatile fatty acids. There is no significant cumulative impact on air (odour) on local dwellings on foot of both developments. There is no significant cumulative impact on air throughout the study area due to the spreading of pig manure.

7.11.16. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of air can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on air.

7.12. **Chapter 8: Climate**

7.12.1. The construction of the proposed development will result in an increased output of GHGs due to embodied carbon in the materials used in the construction of the pig houses. Greenhouse gases (mainly methane and nitrous oxide) will be emitted from the proposed development during its operational phase. Carbon dioxide emissions will arise from pig respiration and energy and fuel used on site. Gaseous emissions other than GHGs will be emitted in combination with lower quantities of other gases/pollutants and particles.

7.12.2. There is no change to the baseline environment in a “do-nothing” scenario. In the absence of mitigation, the existing GHG emissions will increase by 40%, representing 0.01% of national agricultural emissions. Thus, the proposed development would represent a not-significant- slight adverse impact as it is contrary to national targets and policies to combat climate change. The existing wind turbine is part of the baseline environment of the site and its contribution to reducing CO_2 emissions in the proposed development will not change. Before mitigation, a total of 16.3 t of NH_3 per year will be produced by the proposed pig farm. When compared to the national average, this will not significantly affect the existing climate. However, given that this increase is contrary to national policy, a not significant – slight adverse impact would arise without mitigation. The quantities of other gaseous and

particulate emissions produced will be insignificant relative to national production and therefore, without mitigation, the effects are not significant.

7.12.3. The mitigation measures which are proposed with respect to climate during the construction phase include:

- Exhaust emissions from vehicles operating within the site will be controlled by the contractor through the regular servicing of machinery.
- Construction areas and delivery vehicles will be sprayed with water during dry periods.
- Materials will be handled and stockpiled to minimise their exposure to wind and material drop heights will be minimised.
- Haul distances will be minimised by selecting locally sourced materials, with deliveries minimised by ordering in bulk.
- Engines will be turned off when machinery is not in use.
- Regular maintenance of plant and equipment to ensure efficient fuel consumption.
- Where possible, ground granulated blast furnace slag and pulverised fly ash will be considered as replacements for Portland cements.
- Recycled materials will be used where possible. Re-using and recycling 90% of the demolition materials on site will reduce CO_2 emissions during the construction phase.

7.12.4. The following mitigation measures are proposed for land spreading emissions during the operational phase:

- The use of low emission spreaders where possible.
- Adherence to application rates and applying manure in accordance with SI 605 of 2017 (as amended).
- Reducing protein levels in balanced diets.

7.12.5. The following mitigation measures are proposed for emissions from the pig houses during the operational phase:

- An energy audit will be carried out and an Energy Management System will be implemented.
- Machinery and motors will be switched off when not in use.
- A natural gas heating system will be installed, with lower emissions than oil.
- Thermostatic controls on all heating systems.
- Automatic controls on a modern, low-energy ventilation system.
- Night rate electricity used where possible.
- The use of high U-value materials to insulate buildings.
- Slurry tanks will be covered to minimise emissions.
- The use of low energy equipment and lighting, with timers used as standard on lighting controls.
- Good operational practice to minimise dust and particulate matter emissions.
- The use of an automatic wet feed system to reduce dust emissions.
- Adherence to the Code of Good Agricultural Practise for Reducing Ammonia Emissions from Agriculture (2019).
- An Air Quality (Odour) Management Plan which adheres to EPA Odour Emissions Guidance Note (AG9) will be implemented.
- Implementation of low emission pig housing design, which together with a reduction in crude protein, will result in a 50% reduction in ammonia emissions.
- The use of modern feed additives will improve nitrogen retention in carcasses and thereby reduce ammonia emissions.
- Continued investment in advanced genetics and improved management systems.

7.12.6. Post mitigation, the proposed development will reduce GHG emissions by approx. 16% by using low emission housing, low protein diets and covered slurry stores. As such, the residual impacts of the proposed development are considered not significant.

7.12.7. In combination, the proposed development and that which is proposed at Carrigroe pig farm will reduce CO_2 emissions by 17% compared to the existing developments. The total post mitigation emissions from both pig farms is approx. 0.02% of the national agricultural CO_2 emissions. Therefore, the cumulative impact is not significant. A cumulative reduction of 10% in NH_3 emissions will arise compared to both existing pig farms. The impact of NH_3 on climate is not significant. The next nearest pig farm and poultry houses outside the study area are considered remote enough so as not to cause significant cumulative effects.

7.12.8. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of climate can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on climate.

7.13. **Chapter 9: Material Assets**

7.13.1. The identified material assets within the study area include roads, public utilities and services, settlements, rural dwellings, commercial premises, farms, commercial forestry and woodland, tourism services and cultural heritage. Waste management facilities outside of the study area may also be affected by the proposed development.

7.13.2. The main characteristics of the proposed development which may potentially affect material assets include traffic generated on road infrastructure, potential effects on water quality and indirectly water services, the production of additional waste, impacts from emissions and nutrients and impacts on private property and loss of agricultural land.

7.13.3. There is no change to the baseline environment in a “do-nothing” scenario. A not significant-slight adverse impact may arise to the local farming environment due to the loss of additional soil nutrients. During the operational phase of the proposed development, traffic is estimated to decrease from 39 to 26 ADDT. The local road is in good condition and suitable for both agricultural traffic and heavy goods vehicles. Therefore, in the absence of mitigation, the impact of traffic on roads is imperceptible.

7.13.4. Poor practices in the application of pig manure could lead to slight adverse effects on the natural water environment, including public groundwater sources, resulting in a slight adverse impact on human health without mitigation. The impact on material assets is considered comparatively less sensitive than human health and therefore, the pre-mitigation impact is not significant – slight adverse.

7.13.5. The nearest settlements will not be impacted by the proposed development due to the separation distances arising. The land spreading of manure could potentially act as a nuisance and slurry tankers on the public road network could potentially impact on local users. In the absence of mitigation, these impacts are assessed as not significant as the land spreading of animal manures and agricultural traffic are common features of rural areas. Before mitigation, emissions will have a not significant impact on dwellings in the vicinity of the pig farm.

7.13.6. Without mitigation, there will be no effect on the power supply, traffic and road network to businesses and tourist assets within the study area during the construction and operational phases of the proposed development. There will also be no significant effect on the potential to develop private property in the study area, with the land around the pig farm being almost entirely in agricultural use and thus without significant development potential.

7.13.7. The proposed development will take approx. 1 ha of agricultural land (0.001 % of the agricultural area of Co. Waterford), with this loss of land deemed to be not significant. The proposed development will increase agricultural output, with nutrients in the pig manure deemed to be an asset for land and soils. Pre-mitigation, the proposed development will have a not significant – slight positive impact on agricultural land. Without mitigation, the proposed development will not have a significant effect on local forestry plantations and woodland or above and below ground cultural heritage sites.

7.13.8. The residual C & D waste produced from the proposed development will account for 0.01% of the southern regional annual production and is a once-off temporary effect. Waste produced during the operational phase will not increase significantly. Without mitigation, the proposed development will not have a significant effect on licensed waste facilities in the area.

7.13.9. The mitigation measures which are proposed during the construction phase of the proposed development include:

- C & D materials will be stored in approved waste contractor skips and building materials will be secured to prevent weather damage.
- Haul distances will be minimised by selecting locally sourced materials where possible and materials will be ordered in bulk to minimise deliveries.
- Materials will be recycled where possible.
- Silt and sediment control measures during construction to control run-off.
- Wheel wash facilities to prevent soiling of the road network.
- A Construction and Demolition Environmental Management Plan will be agreed with the local authority in advance of construction.

7.13.10. The mitigation measures which are proposed during the operational phase of the proposed development include:

- Adherence to SI 605 of 2017 (as amended) to maintain soil nutrient balance and to protect water resources.
- Implementation of odour management plan and other odour reduction measures (as identified in chapter 7).
- All waste contractors will have necessary waste licenses.
- Low emission pig house design will reduce GHG emissions.
- Building within the site of the existing pig farm will reduce loss of agricultural land.
- The use of low energy equipment and lighting with automatic controls and timing switches will help reduce energy consumption.
- A policy of waste reduction will be maintained to minimise waste production.
- Water usage will be minimised by maintaining a low water to feed ratio and ensuring water fixtures are in good working order.

7.13.11. Residual impacts are considered imperceptible with standard mitigation measures and there is a not significant - slight positive effect on agricultural land and farming.

7.13.12. The in-combination effects of the proposed development and that proposed at Carrigroe pig farm have been considered. The in-combination volume of construction traffic due to both pig farm developments will not increase, as the Carrigroe site will not be developed at the same time. In a worst-case scenario, the combined construction traffic would be approx. 60 movements per day (2.5% of the AADT on the R671) and therefore would not be a significant impact. The construction traffic from the Carrigroe site will not significantly affect the traffic on the entrance road to the Caherbrack pig farm. The predicted traffic volumes in the operational phase of both pig farms will reduce from 65 to 56 journeys per day for both farms. Thus, the cumulative impacts on traffic will reduce but not significantly.

7.13.13. The cumulative emissions to air from both pig farms are not significant. The cumulative impact of emissions on business and residential material assets are not significant due to the separation distances arising. The cumulative emissions from the land spreading of pig manure from both sites will not significantly affect ground water sources, commercial businesses or tourist assets in the study area. The Carrigroe pig farm site will not add significantly to potential noise impacts on businesses or tourist assets in the study area and will not add significantly to potential visual and landscape impacts at the Caherbrack pig farm and the human enjoyment of the local landscape.

7.13.14. The additional agricultural land required for both pig farms (approx. 2 ha) is not a significant effect. The usage of this agricultural land will not significantly affect the existing development potential of land surrounding the pig farms. There will be no significant cumulative effects with pig farms located outside of the study area. There is a potential for a cumulative nuisance effect when pig manure and cattle manure are applied at the same location. However, with adherence to SI 605 of 2017 (as amended), this cumulative impact is not significant. In conclusion, there are no significant residual or cumulative effects on the material asset environment.

7.13.15. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of material assets can be avoided, managed and

mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on material assets.

