Appropriate Assessment Screening Report & Natura Impact Statement on behalf of AES

Proposed Increase In Waste Acceptance Materials Recovery Facility Cappancur County Offaly.

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Project: AA Screenings and Natura Impact Statement for Increase In Waste Acceptance Materials Recovery Facility Cappancur County Offaly.

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Executive Summary

DixonBrosnan was commissioned by Advanced Environmental Solutions (Ireland) (AES) to undertake an Appropriate Assessment Screening (AA Screening) and Natura Impact Statement (NIS) for a proposal to increase the amount of waste acceptance at their Recovery Facility located in Cappancur County Offaly.

The facility operates under planning permission issued by Offaly County Council (PL2/17/240) and an Industrial Emissions Licence (W0104-03) issued by the Environmental Protection Agency (Agency). The IE Licence restricts the amount of waste that can be accepted annually to 60,000 tonnes.

AES has applied to the Agency for a revision of the IE licence to increase the annual waste intake to 80,000 tonnes. The proposed increase in the annual waste throughput will not require the expansion of the site, the construction/provision of any new buildings/structures, or any alteration to the existing site layout and operations. The Agency determined that due to the nature of the development a Natura Impact Statement (NIS) was required.

An initial AA screening identified one designated site that could potentially be impacted by the proposed development, namely Charleville Wood SAC. A number of potential direct, and indirect impacts associated with the development were assessed.

The AA Screening and NIS report concluded that there is no potential for direct, indirect or cumulative impacts arising from the proposed development on the Charleville Wood SAC. The integrity of site will not be adversely affected thus it can be excluded on the basis of objective scientific information, that the proposed development, will impact the conservation objectives of the identified Natura 2000 sites.

1. Introduction

Dixon Brosnan was commissioned by Advanced Environmental. Solutions (Ireland) Ltd. (AES) to undertake an Appropriate Assessment Screening (AA Screening) and Natura Impact Statement (NIS) to determine the potential impacts, if any, of a proposed increase the amount of waste acceptance at their Materials Recovery Facility located in Cappancur County Offaly on nearby sites with European conservation designations (i.e. Natura 2000 sites).

1.1 Purpose of this Report

The purpose of the Appropriate Assessment Screening is to determine the appropriateness, or otherwise, of the proposed development with respect to any direct or indirect impacts on nearby Natura 2000 sites in the context of their conservation status.

The report identifies whether the proposed increase the amount of waste acceptance at the AES Recovery Facility is likely to have a significant effect on Natura 2000 site(s). This AA Screening Report and NIS has been prepared for submission to the Environmental Protection Agency (Agency). Having satisfied itself that the Statement is complete and objective, the Agency will undertake the Appropriate Assessment on the basis of the Statement and any other necessary information.

2. Background and legislative context

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as "The Habitats Directive", provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. These are SACs designated under the Habitats Directive and SPAs designated.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to have a significant effect on or to adversely affect the integrity of European Sites (Annex 1.1). Article 6(3) establishes the requirement for AA:

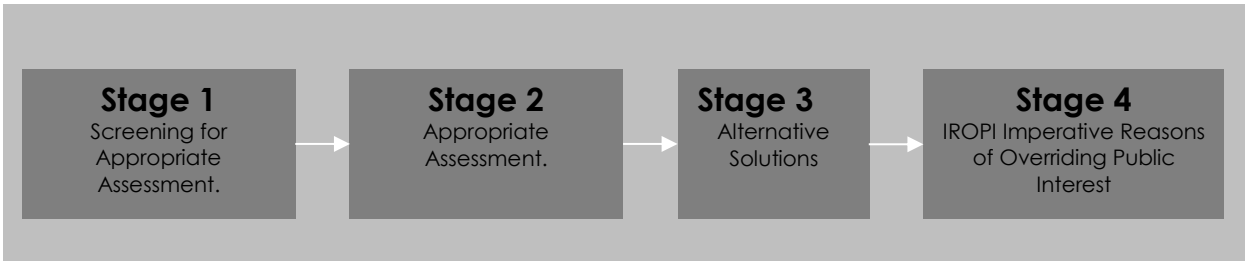
Any plan or project not directly connected with or necessary to the management of the [European] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

Article 6(4) states:

If, in spite of a negative assessment of the implications for the [European] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

2.2 Appropriate Assessment Procedure

The assessment requirements of Article 6(3) establish a stage-by-stage approach.This assessment follows the stages outlined in the 2001 European Commission publications "*Assessment of plans and projects significantly affecting Natura 2000 sites: methodological guidance on the provisions of Articles 6(3) and 6(4) of the Habitats Directive 92/43/EEC"* (2001) and *Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (Draft)* Office for Official Publications of the European Communities, Luxembourg (EC, 2015);



The stages are as follows:

Stage One: Screening — the process which identifies any appreciable impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant;

Stage Two: Appropriate assessment — the consideration of the impact on the integrity of the Natura 2000 site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts;

Stage Three: Assessment of alternative solutions: The process which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site. It is confirmed that no reliance is placed by the developer on Stage Three in the context of this application for development consent;

Stage Four: Assessment where no alternative solutions exist and where adverse impacts remain — an assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed (it is important to note that this guidance does not deal with the assessment of imperative reasons of overriding public interest). Again, for the avoidance of doubt, it is confirmed that no reliance is placed by the developer on Stage Four in the context of this application for development consent

Documentation/guidelines of relevance to this screening report include the following:

- European Commission, 2001. *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC.* Office for Official Publications of the European Communities, Brussels (EC, 2001);

- European Commission, 2000a. *Communication from the Commission on the Precautionary Principle.*, Office for Official Publications of the European Communities, Luxembourg (EC, 2000a);
- *Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (Draft)* Office for Official Publications of the European Communities, Luxembourg (EC, 2015);
- *Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2000)*
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission; (EC, 2007);
- *Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities*. Department of the Environment, Heritage and Local Government, Dublin (DEHLG, 2010a);
- Department of Environment Heritage and Local Government Circular NPW 1/10 and PSSP 2/10 on Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities (DEHLG, 2010b);
- *Interpretation Manual of European Union Habitats. Version EUR 28*. European Commission (EC, 2013);
- CJEU Case C 164/17 Edel Grace Peter Sweetman V An Bord Pleanála

It is noted that environmental control measures will implemented in line with standard guidelines (i.e Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects (Department of Environment, Heritage and Local Government, July 2006), CIRIA document – 133 Waste Minimisation in Construction, CIRIA document – Guidelines Control of Water Pollution from Construction Sites – Guide to Good Practice), Inland Fisheries Ireland - Guidelines on protection of fisheries during construction Works in and adjacent to waters (IFI, 2016)). Whilst the implementation of such measures will assist in minimising impacts on the local environment, the implementation of these measures has not been taken into consideration in this screening report when reaching a conclusion as to the likely impact of the development on Natura 2000 sites