7.14. **Chapter 10: Landscape**

7.14.1. Landscape is considered in Chapter 10 of the EIAR. The area around the pig farm is characterised by small foothills to the south and west of the Commeragh and Monavullagh Mountains, with pasture interspersed with farmyards and commercial forestry being the dominant visual features. The characteristics of the proposed development that may potentially visually impact on landscape are the proposed pig farm buildings, which are up to 13 m in height, 105 m long and 16.9 m – 24.7 m wide. The footprint of the buildings on site will increase from 9,277m^2 to approx. 12,000 m^2.

7.14.2. The existing landscape and visual impacts are not significant – slight adverse due to the presence of the wind turbine (30 m high). There is no change to the baseline environment in a "do-nothing" scenario.

7.14.3. The "do-something" potential pre-mitigation impacts on the landscape assumes that the mitigation of dark green roof colouring and side sheeting of the feed silo/services building applies. There will be less buildings on site on foot of the proposed development, but these will have a larger footprint. The long, low design of the pig houses results in a low profile on the landscape which reduces visual impact. The services and feed silo building has a footprint of approx. 21 m x 19 m, with an eaves height of 12 m and a height to apex of 13 m. Along with the wind turbine, this will be the highest structure on site with the highest potential visual impact. However, this building reduces the visual impact by covering the metal bins and grain augers which are prominent features in the existing pig farm. While the floor area of the existing above ground structures will increase by 25% on foot of the proposed development, the footprint enclosing all over ground structures will not increase significantly.

7.14.4. The existing views of the site from the R672 to the east, are mainly confined to the wind turbine. The top of the meal silo/services building and the roofs of some of the new pig houses will also be visible. The impact is not significant. Along the local country road to the east of the pig farm, the gables and roofs of the new pig houses,

existing haybarn and wind turbine and the new feed silo/services building will be clearly visible. Compared to the existing view, there will not be a significant increase in impact.

7.14.5. The natural screening of hedgerows along public roads and fields restricts views of the proposed pig farm from the south such that only the tops of the proposed feed silo/services building, and part of the new pig house roofs will be visible. The wind turbine will continue to be the most visually dominant feature, which reflects the existing situation. As such, there will not be a significant increase in impact.

7.14.6. There is only 1 no. point on the R671 to the west of the pig farm where the proposed pig houses will be visible. From the north and west on the elevated country road running north from Ballynamult to Knockmeal, there will be views of all the proposed new buildings. The wind turbine will remain the most prominent feature on the site from these vantage points, but the fee silo/services building will also be prominent at the southern end of this road as the view of the site increases. There will not be a significant change in the visual impact for the houses located along this road due to the separation distance arising (0.5 km +) and given that the views are from a higher elevation, looking down into the Drumgorey Stream valley.

7.14.7. Travelling south along the R671 from Ballymacarbry towards the pig farm, the proposed buildings will not be visible until reaching the crossroads which is located 70 m north-west of the pig farm entrance. From here, there will be no significant change in visual impact on foot of the proposed development.

7.14.8. There will be no significant views from the scenic route which runs south through Tooranfeena and Knockboy (2.4 km east of the pig farm site). There will be no significant views from the Commeragh or Monavullagh Mountains which are located more than 6 km from the subject site. Overall, there will not be a significant increase in visual impact on the landscape in a do-something scenario.

7.14.9. Natural mitigation of the proposed development occurs on foot of the site location, which is low lying, being situated in the Drumgorey Stream valley. The proposed buildings will not break the sky-line of the views from any sensitive receptors (dwellings) – except for the wind turbine, which is part of the baseline environment. The R671 is screened by dense hedgerows and forestry at both sides. Forestry to

the south and west, along with local topography (hills) further mitigates visual impacts.

7.14.10. The mitigation measures which are proposed with respect to landscape include:

- The pig houses will have a low-profile design and a dark green roof to blend in with existing agricultural buildings in the local area.
- The services/feed silo building (13 m high) will be dark green to mitigate its visual impact.
- The existing haybarn will be painted dark green to match the proposed buildings.
- Screen planting will be provided around the pig farm site and will comprise native and indigenous trees and shrub planting as illustrated on the planning application drawings.

7.14.11. The proposed development, while larger than the existing pig farm, will not significantly change the impact on the landscape character. The pre-mitigation impact is not significant-slight adverse due to the wind turbine. The standard mitigation measures reinforce that the post mitigation residual impact is not significant – slight adverse.

7.14.12. With respect to cumulative impacts, there is only 1 no. dwelling just south of Knockraha Bridge which will have a limited view of the proposed development and the proposed development at Carrigroe pig farm. Due to the separation distance arising, the visual impact is not significant. The next nearest pig farm and poultry houses outside the study area boundary are remote enough to not cause cumulative effects on landscape.

7.14.13. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of landscape can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on landscape.

7.15. Chapter 11: Cultural Heritage

7.15.1. Cultural heritage is considered in Chapter 11 of the EIAR. The subject site is located immediately south-west of Caherbrack House (Protected Structure Ref. 14; NIAH Reg. No. 22901303) which dates to c. 1820. A limekiln is shown on the first edition 1/10560 OS survey of the site and 2 no. subsequent surveys but is no longer visible above ground. There were no other buildings on site in the 19th century and there is no suggestion in the arrangement of old field boundaries, or in the present topography, to suggest any early settlement on the site. While no monuments are recorded in the vicinity of the proposed development, 5 no. monuments are identified within 1 km of the site boundary.

7.15.2. The “do-nothing” impact would result in no changes to the existing archaeological environment. There is a possibility that material of archaeological interest will be disturbed, or further disturbed, by the proposed works, but the likelihood is considered to be small.

7.15.3. The following mitigation and monitoring measures are identified:

- Removal of topsoil, surfacing or buildings at the start of building works to be monitored by an experienced field archaeologist to record and investigate any material of likely significance.
- Ground works may be halted to allow proper investigation and in exceptional circumstances, the National Monuments Service may be called in to advise.

7.15.4. The desktop assessment indicates that there is unlikely to be any significant residual impact, but this assessment should be reviewed during monitoring. Where unknown archaeology is not recorded and dealt with appropriately, then the impact could be moderate adverse. The cumulative archaeological impact of the proposed development and earlier works on site is considered not significant.

7.15.5. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of cultural heritage can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on cultural heritage.

7.16. Chapter 12: Interactions and Cumulative Effects

7.16.1. Interactions, Cumulative Effects and Transboundary Effects are considered in Chapter 12 of the EIAR. Potential interactions between environmental factors are identified during the operational phase, the construction phase and both phases. Where no interactions arise between environmental factors, this is identified (see table 12.2). Post mitigation, no significant residual impacts are identified with respect to any of the identified interactions.

7.16.2. A summary of all the cumulative impact assessments is presented in table 12.3 of the EIAR. No additional cumulative impacts other than those already identified in each individual assessment arise when all cumulative impacts are considered.

7.16.3. I have considered this chapter of the EIAR. I am satisfied that the interactions between the factors identified earlier in the report are adequately identified and that impacts would be avoided, managed and mitigated by the measures which form part of the proposed development, the mitigation measures and through suitable planning conditions. I am therefore satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects on the environment, by virtue of the likely interactions between the identified factors.

7.17. Chapter 13: Summary of Residual Impacts & Mitigation

7.17.1. A summary of the residual impacts of the proposed development before and after mitigation is set out in table 13.1 of the EIAR. Monitoring commitments are also identified, together with a summary of mitigation measures as identified in table 13.2.

7.18. Reasoned Conclusions

7.18.1. Having regard to the examination of the environmental information contained above, and in particular, the EIAR and supplementary information provided by the developer, the reports of the Planning Authority, prescribed bodies, appellants and observers in the course of the application and appeal, it is considered that the main significant direct and indirect effects of the proposed development on the environment are, and will be mitigated as follows:

- Before mitigation, there are slight adverse impacts on human population and health due to potential impacts on ecosystem services and water supplies from poor land spreading practices. During the operational phase, there will

be strict adherence to SI 605 of 2017 (as amended) with appropriate land spreading set-back distances from public and private water sources and watercourses. Slurry storage of 30+ weeks will be provided on site to ensure pig manure is spread in suitable conditions and leak-proof slurry storage tanks with leak detection facilities will be provided.

- There are potential slight adverse impacts on ground waters and surface waters at the subject site and in the study area. Standard construction and demolition measures will be implemented to control silt and sediment run-off, to avoid leakage of harmful substances and ensure the appropriate removal of contaminated soil. During the operational phase, ongoing monitoring of ground and surface waters will be undertaken, leak-proof slurry storage tanks with leak detection facilities will be implemented, land spreading will be undertaken in accordance with the requirements of SI 605 of 2017 (as amended) and the on-site wastewater treatment system will be inspected regularly.
- Before mitigation, the proposed development will increase ammonia emissions by 51% and methane and nitrous oxide emissions by 40% compared to the existing pig farm. Post mitigation, the proposed development will result in an increase in ammonia emissions of 6 % and will reduce methane and nitrous oxide emissions by 16% compared to the existing situation. It is considered that the increase in ammonia emissions is not significant.

7.18.2. I am, therefore satisfied, that the proposed development would not have any unacceptable direct or indirect effects on the environment.

8.0 Planning Assessment

8.1. Project Splitting / Cumulative Impacts

8.1.1. The appellants highlight the changes that were made to the concurrent planning application for a pig farm development at Carrigroe at Further Information stage. It is submitted that the Board should not take the scaled back development into account, as to do so would allow the applicant to engage in project splitting. It is also submitted that both developments are a single project. In response to the foregoing, the applicant's agent submits that separate planning applications were submitted for each of the pig farm developments due to the 1.25 km separation distance arising between the sites. It is considered that this approach does not constitute project splitting.

8.1.2. Having considered the matter at hand, I am satisfied that the applicant has not sought to engage in project splitting in this instance. The proposed pig farm developments are located on separate sites, and I consider that the submission of individual planning application is not unreasonable in this context. Notwithstanding the foregoing, I am also satisfied that the cumulative impacts of the proposed development and the concurrent application for a pig farm development at Carrigroe (as amended) have been considered in the applicant's EIAR and NIS as submitted at planning application stage and revised at Further Information stage. As such, I am satisfied that the appellants' concerns in this regard are unfounded and that this point of appeal is without substance.

8.2. Impact on Caherbrack House and Caherbrack Bridge

8.2.1. The appellants submit that the proposed site access is a threat to the physical integrity of the outbuildings at Caherbrack House and will detract from the visual amenity of this Protected Structure. It is also submitted that construction and operational traffic will threaten the physical integrity of Caherbrack Bridge and a documented limekiln on the site.

8.2.2. In response to the foregoing, the applicant's agent submits that potential impacts on Caherbrack House, Caherbrack Bridge and the limekiln have been fully assessed. It is submitted that potential impacts on the agricultural building on the site of Caherbrack House will be mitigated by: (i) the laying of a 200 mm concrete surface

on the entrance road to accommodate heavy construction traffic, (ii) the erection of a fence to demarcate the farm outhouse and, (iii) the implementation of a speed limit on the entrance laneway. It is also submitted that substantial improvements will be made to the site access and that a survey of Caherbrack Bridge has confirmed it to be of sound condition.

8.2.3. The Planning Authority requested the applicant to provide an AHIA and updated EIAR to consider the impact of the proposed development on Caherbrack House, Caherbrack Bridge and the limekiln by way of Item No. 6 of the Request for Further Information. The submitted AHIA notes that Caherbrack House (a Protected Structure) is under separate ownership, that the house and its curtilage are outside of the development area and will not be physically impacted by the proposed development. No works are proposed at Caherbrack Bridge, but pig farm traffic will use the bridge during the construction and operational stages. The bridge is noted to have undergone considerable remedial works in the 20th century, stabilising the causeway approach from the south. The location of the limekiln is confirmed on high ground, one field distant from the road over Caherbrack Bridge and is shown on the first edition 1/10560 survey of c. 1840 and two later surveys. This structure is no longer visible above ground, but it is noted that a small hill on the northern edge of the kiln's footprint may include buried remains.

8.2.4. The assessment identifies that the passage of vehicles to and from the subject site has the potential to damage agricultural buildings on the site of Caherbrack House, adjoining the entrance laneway to the pig farm. Mitigation measures to address these impacts have been identified as set out in the applicant's appeal response.

8.2.5. The operational impacts on Caherbrack House will include noise, smells and vibration from traffic but these will not increase substantially over the existing pig farm emissions, and in some instances, will diminish. The ridge heights of the proposed pig houses are slightly lower than those of the existing buildings, except for the main feed room which is approx. 5 m higher and the retained wind turbine which has an overall height of 44 m. The assessment notes that the proposed feed mill is situated approx. 80 m south-west of the Protected Structure and will be partially screened by existing trees outside the site boundary and by additional proposed screen planting. As such, it is considered that the impact on the Protected Structure

will be minimal. The AHIA also recommends that the site of the limekiln should be included in the monitoring of topsoil removal from the site.

8.2.6. Having regard to the foregoing, I am satisfied that the proposed development would have no significant impact on Caherbrack House having regard to the existing pig farm development on the subject site, the separation distance arising between the pig farm and the Protected Structure and the identified mitigation measures. I am also satisfied that the inclusion of the limekiln in the archaeological monitoring of the site would be appropriate. These matters can be addressed by planning condition should the Board decide to grant planning permission for the proposed development.

8.2.7. A Bridge Assessment Report on Caherbrack Bridge as prepared by Ryan Hanley Ltd was also submitted in response to Item No. 6 of the Further Information Request. The report notes that this structure is a two-span masonry arch bridge which carries the local road over the Drumgorey Stream. The bridge is not afforded any statutory protections under the National Monuments Acts or the Planning and Development Act. The bridge has no defects of significance, has good geometry, and is well maintained. The assessment confirms that no weight restriction need apply to the bridge.

8.2.8. In my opinion, the proposed development would not result in any undue negative impacts on Caherbrack Bridge. Notwithstanding the foregoing, I consider that appropriate measures to protect the bridge during the operational and construction phases of the project should be agreed in advance with the Planning Authority and I note the recommendations of the Conservation Officer in this regard. This matter can be addressed by condition in the event the Board decides to grant planning permission for the proposed development.

8.3. **Ground Water Impacts**

8.3.1. The appellants raise a number of concerns regarding potential ground water impacts on foot of the proposed development including: (i) there is significant groundwater vulnerability around the site and a high probability that the proposed wastewater discharge would be directed to bedrock rather than achieve polishing in the subsoil, (ii) the protection of groundwater cannot be ensured by a planning condition, (iii) much of the information in the EIAR is outdated and the established baseline does not reflect current groundwater quality conditions, and (iv) more recent quality

assessments were carried out after a period of low stocking numbers, and therefore, do not reflect historical pig numbers and the volume of slurry generated.

8.3.2. The appeal submission from The Concerned Residents of Touraneena & Ballinamult includes Hydrology & Hydrogeological Observations on the proposed development as prepared by Parkmore Environmental Services (Appendix II refers). A copy of this report is also appended to the appeal submission from Noel & Kathleen Reynolds. In summary, the report highlights the following concerns with respect to groundwater:

(i) Much of the information used in the EIAR is outdated. The groundwater quality data is from 2013 and may have no bearing on the nitrate levels currently in the wells at Caherbrack.

(ii) Unclear values presented in fig. 6.5 of the EIAR (groundwater results at the existing pig farm), which suggest the nitrate levels significantly exceed guideline values. The 'apparent' exceedances in nitrate levels in groundwater at the subject site put the 'good' status of the Knockmealdown groundwater body at risk.

(iii) A raised polishing filter rather than a polishing filter below ground level may be more appropriate to treat wastewater on the site and to reduce the impact on groundwater quality.

(iv) Groundwater analysis undertaken in 1990 of a domestic well located c. 500 m upgradient of the neighbouring Carrigroe pig farm but downgradient of land-spreading areas, indicated that the water supply was contaminated by slurry and had a high nitrate level.

(v) The proposed development will increase pressure on groundwater via sewage discharges to groundwater, potential leaks from slurry storage facilities and from the land-spreading of pig slurry.

8.3.3. In responding to the grounds of appeal, the applicant's agent submits that the quantity of groundwater which will be used by the proposed development will not change significantly and will not adversely affect local supplies. It is also submitted that the EIAR and NIS provide a comprehensive baseline description of the water environment. It is noted that the pig farm has been in existence for 40 years and there is a high degree of certainty that the baseline assessment captures any impacts of the existing development. It is submitted that the replacement of the earth-banked lagoons with concrete slurry storage tanks with leak detection facilities

will improve the ability to monitor the groundwater quality under the tanks and result in a higher degree of certainty of the integrity of the slurry stores. It is also submitted that the spread lands have been assessed in their entirety for risk to groundwater from land spreading, with all unsuitable areas excluded. The applicant's agent also acknowledges that the proposed pig farm will have to comply with an EPA license and all of the standard monitoring requirements within such licenses.

8.3.4. In considering the appellants' concerns, I note that it is proposed to install a packaged wastewater treatment system and polishing filter on the subject site adjacent to the eastern site boundary (Drawing No. WTS01-001 refers). The planning application was lodged before 7th June 2021, and as such, the EPA's 2009 Code of Practice for Domestic Wastewater Treatment Systems applies.

8.3.5. The revised Site Characterisation Form which accompanied the applicant's Further Information response categorises the underlying aquifer as locally important and of extreme vulnerability. The groundwater protection response is identified as R2 and as such, the installation of an on-site wastewater treatment system is acceptable, subject to normal good practice.

8.3.6. The 3 no. trial holes were excavated outside of the proposed percolation area and examined over a 48-hour period. A clay (loam) soil was recorded between 0.1 -0.4 m and sand silt (coarse loamy) soil with a high percentage of stones (sub-angular sandstone 2-6 mm) between 0.5 – 2.0 m. Water was recorded at the base of the trial hole at a depth of 2.0 – 2.1 m. A T-test result of 20.14 was recorded, which confirms that the site is suitable for the development of a septic tank system or a secondary treatment system discharging to ground water. The applicant proposes to install a packaged wastewater treatment system and polishing filter of suitable material with a minimum thickness of 900 mm of free draining unsaturated soil between the point of infiltration of the effluent and the water table. I note that the layout of the proposed wastewater treatment system and percolation area complies with the minimum separation distances for all potential targets. I also note that the size of the percolation area (37.5 m^2) complies with the requirements of table 10.1 of the Code of Practice. Having regard to the information provided with the application, I am satisfied that the proposed packaged treatment system would be acceptable on the site for the purposes of wastewater treatment.

8.3.7. While I acknowledge the information provided by the appellants regarding the contamination with slurry of a domestic well, I note that this event occurred more than 30 years ago and that the well is located to the north of the neighbouring Carrigroe pig farm site. In my opinion, this matter cannot reasonably be considered in the adjudication of this appeal case. Potential groundwater impacts arising from the land spreading of pig manure is considered further in Section 8.9 (Appropriate Assessment) of this report.

8.3.8. I also acknowledge that the groundwater quality results for the subject site (as presented in Section 6.3.2 of the EIAR) are somewhat outdated as identified by the appellants, relating to the years 2008-2013. I agree that the inclusion of more recent data would have been preferrable in this instance. However, I also note that the pig farm has accommodated reduced pig numbers in recent years on foot of the sale of the property by the previous owner. Having visited the subject site and having regard to the dilapidated condition of the existing buildings and the existing earth-banked, open slurry lagoons, on balance, I consider that the proposed development would serve to modernise and significantly improve the existing pig farm buildings and slurry storage facilities. Slurry will be stored in purpose-built concrete storage tanks with leak detection facilities, which will increase the ability to monitor water quality beneath the tanks. I agree with the applicant's agent that this arrangement will significantly increase the integrity of the slurry stores compared with the existing arrangement. As also highlighted by the applicant's agent, the development will require an IPPC license, which will include a requirement for groundwater monitoring.

8.3.9. As such, I am satisfied that potential impacts to groundwater can be appropriately managed and monitored in the event the Board grants planning permission for the proposed development.

8.4. Surface Water Impacts

8.4.1. The appellants express concerns that water quality sampling downstream of the site would only be required for a 3-year period. It is submitted that all environmental monitoring should be undertaken at least quarterly. It is considered that: (i) much of the information presented in the EIAR is outdated and the established baseline does not reflect current surface water quality conditions, (ii) more recent quality

assessments were carried out after a period of low stocking numbers, and therefore, do not reflect historical pig numbers and the volume of slurry generated, (iii) outdated Water Framework Directive information has been presented regarding surface water status and the risk to water quality, and (iv) soiled water will discharge into the Drumgorey Stream.

8.4.2. The appeal submission from The Concerned Residents of Touraneena & Ballinamult includes a report entitled “Hydrology & Hydrogeological Observations” as prepared by Parkmore Environmental Services. This report submits the following with respect to surface water quality:

(i) Site-specific surface water assessments undertaken in the land spreading area in 2019 were undertaken after a period of low stocking numbers on both pig farms. As such, the results do not reflect historical pig numbers, or the numbers proposed and do not demonstrate that the development is currently having no negative effects on water courses.

(ii) EPA Annual Environmental returns show that 3,864 m^3 and 2,377 m^3 of slurry was produced on the site in 2018 and 2019 respectively. Thus, the Q values are not reflective of the proposed 19,500 m^3 of slurry which will be produced in the redeveloped farm and the concurrent pig farm development which is proposed at Carrigroe.

(iii) No recent site-specific surface water quality samples were collected and presented in the EIAR. Water quality data presented for the Drumgorey Stream dates from 2008 to 2014, which is now 7-13 years old and may have no bearing on current baseline water quality in the river.

(iv) Q-value data presented in table 6.8 (Drumgorey Stream Parameters with River Waterbody Status 2010-2015) presents data from the Finisk River, located 170 m upstream of the confluence with the Drumgorey Stream and from the bridge upstream of Ballinamult Bridge, which is a further 830 m upstream. Neither of these sampling points is impacted by surface water from the Drumgorey Stream and as such, is not representative of the Drumgorey Stream or surface water quality downstream of the pig farms.

(v) The EIAR presents outdated/incorrect WFD data in relation to surface water ‘Status’ and ‘Risk’ – the Drumgorey Stream and Finisk River downstream of its

confluence with the Drumgorey Stream, have declined in quality since the WFD review and this is not acknowledged.

(vi) Site-specific water quality assessments completed in the Drumgorey Stream by Waterford County Council during 22nd Oct 2020 – 26th April 2021 indicates that the chemical status of surface water downstream of the existing pig farms is poor, with ammonium levels being 8 – 9 times more than the Surface Water Regulations 'Good' status threshold value in Feb and March 2021. Excessive plant growth in the Drumgorey Stream downstream of the pig farms confirms the enriched nature of this surface water.

(vii) Four surface water samples were collected from the Drumgorey Stream downstream of the subject site between 25th February and 22nd April 2021, with high levels of E. Coli and Enterococci detected in all four samples. It is submitted that these high counts are likely related to the discharge of effluent from the existing pig farm development.

8.4.3. In responding to the grounds of appeal, the applicant's agent submits that the EIAR and NIS provide a comprehensive baseline description of the surface water environment. It is submitted that the pig farm has been in existence for 40 years and there is a high degree of certainty that the baseline assessment captures any impacts of the existing development. It is considered that the baseline water environment, supplemented by the 7 Q samples taken by Ash Ecology and Environmental in 2019, includes the impact of the existing pig farm and that the proposed attenuated storm water system represents an improvement on the existing handling system. There will be no soiled yards in the proposed development, with all pig walkways being slatted and covered. The slurry extraction point will have a small, raised slurry apron which will slope back to the tank. Pig carcasses will be stored in purpose-built sealed skips.

8.4.4. In considering this issue, I note that section 6.3.3.3 of the applicant's EIAR states that there are no EPA surface water quality monitoring stations on the Drumgorey Stream. The most representative recently monitored (2018) EPA station is identified on the Finisk River at station 'Br u/s Ballinamult Bridge' which recorded a Q4 – Good Status and which has not changed since 1990. I have reviewed EPA mapping of national water monitoring station locations, and as identified by the appellants, I note

that the Drumgorey Stream does not flow into the Finisk River, and as such the data which is presented for station 'Br u/s Ballinamult Bridge' is not representative of surface water quality in the vicinity of the existing pig farm.

8.4.5. Section 6.3.3.3, Chapter 6 of the EIAR states that monitoring of the Drumgorey Stream is required at the Caherbrack pig farm site as an IPPC licence condition since 2008. Figure 6.13 illustrates the water analysis results for nitrates and NH_3 for the years 2008, 2012, 2013 and 2014, with levels noted to be generally acceptable. More recent monitoring results are not included.

8.4.6. More recent water quality sampling was undertaken by the applicant in October 2019 and December 2019, including a location on the Drumgorey River approx. 53 m upstream of the confluence with the Finisk River (see EIAR, Volume 2: figure 6.11B - Surface Water Baseline Environment) and downstream of the pig farm. This sample gave a result of 'Q4 – Good Status' and the applicant submits that this indicates that the existing pig farm is currently having no negative effects on this watercourse.

8.4.7. The water quality monitoring results which have been provided by the appellants identify 5 no. sampling points. Sampling points 1, 2 and 5 are located hydraulically upstream of the subject site and the neighbouring pig farm at Carrigroe. Sampling point 3 is upstream of the subject site, while sampling point 4 is downstream of both pig farms, immediately upstream of where the Drumgorey Stream joins the Finisk River.

8.4.8. The ammonium levels at sampling point no. 4 significantly exceeded the 'good' chemical threshold for 4 of the 7 sampling rounds, with significant exceedances recorded during February and March 2021. The concentration of ammonium in the Drumgorey Stream at this point on 25th February was more than 8 times the 'good' status threshold value. Phosphate levels were generally recorded as having 'good' chemical status threshold levels and where exceedances were recorded, they occurred in sampling locations upstream of the pig farm.

8.4.9. The Planning Authority has not responded to the appeal submissions, and as such, has not commented on the sampling results provided by the appellants. However, I note that following the submission of the applicant's Further Information Response, the Water Services Department had no objection to the proposed development

subject to conditions, including quarterly monitoring of stormwater and the Drumgorey River.

8.4.10. In reaching a conclusion on this point of appeal, I note that the proposed development includes an attenuated storm water system which represents an improvement on the existing storm water handling system. There will be no soiled yards in the proposed development and carcasses will be stored in purpose-built sealed skips. Slurry will also be stored in leak proof tanks, compared with the existing uncovered lagoons. I also note that pig manure take-off points will be concreted and pig walk-ways will be slatted and concreted with the run-off drained to the slurry tanks. Mitigation measures are also identified to address potential impacts to water during the construction phase.

8.4.11. On balance, given the significantly dilapidated condition of the existing pig farm buildings on the site, the improvements which are proposed to the animal accommodation and associated buildings and systems, including the surface water management system, and that surface water quality within the Drumgorey Stream will be subject to monitoring by way of an IPPC license, I am satisfied that this matter can be satisfactorily managed to ensure no undue negative impacts arise in this regard.

8.5. Impacts on Local Community, Tourism and Local Businesses

8.5.1. The appellants submit that the proposed development would impact adversely on the vision of sustainable rural communities and rural tourism presented in the County Development Plan. It is also submitted that the proposed development would be inconsistent with development plan policies which promote walking and cycling in rural areas and that increased traffic, malodour, dust and noise will threaten the attractiveness of the local community, damage local businesses dependent on tourism and significantly impair the enjoyment of local amenities. The appellants consider there are disease and / or biosecurity risks of importing pig slurry onto farms and that communicable disease outbreaks are possible as a consequence of the proposed large number of confined pigs being imported into the region. It is also submitted that the proposed development would result in a loss of local employment.

8.5.2. In responding to the grounds of appeal, the applicant's agent submits that local environmental emissions will be reduced, and as such, it is not correct that the

proposed development will have a negative impact on tourism. It is considered that none of the risks to human health which have been identified by the appellants have been substantiated. It is submitted that there are no significant risks to human health, there are no high antibiotic residues in pig manure and that dust emissions from pig buildings are not a public health issue. It is further submitted that there are no real risks from land spreading and there is no significant risk of pig diseases spreading to humans. The applicant acknowledges that jobs on site will reduce from 7 to 3, but states that all jobs would be lost without the required investment in the existing pig farm.

8.5.3. In considering the potential noise impacts of the proposed development, I note the EIAR states that construction activities will generate additional noise levels of 52-60 dBs LAeq at 100 m from some machines. Rock breaking may also be required on site which could increase noise levels to 68 dBS LAeq at 150 m. TII guidelines recommend a noise level of 60 dBs LAeq at the façade of the nearest dwelling(s). There is 1 no. dwelling within 90 m of the site and noise levels will be acceptable post mitigation. Noise levels will be below 60 dBs LAeq at all other dwellings at 400 m+. Machinery working on site during the operational phase will generate similar noise levels to construction machinery but for shorter durations. At a distance of approx. 100 m from the proposed feed mixing building and the pig manure extraction points, and due to the short duration of these activities, there will be no significant impacts on the nearest dwelling.

8.5.4. During the operational phase, the frequency of manure pumping will reduce slightly. There will be no significant change arising from machinery operations on site. Noise emanating from the new pig houses will dissipate significantly between the site boundary and nearest dwelling (90 m from site boundary). The ad-lib feeding system in the new pig houses will eliminate peak noise events associated with timed feeding. There will be no significant increase in noise levels at sensitive noise receptors. The effects of noise emanating from the pig farm or from land spreading will not significantly affect the wider community in the study area.

8.5.5. A range of noise mitigation measures are proposed during the construction and operational phases of the proposed development including PPE for construction workers and the use of noise screening in the event of rock breaking, with advance notice to adjoining landowners. Noise impacts will be reduced during the operational

phase as there will be no operational noises outside of normal working hours. Having regard to the foregoing, in my opinion, no significant noise impacts would arise to the local community, including local businesses and tourism assets, on foot of the proposed development.

8.5.6. There is the potential for dust emissions to arise during the demolition of the existing pig buildings and the construction and operation of the proposed development. In the absence of mitigation, the potential impact of dust on the health of workers during the construction and operational phases is slight – moderate adverse. Air emissions from the pig houses contain dust and harmful pathogens. However, without mitigation, the dispersion of the exhaust from the pig houses means that there are no significant health effects outside the pig houses.

8.5.7. In considering the potential dust impacts of the proposed development, I note that a water tanker will douse soil during dry weather to prevent dust nuisance during the construction phase. Construction contractors will be required to have a safety statement and active safety policy for workers, who will be provided with PPE for dust effects. In the event planning permission is granted in this instance, I note that the pig farm must apply and operate under the conditions of an EPA licence, which may include conditions relating to dust monitoring. In my opinion, no significant dust impacts would arise on foot of the proposed development.

8.5.8. The EIAR includes an odour model with odour impact contours to identify potential impacts to 39 no. neighbouring residential properties within 1 km of the site (as illustrated in Vol. 2, Chapter 7, Fig. 7.3). While the appeal submission from Wild Ireland Defence states that there are more than 70 houses within 1km of the site, I note that no mapping has been provided to support this position.

8.5.9. One dwelling (Caherbrack House) is located within the identified odour limit contour for the existing pig farm. It is acknowledged that the uncovered slurry lagoons likely increase this contour. Before mitigation, 5 no. dwellings are located within the identified odour limit contour, with a further 1 no. dwelling located just outside, representing a not significant - slight adverse impact.

8.5.10. The following mitigation measures are proposed for odour during the operational phase of the proposed development: (1) timing of pig manure application e.g. early in the day/week, (2) the automatic wet feed system will reduce dust levels in the

internal and external environments, which in turn will mitigate odorous compounds attached to dust particles, (3) pig carcasses will be stored in air-tight containers and collected at least every 2 weeks , (4) low-emission pig house design and reduced protein in pig diets will reduce pre-mitigation odours by 40%, (5) covered slurry stores will reduce odour impacts, (6) good operational practices including high cleanliness standards, reduced manure storage levels in summer months and the use of an odour management plan, (7) high powered fans in the pig house ventilation system will aid dispersion of odour. An Odour Management Plan is provided in Vol. 2, Appendix 4 of the EIAR.

8.5.11. The proposed development will have a greater odour impact compared with the existing pig farm but will adversely affect 1 no. dwelling. The odour impact, as expressed in the number of houses affected, will not change significantly from the existing farm. With mitigation, the odour impact of the proposed development will not be significant. While land spreading of manure has the potential to case nuisance, the study area is a predominantly rural area, within which land spreading is common and transitory. Having regard to the foregoing, including the existing operational pig farm use on the site, I am satisfied that no significant odour impacts would arise on foot of the proposed development which would warrant a refusal of planning permission in this instance.

8.5.12. In considering the appellants' concerns regarding the loss of local employment, I note that the number of jobs will decrease from 7 to 3. Section 3.5.3.3 of the EIAR states that without the required investment in the existing pig farm, the existing jobs are in jeopardy. It is also identified that the 3 retained jobs on the pig farm would sustain 18-21 jobs in the wider agri-business community. The proposed construction costs (€3 million) would also be of considerable economic value, creating 36 full time job years. Having regard to the foregoing, I am satisfied that the employment impacts arising on foot of the proposed development, would be acceptable.

8.5.13. Potential human health impacts of the proposed development are considered in Chapter 3 of the EIAR (and other chapters as relevant), which states that, in the absence of mitigation, health impacts on the study area community are imperceptible due to the spread of pathogens in pig manure. Air emissions from the pig houses contains dust and harmful pathogens. In the absence of mitigation, the dispersion of the exhaust from the pig houses means that there are no significant health effects

outside of the houses. A number of operational phase mitigation measures are identified with respect to potential local human health effects, including, adherence to SI 605 of 2017 for the application of organic manures, the land spreading of manure which kills harmful pathogens through exposure to sunlight and weathering, and low trajectory spreading, which minimises aerosol production and reduces the risk of spreading pathogens. In my opinion, having regard to the mitigation measures which are proposed, the established nature of this agricultural activity, which is typical of rural areas, I am satisfied that no significant health impacts would arise on foot of the proposed development.

8.5.14. In conclusion, while I note the appellants have benefitted from the reduced operation of the pig farm in recent years, I also note it is a long-established use at this location. I acknowledge that some dust, odour and noise impacts will arise to the local community on foot of the proposed development. However, I do not consider that such significant impacts would arise which would warrant the refusal of planning permission in this instance. I further note that, if the Board grants planning permission for the proposed development, an IPPC licence will be required from the EPA which will identify monitoring of environmental emissions as appropriate. Having regard to the foregoing, I am satisfied that the proposed development would not have any significant impact on the local community, local businesses and tourist assets with reference to noise, dust, odour and human health impacts.

8.6. Site Access / Traffic Impacts

8.6.1. The appellants submit that the pig farm access junction proposals are not in accordance with the Planning Authority and TII development standards for rural road layouts. It is also submitted that increased traffic will hinder the ability of the local community to undertake safe walking and cycling trips.

8.6.2. The appeal submission from The Concerned Residents of Touraneena & Ballinamult includes a Roads, Traffic and Access Appraisal as prepared by Malachy Walsh and Partners Engineering and Environmental Consultants. This appraisal states that:

(1) The inadequate access junction sight visibility splay distances along the L5074 would increase the risk of exiting vehicles pulling out into the path of vehicles on the L5074.

(2) The inadequate stopping sight distances along the L5074 on the approaches to the proposed development access junction could result in potential collisions between vehicles on the L5074 and vehicles accessing the proposed development.

(3) The inadequate sight visibility splay distance to the south along the R671 from the L5074 junction would increase the risk of right-turning exiting vehicles pulling out into the path of northbound vehicles on the R671.

(4) The inadequate stopping sight distance northbound along the R671 on approach to the L5074 junction could result in potential collisions between northbound vehicles on the R671 and vehicles turning right from the L5074. Other northbound vehicles on the R671 waiting behind development generated vehicles waiting to turn right to the L5074 and the proposed development, could be subject to rear-end type collisions from northbound vehicles.

(5) There will be a 15% increase in AADT volumes generated by the proposed development access junction compared with previous operations, representing an intensification of heavy vehicle traffic generation and heavy vehicle turning movements at a sub-standard access junction.

8.6.3. In response, the applicant's agent states that traffic generated by the proposed pig farm will reduce, as the existing 1200 sow breeding operation will be replaced by a finishing unit. It is submitted that the volumes of traffic generated by the proposed development and the Carrigroe pig farm will not significantly change total traffic on the local roads. It is also submitted that the site access will be significantly improved. It is considered that the proposed site traffic will not increase journey times or increase the risk of collisions as asserted by the appellants.

8.6.4. The Planning Authority requested Further Information in relation to the traffic impacts arising on foot of the proposed development, including total movements during the construction and operational phases, the nature of all vehicle types and associated tonnages, the timescale of construction works and associated traffic data, traffic associated with the stocking and establishment of the facility and for 1 no. full operational year, and traffic management proposals to ensure no conflicts of traffic movements arise (Item No. 3 of RFI refers). The Planning Authority also requested the applicant to demonstrate that the required sightlines could be achieved at the site

entrance (Item No. 4 of the RFI request refers). Item No. 6 of the RFI sought proposals for the provision of a bound surface on the site access road.

8.6.5. The applicant's response to the foregoing states that the construction of the proposed development will comprise 7 no. phases over a period of 12-18 months. The number of trips arising and the types of vehicles which will be required in each phase are identified. Peak traffic movements are also identified. The average traffic over the construction period is 30 movements per day.

8.6.6. The following traffic management measures are identified during the construction phase: (1) provision of 1 no. passing bay approx. 80 m back from the site entrance on the L5074 to allow conflicting traffic to pass, (2) an on-site speed limit of 10 km/hr to reduce noise and dust and increase traffic safety, (3) requirement to yield to oncoming traffic at the site entrance to enable traffic on the L5074 to enter the site quickly, (4) the application of a concrete surface to the access lane to minimise dust and facilitate all types of traffic, (5) provide a flag man at the site entrance during peak concrete pouring, (6) the sequenced arrival of concrete trucks, with other materials deliveries postponed to minimise site traffic, (7) the erection of sheds/buildings will not coincide with peak concrete pouring activity.

8.6.7. The annual average daily traffic on the L5074 is estimated as 17,525 movements, of which 9,495 is accounted for by proposed pig farm traffic. In the proposed development, an average annual daily traffic of 26 movements is predicted on the L5074, with a further 22 movements for general, public use of the road (total 48 movements). Outside of the operational hours of the pig farm, there will be very little traffic to the site. Slurry tanker traffic movements will vary from 0 per hour in the winter period to approx. 1 per hour in the peak season of May/June. Overall traffic levels will reduce from 39 movements per day in the existing breeding unit to 26 movements per day in the proposed finisher development.

8.6.8. The following traffic management measures are identified during the operational phase: (1) one passing bay will be provided 80 m back from the site entrance on the L5074 to allow conflicting traffic to pass, (2) speed limit signage to reduce traffic speeds within the site, (3) yield to oncoming traffic at the site entrance to enable traffic on the L5074 to enter the site quickly, (3) laneway surface will be concrete to minimise dust and facilitate all types of traffic.

8.6.9. I acknowledge the concerns which have been raised by the appellants concerning traffic impacts arising on foot of the proposed development, including potential impacts to motorists, cyclists and pedestrians utilising the same local road network. However, I note that the construction phase traffic will be temporary in nature. In considering the traffic which will arise during the operational phase of the development, I note that the overall traffic movements will decrease from 39 to 26 movements per day. I also note that the existing pig farm has been operational at this location for more than 40 years, albeit at a reduced operational level in recent years. As such, the traffic which will be generated on foot of this rurally-based enterprise, will generally reflect the existing baseline traffic volumes on the local road network.

8.6.10. Having regard to the foregoing, I consider that the traffic which would arise during the construction and operational phases of the development would be acceptable at this location, subject to the agreement of final traffic management proposals with the Planning Authority. This matter can be addressed by way of condition should the Board decide to grant planning permission for the proposed development.

8.6.11. In considering the appellants concerns in relation to the configuration of the site access, I note that Drawing No. J684A-PL01-001 (Sightline Survey – Local Access Road Junction with Regional Road) as submitted to the Planning Authority demonstrates a sightline of 55 m in a north-westerly direction, with a maximum sightline of 35 m in a south-easterly direction. It is proposed to provide a concrete surface to the entire entrance splay area and the entirety of the site access road. The applicant submits that the proposed entrance enhancements and the anticipated reduction in traffic volumes, will result in improved traffic safety on foot of the proposed development.

8.6.12. I acknowledge that the development management standards of the Waterford County Development Plan 2011-2017 (as extended) identify a sightline requirement of 55 m where a site access adjoins a local road. However, I further note that there is an existing entrance to the operational pig farm at this location. I also note that the proposed access arrangements were discussed and agreed in principle with the Planning Authority's Area Engineer prior to the applicant's Further Information submission. As such, I am satisfied that the proposed access arrangements would be acceptable in this instance.

8.7. Climate Change Impacts

8.7.1. The appellants submit that it is not possible to ensure the proposed pig farm can operate in a climate neutral manner, which is a key consideration given the recent approval of the Climate Action and Low Carbon Development (Amendment) Bill, 2021. The applicant's agent submits that the proposed development seeks to upgrade the existing pig farm to achieve the highest environmental and production performance standards and to ensure it conforms to any EPA licence.

8.7.2. The climate impacts of the proposed development are considered in chapter 8 of the EIAR. In the absence of mitigation, the existing GHG emissions are predicted to increase by 40%, representing 0.01% of national agricultural emissions. In light of national GHG reduction targets, the unmitigated impacts would represent a not significant – slight adverse impact. Approx. 10.8 tons of ammonia is produced by the existing development and without mitigation, 16.3 tons will be produced by the proposed pig farm. In light of national emission limits for NH_3, this represents a not significant – slight adverse impact. The quantities of other gaseous and particulate emissions produced will be insignificant relative to national production and therefore, without mitigation, the effects are not significant.

8.7.3. The EIAR includes climate impact mitigation measures during the construction phase of the development, and in relation to land spreading and emissions from the pig houses during the operational phase. Post mitigation, the proposed development will reduce GHG emissions by approx. 16% by using low emission housing, low protein diets and covered slurry stores. The residual climate impacts of the proposed development are considered not significant. In combination, the proposed development and that which is proposed at Carrigroe pig farm will reduce CO_2 emissions by 17% compared to the existing developments. The post mitigation emissions from both pig farms are approx. 0.02% of the national CO_2 agricultural emissions. The cumulative impact is not significant. A cumulative reduction of 10% NH_3 emissions will arise compared to the 2 existing pig farms and the impact of these emissions on climate is not significant.

8.7.4. Having regard to the foregoing, I am satisfied that the climate impacts of the proposed development has been satisfactorily addressed by the applicant. While I acknowledge that GHG emissions will arise on foot of the proposed development, I

note that these represent an improvement on those arising from the existing, operational pig farm. Post mitigation, the emissions arising on foot of the proposed development are not significant. Having regard to the foregoing, I consider that the climate impacts arising on foot of the proposed development would not be so significant to warrant a refusal of planning permission in this instance.

8.8. Use of BTA / BATNEEC

8.8.1. The appellants submit that there is no evidence that biofiltration and / or chemical scrubbing were considered to mitigate threats to human health on foot of the proposed development. It is also submitted that the EPA Batneec Guidance Note for the Pig Production Sector has not been adequately considered. In response to the foregoing, the applicant's agent submits that the incorporation of BAT into the proposed development was considered in response to Item No. 8 of the Request for Further Information.

8.8.2. Having reviewed this material I am satisfied that this issue has already been addressed by the applicant. I further note the submissions from the EPA, which state that, in the event the Agency grants an IPPC licence for the proposed development, it will incorporate conditions to ensure appropriate national and EU standards are applied and that Best Available Techniques (BAT) are used in the carrying out of the activities. Having regard to the foregoing, I am satisfied that this issue will be managed by the EPA outside of the planning application process.

8.9. Appropriate Assessment (AA) Screening

8.9.1. The subject site is not located within or directly adjoining any Natura 2000 site. Therefore, there is no potential for **direct impacts** on any such site to occur. The proposed development is not an ex-situ site for any Qualifying Interest/Special Conservation Interest populations of any European sites. The applicant's AA screening report notes that there are 4 no. SACs and 1 no. SPA within 15 km of the subject site as follows:

- Blackwater River (Cork/Waterford) SAC (site code: 002170) – located approx. 0.7 km to the south at its closest point.
- Lower River Suir SAC (site code: 002137) – located approx. 5 km to the north at its closest point.

- Nier Valley Woodlands SAC (site code: 000668) – located approx. 7 km to the north-east at its closest point.
- Comeragh Mountains SAC (site code: 001952) – located approx. 7 km to the east at its closest point.
- Dungarvan Harbour SPA – located approx. 14 km to the south-east at its closest point.

8.9.2. In addition to the foregoing, I note that Blackwater River (Cork/Waterford) SAC is connected to Blackwater Estuary SPA (site code: 004028) at its southern-most extent, approx. 25 km to the south-west of the subject site. In my opinion, this Natura 2000 site should also be screened in for assessment.

8.9.3. The subject site is hydrologically connected to Blackwater River (Cork/Waterford) SAC via site drainage to the Drumgorey Stream, which flows to the Finisk River which forms part of the SAC. In considering the potential for **indirect effects** to occur to this site, I note that the proposed development has the potential to result in deterioration of water quality downstream, through increased silt levels in surface water run-off and the inadvertent spillage of pollutants from fuels and hydraulic fluid which could introduce toxic chemicals to the aquatic environment via surface-water run-off or groundwater contamination. The inappropriate storage of pig manure also has the potential to impact on surface water and groundwater resources. In the absence of mitigation, such impacts could affect aquatic fish and plant species and have negative impacts on surface and groundwater quality. The Finisk River could also be affected by invasive species if introduced to the subject site during the construction and operational phases. As such, the proposed development has the potential to have likely, significant indirect effects on Blackwater River (Cork/Waterford) SAC, and therefore the carrying out of an Appropriate Assessment is required in relation to this site.

8.9.4. Blackwater River (Cork/Waterford) SAC is connected to Blackwater Estuary SPA (site code: 004028) at its southern-most extent, approx. 25 km to the south-west of the subject site. The qualifying interests and conservation objectives for this site are set out in Appendix 1 of this report. In applying the ‘source-path-receptor’ model in respect of potential indirect effects, and having considered the relevant conservation objectives and qualifying interests, I consider that Blackwater Estuary SPA can be

screened out from further assessment at the preliminary stage based on a combination of factors including the intervening minimum distances, the nature of the qualifying interests of this European site, the nature and scale of the proposed development and the likely emissions arising.

8.9.5. Dungarvan Harbour SPA (site code: 004032) is located approx. 14 km to the south-east of the subject site at its closest point. The qualifying interests and conservation objectives for this site are set out in Appendix 1. In applying the 'source-path-receptor' model in respect of potential indirect effects, and having considered the relevant conservation objectives and qualifying interests, I consider that Dungarvan Harbour SPA can be screened out from further assessment at the preliminary stage based on a combination of factors including the intervening minimum distances, the nature of the qualifying interests of this European site, the nature and scale of the proposed development and the likely emissions arising.

8.9.6. The applicant's AA screening assessment also screens out Lower River Suir SAC, Nier Valley Woodlands SAC, Comeragh Mountains SAC and Dungarvan Harbour SPA based on the lack of evidence of a pathway between the subject site and each of these sites, given the distance for disturbance and the lack of a hydrological connection. In considering the foregoing, I note that the study area of the proposed pig slurry spread lands encompasses 55 townlands in the wider vicinity of the subject site. The applicant has provided maps (figures E-I which accompany the Further Information Response) to illustrate the locations where the spread lands overlap Natura 2000 sites. In addition to Blackwater River (Cork/Waterford) SAC, these include Comeragh Mountains SAC, Nier Valley Woodlands SAC and Lower River Suir SAC.

8.9.7. Exclusion zones for the land spreading of slurry within these designated areas has been identified on the above-referenced maps. However, in applying the 'source-path-receptor' model, I consider that the proposed land spreading activity has the potential to cause diffuse pollution, resulting in the deterioration of surface and groundwater quality within the identified study area. As such, I consider that the proposed development also has the potential to have indirect effects on Lower River Suir SAC, Nier Valley Woodlands SAC and Comeragh Mountains SAC, and that these sites should also be screened in for assessment.

8.10. Appropriate Assessment (AA)

8.10.1. The proposed pig farm development is not located within and does not adjoin Blackwater River (Cork/Waterford) SAC, Comeragh Mountains SAC, Nier Valley Woodlands SAC or Lower River Suir SAC, and as such, there is no potential for **direct effects** to occur to the qualifying interests of any of these designated sites during the construction or operational phases of the development.

8.10.2. The site of the proposed pig farm is hydrologically connected to Blackwater River (Cork/Waterford) SAC, and as such, has the potential to have **indirect effects** including:

(i) the deterioration of water quality downstream impacting on fish and aquatic plant species,

(ii) increased silt levels in surface water run-off and the inadvertent spillage of pollutants from fuels and hydraulic fluid could introduce toxic chemicals to the aquatic environment via surface-water run-off or groundwater contamination and the inappropriate storage of pig manure, and

(iii) the introduction and spread of an invasive species which may spread to the SAC via site drainage.

8.10.3. The conservation objectives and qualifying interests of Blackwater River (Cork/Waterford) SAC are set out in the following table.

Blackwater River (Cork/Waterford) SAC (Site Code: 002170)	
Conservation Objectives	1029 - To restore the favourable conservation condition of the Freshwater Pearl Mussel 1092 - To maintain the favourable conservation condition of White-clawed Crayfish 1095 - To restore the favourable conservation condition of Sea Lamprey 1096 - To maintain the favourable conservation condition of Brook Lamprey 1099 - To maintain the favourable conservation condition of River Lamprey

	1103 - To restore the favourable conservation condition of Twaite Shad 1106 - To maintain the favourable conservation condition of Atlantic Salmon 1130 - To maintain the favourable conservation condition of Estuaries 1140 - To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide 1220 - To maintain the favourable conservation condition of Perennial vegetation of stony banks 1310 - To maintain the favourable conservation condition of Salicornia and other annuals colonizing mud and sand 1330 - To restore the favourable conservation condition of Atlantic salt meadows (Glauco-Puccinellietalia maritimae) 1355- To restore the favourable conservation condition of Otter 1410 - To maintain the favourable conservation condition of Mediterranean salt meadows (Juncetalia maritimi) 1421 - To maintain the favourable conservation condition of Killarney Fern 3260 - To maintain the favourable conservation condition of Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation 91A0 - To restore the favourable conservation condition of Old sessile oak woods with Ilex and Blechnum 91E0 - To restore the favourable conservation condition of Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
Qualifying Interests	1029 Freshwater Pearl Mussel Margaritifera margaritifera 1092 White-clawed Crayfish Austropotamobius pallipes 1095 Sea Lamprey Petromyzon marinus 1096 Brook Lamprey Lampetra planeri 1099 River Lamprey Lampetra fluviatilis

	1103 Twaite Shad Alosa fallax 1106 Atlantic Salmon Salmo salar (only in fresh water) 1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 1220 Perennial vegetation of stony banks 1310 Salicornia and other annuals colonizing mud and sand 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) 1355 Otter Lutra lutra 1410 Mediterranean salt meadows (Juncetalia maritimi) 1421 Killarney Fern Trichomanes speciosum 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation 91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles 91E0 *Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) 91J0 *Taxus baccata woods of the British Isles (status under review)

8.10.4. The proposed spreading of pig manure also has the potential to have **in-direct** effects on the identified spread lands, which in certain identified locations, overlap with Comeragh Mountains SAC, Nier Valley Woodlands SAC, Lower River Suir SAC and Blackwater River (Cork/Waterford) SAC. The proposed spreading of pig manure also has the potential to have **in-combination effects** with the proposed spreading of pig manure from the proposed development at Carrigroe pig farm, with a combined volume of 19,500 m^3 manure arising. These impacts include the increased nutrient content of the spread lands, thus potentially increasing N and P leaching to aquifers and impacts on surface water quality arising from run-off from the spread

lands. Risks to groundwaters may arise from the misuse of pig manure, poor land spreading practices and non-adherence to SI 605 of 2017 (as amended).

8.10.5. The conservation objectives and qualifying interests of Comeragh Mountains SAC, Nier Valley Woodlands SAC and Lower River Suir SAC are set out in the following tables.

Lower River Suir SAC (Site Code: 002137)	
Conservation Objectives	1330 - To restore the favourable conservation condition of Atlantic salt meadows (GlaucoPuccinellietalia maritimae). 1410 - To restore the favourable conservation condition of Mediterranean salt meadows (Juncetalia maritimi). 3260- To maintain the favourable conservation condition of Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation. 6430 - To maintain the favourable conservation condition of Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels. 91A0 - To restore the favourable conservation condition of Old sessile oak woods with Ilex and Blechnum in the British Isles. 91E0 - To restore the favourable conservation condition of Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)*. 91J0 - To restore the favourable conservation condition of Taxus baccata woods of the British Isles*. 1029 - To restore the favourable conservation condition of Freshwater Pearl Mussel. 1092 - To maintain the favourable conservation condition of White-clawed Crayfish. 1095 - To restore the favourable conservation condition of Sea Lamprey. 1096 - To restore the favourable conservation condition of Brook Lamprey. 1099 - To restore the favourable conservation condition of River Lamprey.

	1103 - To restore the favourable conservation condition of Twaite Shad. 1106 - To restore the favourable conservation condition of Atlantic Salmon. 1355 - To maintain the favourable conservation condition of Otter
Qualifying Interests	1029 Freshwater Pearl Mussel Margaritifera margaritifera 1092 White-clawed Crayfish Austropotamobius pallipes 1095 Sea Lamprey Petromyzon marinus 1096 Brook Lamprey Lampetra planeri 1099 River Lamprey Lampetra fluviatilis 1103 Twaite Shad Alosa fallax fallax 1106 Salmon Salmo salar 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) 1355 Otter Lutra lutra 1410 Mediterranean salt meadows (Juncetalia maritimi) 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels 91A0 Old sessile oak woods with llex and Blechnum in the British Isles 91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) 91J0 Taxus baccata woods of the British Isles

Nier Valley Woodlands SAC (Site Code: 000668)	
Conservation Objectives	91A0 - To restore the favourable conservation condition of Old sessile oak woods with Ilex and Blechnum in the British Isles in Nier Valley Woodlands SAC.
Qualifying Interests	91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles

Comeragh Mountains SAC (Site Code: 001952)	
Conservation Objectives	3110 - To maintain the favourable conservation condition of Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) 3260 - To maintain the favourable conservation condition of Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation 4010 - To restore the favourable conservation condition of Northern Atlantic wet heaths with Erica tetralix 4030 - To restore the favourable conservation condition of European dry heaths 4060 - To restore the favourable conservation condition of Alpine and Boreal heaths 7130 - To restore the favourable conservation condition of Blanket bogs (* if active bog) 8110 - To restore the favourable conservation condition of Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani) 8210 - To restore the favourable conservation condition of Calcareous rocky slopes with chasmophytic vegetation 8220 - To restore the favourable conservation condition of Siliceous rocky slopes with chasmophytic vegetation 6216 - To restore the favourable conservation condition of Slender Green feather-moss (Hamatocaulis vernicosus)

Qualifying Interests	3110 Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation 4010 Northern Atlantic wet heaths with Erica tetralix 4030 European dry heaths 4060 Alpine and Boreal heaths 6216 Slender Green Feather-moss Hamatocaulis vernicosus 7130 Blanket bogs (* if active bog) 8110 Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani) 8210 Calcareous rocky slopes with chasmophytic vegetation 8220 Siliceous rocky slopes with chasmophytic vegetation

8.18. The following **mitigation measures** are proposed in relation to the **proposed pig farm development** during the construction phase:

- The proposed works will occur away from drainage ditches/watercourses and appropriate precautionary measures to prevent water pollution to the existing drainage network will be implemented.
- Best practice guidelines will be adhered to including “Control of Water Pollution from Construction, Guidance for Consultants and Contractors” and Inland Fisheries Guidelines (2016).
- Refuelling of plant equipment will not take place within 10 m of any watercourses/drainage ditches.
- Avoidance of extreme wet weather conditions during all site works.
- Eroded sediments will be retained at the impacted area, with soil exposure limited during excavation works and soils stabilised to prevent run-off of silt.
- Temporary stockpiled material will be covered to prevent run-off.
- A lined and watertight skip is to be used as the only area on site where concrete activities are permitted to wash out, including mixers, barrows and

rakes. When ready-made concrete is used, the drum of delivery lorries will return for washout to the batching plant, with only chutes washed out on site.

- Wash-down water from exposed aggregate surfaces, cast-in-place concrete and from concrete trucks will be trapped on site to allow sediment to settle out and reach neutral pH before clarified water is allowed to percolate into the ground.
- Fuelling and lubrication of equipment will be carried out off-site or in bunded areas.
- Fuels, lubricants and hydraulic fluids for equipment used in construction will be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment according to current best practice.
- Any spillage of fuels, lubricants and hydraulic oils will be immediately contained, and the contaminated soil removed from the construction site and disposed in accordance with all relevant waste management legislation.
- No vehicle or equipment maintenance work will take place in the construction site.
- Prior to any work commencing, all construction equipment will be checked to ensure that it is mechanically sound, to avoid leaks of oil, fuel, hydraulic fluids and grease.
- Measures will be introduced to minimise waste and ensure correct handling, storage and disposal of waste.
- Emergency response procedures will be put in place.
- Sediment control facilities will be regularly inspected and maintained, and any build-up of sediment cleaned regularly, ensuring only clean, uncontaminated storm water shall be discharged to the drainage system.
- Adherence to SI 605 of 2017 (as amended) with respect to on-site storage of slurry.
- The construction methodology shall follow best practice guidance to prevent the introduction of invasive plant species to the site.

- Site clearance to be carried out from the centre outwards to allow small mammals to escape.
- All hedgerows and mature trees to be retained where possible. Any planting of new trees should use native Irish tree species.
- Any mature trees that need to be felled for health and safety reasons should be left idle for 24 hours to allow any bats to escape during the evening.
- No tree felling or removal of hedgerows between 1st March and 31st August (bird nesting season).
- Environmental noise arising during construction shall be controlled in accordance with BS5228.

8.18.1. The following **mitigation measures** are proposed for **land spreading** during the **operational phase**:

- The pig farm management will use a collaborative approach with customer farmers to encourage and ensure best practices are adhered to when land spreading.
- Slurry spreading equipment will be monitored by the pig farm to ensure farmers do not use leaking equipment for spreading pig manure.
- There will be 30 + weeks manure storage on site, which will allow manure to be spread at suitable times of the year.
- Reduced protein in pig diets will reduce the level of nitrogen in the manure, thereby reducing potential NO_3 leaching.
- Adherence to application rates specified in SI 605 of 2017 (as amended).
- Maintenance of a manure register to monitor movements of slurry. The register will be available for inspection by the EPA and records will be sent to the DAFM each year.
- Monitoring by pig farm management of the localities where manure is spread to ensure nuisance or environmental nuisance is not being caused.
- A buffer zone of 25 m around all private wells, 200 m around public water sources and 15 m around karst features to protect groundwaters.

- Organic manures will not be spread between 15th October and 12th January.
- Not using upward-facing splash plate or sludge irrigator on a tanker or umbilical system for spreading organic fertiliser or soiled water.
- Not spreading from a roadway or passageway.
- Not spreading when land is waterlogged, frozen, covered with snow, flooded or likely to flood, heavy rainfall is forecast within 48 hours, on steeply sloping ground.
- Where the slope towards a surface watercourse exceeds 10%, a buffer zone of 10 m is required.
- 5m buffer zone for other water courses, increasing to 10 m for a period of 2 weeks preceding and 2 weeks following the periods when the application of fertilisers to land is prohibited as per Schedule 4 of the Regulations.
- Exclusion of SACs designated areas from land spreading areas.

8.18.2. The appellants have raised numerous concerns in relation to the potential impact of the proposed development and the associated land spreading on Natura 2000 sites. These concerns can be summarised as follows:

- The cumulative impact of the proposed development and the concurrent application for a pig farm development at Carrigroe on Natura 2000 sites must be taken into consideration.
- The land-spreading of pig slurry is an intrinsic part of the project for which planning permission is being sought and was not considered in the applicant's NIS.
- A list of farmers who have committed to take slurry from the proposed pig farm(s) has not been provided and the map of available slurry spread-lands is inaccurate and cannot be relied on.
- The nutrient levels in the surrounding intensive dairying land are already so high, that the use of further pig slurry on these lands is precluded.
- The NIS relies on but does not contain compliance with the Nitrates Regulations as mitigation for the spreading of slurry. Water catchments along

the south/south-east coasts are of concern with respect to elevated nitrogen concentrations, including the Blackwater and Suir catchments.

- The AA carried out by the Board cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the proposed works on protected sites.
- The proposed land spreading areas are hydrologically connected to Natura 2000 sites. There is a high risk that the proposed farm activities and land spreading could negatively impact downstream water bodies and their qualifying interests, including the freshwater pearl mussel.
- The NIS fails to establish a baseline for soil conditions in the proposed land spreading area and relies on assumptions that slurry spreading to date has not caused any adverse effects and those farmers receiving the slurry have and would continue to spread it, using best available methods.

8.18.3. The appeal submission from The Concerned Residents of Touraneena & Ballinamult includes Hydrology & Hydrogeological Observations on the proposed development as prepared by Parkmore Environmental Services (Appendix II refers). It is submitted that: (i) a 4 km stretch of the River Finisk SAC forms a boundary with the proposed land spreading area and that 30% of the total proposed land spreading area, including both pig farm sites, drains to the SAC, (ii) a 2km stretch of the Nier River SAC forms a boundary with the proposed land spreading area to the north, while a further 4 km stretch of the river flows through the middle of the proposed land spreading area, and (iii) a portion of the proposed land spreading area is bound by the Nier Valley Woodlands SAC.

8.18.4. It is submitted that the pig farms and land spreading areas are hydraulically connected to the downstream SACs and there is a high risk that on farm activities and runoff from land-spreading areas could negatively impact the downstream water bodies and their qualifying interests, including the freshwater pearl mussel. It is noted that the underlying aquifer is extremely important to groundwater users in the locality and is a highly sensitive receptor at risk from land spreading and activities at the pig farm. It is considered that site-specific groundwater vulnerability assessments should be undertaken in the proposed land spreading area and that land spreading

of pig slurry should only occur where there is a minimum of 1 m soil cover overlying a locally important bedrock aquifer, with a minimum of 2 m soil cover overlying a regionally important bedrock aquifer.

8.18.5. In response to these concerns, the applicant's agent submits that:

- The volume of pig slurry from both pig farm sites will not change significantly (19,828 m^3 existing v's 19,500 m^3 proposed) and the hydraulic loading of the slurry and land spreading impacts will not change significantly.
- The NIS addendum addresses the potential impacts from land spreading within the study area and all adjoining protected sites.
- Areas of unsuitable land for manure spreading have been excluded – houses, buffers around houses, public and private roads, scrub, woodland, areas with rock close to the surface, buffer zones along water courses and public water supplies, zones of contribution to public water supplies.
- The GIS data in relation to vulnerability has been mapped, with 2.2% of the land spreading area being of extreme and high vulnerability over regionally important aquifers. It is submitted that these results provide a high degree of certainty that impacts on water will not be significant, particularly as hydraulic loading from pig manure will be reduced by 14%.
- Teagasc soils information confirms that the land within the study area is suitable for the application of slurry and has adequate infiltration rates.
- The baseline water environment assessment includes the impact of the existing pig farms. There is a high degree of certainty that the volume of pig manure at the subject site will reduce significantly (11,310 m^3 existing v's 8,800 m^3 proposed). As a result, the impacts on water and biodiversity due to the hydraulic loading of the proposed pig slurry will reduce.
- The combined volume of slurry from both pig farms will be similar to the existing, and as such, there is a high degree of certainty that the hydraulic loading and impacts of land spread nutrients will not change significantly in the study area.
- Since 2015, pig herd numbers in Co. Waterford have not changed significantly, accounting for 4% of the stocking rate in the county. As such, the pig sector has

not been responsible for declines in water quality. In addition to compliance with the Nitrates Regulations, the proposed development will also have to comply with EPA license conditions.

8.18.6. The applicant's NIS has considered the cumulative, in-combination impact of land spreading arising from the subject site and the proposed Carrigroe pig farm. Other poultry houses and pig farms outside the study area are considered remote enough to not cause significant cumulative effects.

8.18.7. The cumulative, in-combination impact of land spreading is considered with respect to potential impacts on groundwater, surface water and the aerial deposition of ammonia across the identified spread lands, comprising a gross area of 9,768 ha. Section 4.4.4 of the NIS addendum (In-Combination Conclusions) states that "there are no predicted in-combination effects from run-off of slurry on spread lands and adversely affected water quality and associated qualifying interest species in the catchments of the Lower River Suir and River Blackwater SACs i.e. Lamprey, Salmon, Twaite Shad, Otter and Crayfish". I note that the Planning Authority requested that the impacts on these 2 no. protected sites be assessed under item no. 1 of the Request for Further Information.

8.18.8. Section 4.6 of the NIS addendum concludes that "the proposed works will not cause adverse impacts to the Natura 2000 sites listed below: Blackwater River (Cork/Waterford), Lower River Suir, Nier Valley Woodlands, Comeragh Mountains and Dungarvan Harbour". However, in my opinion, sufficient information has not been provided in the applicant's NIS to reach this conclusion.

8.18.9. I consider that the applicant's NIS (as amended at further information stage), does not provide a comprehensive assessment of the potential for the proposed development, and in particular the proposed land spreading of pig manure, to result in likely, significant effects on the Natura 2000 sites which fall within the identified slurry spreading study area. In my opinion, the information which has been presented is generic in nature, with no systematic analysis undertaken of the potential for impacts to arise to the qualifying interests of the designated sites which are located within the zone of impact.

8.18.10. In my opinion, it is not possible to examine and evaluate the potential effects of the project on Natura 2000 sites based on the best scientific knowledge in the field, and as such, it is not possible to determine whether or not the project would adversely affect the integrity of Blackwater River (Cork/Waterford) SAC (site code: 002170), Nier Valley Woodlands SAC (site code: 000668), Lower River Suir SAC (site code: 002137) and Comeragh Mountains SAC (site code: 001952), either individually or in combination with other plans and projects, in view of the sites' conservation objectives. As such, I consider that planning permission should be refused on this basis.

9.0 **Recommendation**

9.1. I recommend that planning permission be refused for the proposed development.

10.0 **Reasons and Considerations**

10.1. On the basis of the information provided with the application and appeal, including the Natura Impact Statement, and in light of the assessment carried out above, the Board is not satisfied that the proposed development individually, or in combination with other plans or projects, would not adversely affect the integrity of European sites Blackwater River (Cork/Waterford) SAC (site code: 002170), Nier Valley Woodlands SAC (site code: 000668), Lower River Suir SAC (site code: 002137) and Comeragh Mountains SAC (site code: 001952), in view of the site's Conservation Objectives. In such circumstances, the Board is precluded from granting permission.

Louise Treacy
Planning Inspector

26th May 2022

Appendix 1: Conservation Objectives & Qualifying Interests of Blackwater Estuary SPA

Blackwater Estuary SPA (Site Code: 004028)	
Conservation Objectives	A050 - To maintain the favourable conservation condition of Wigeon A140 - To maintain the favourable conservation condition of Golden Plover A142 - To maintain the favourable conservation condition of Lapwing A149 - To maintain the favourable conservation condition of Dunlin A156 - To maintain the favourable conservation condition of Black-tailed Godwit A157 - To maintain the favourable conservation condition of Bar-tailed Godwit A160 - To maintain the favourable conservation condition of Curlew A162 - To maintain the favourable conservation condition of Redshank A999 - To maintain the favourable conservation condition of the wetland habitat
Qualifying Interests	A050 Wigeon Anas penelope (wintering) A140 Golden Plover Pluvialis apricaria (wintering) A142 Lapwing Vanellus vanellus (wintering) A149 Dunlin Calidris alpina (wintering) A156 Black-tailed Godwit Limosa limosa (wintering) A157 Bar-tailed Godwit Limosa lapponica (wintering) A160 Curlew Numenius arquata (wintering) A162 Redshank Tringa tetanus (wintering) A999 Wetlands

Dungarvan Harbour SPA (Site Code: 004032)	
Conservation Objectives	A005 - To maintain the favourable conservation condition of Great Crested Grebe in Dungarvan Harbour SPA A046 - To maintain the favourable conservation condition of Light-bellied Brent Goose in Dungarvan Harbour SPA A048 - To maintain the favourable conservation condition of Shelduck in Dungarvan Harbour SPA A069 - To maintain the favourable conservation condition of Red-breasted Merganser in Dungarvan Harbour SPA A130 - To maintain the favourable conservation condition of Oystercatcher in Dungarvan Harbour SPA A140 - To maintain the favourable conservation condition of Golden Plover in Dungarvan Harbour SPA A141 - To maintain the favourable conservation condition of Grey Plover in Dungarvan Harbour SPA A142 - To maintain the favourable conservation condition of Lapwing in Dungarvan Harbour SPA A143 - To maintain the favourable conservation condition of Knot in Dungarvan Harbour SPA A149 - To maintain the favourable conservation condition of Dunlin in Dungarvan Harbour SPA A156 - To maintain the favourable conservation condition of Black-tailed Godwit in Dungarvan Harbour SPA A157 - To maintain the favourable conservation condition of Bar-tailed Godwit in Dungarvan Harbour SPA A160 - To maintain the favourable conservation condition of Curlew in Dungarvan Harbour SPA A162 - To maintain the favourable conservation condition of Redshank in Dungarvan Harbour SPA A169 - To maintain the favourable conservation condition of Turnstone in Dungarvan Harbour SPA A999 - To maintain the favourable conservation condition of the wetland habitat in Dungarvan Harbour SPA as a resource for the regularly-occurring migratory waterbirds that utilise it

Qualifying Interests	A005 Great Crested Grebe (Podiceps cristatus) A046 Light-bellied Brent Goose (Branta bernicla hrota) A048 Shelduck (Tadorna tadorna) A069 Red-breasted Merganser (Mergus serrator) A130 Oystercatcher (Haematopus ostralegus) A140 Golden Plover (Pluvialis apricaria) A141 Grey Plover (Pluvialis squatarola) A142 Lapwing (Vanellus vanellus) A143 Knot (Calidris canutus) A149 Dunlin (Calidris alpina) A156 Black-tailed Godwit (Limosa limosa) A157 Bar-tailed Godwit (Limosa lapponica) A160 Curlew (Numenius arquata) A162 Redshank (Tringa totanus) A169 Turnstone (Arenaria interpres) A999 Wetland and Waterbirds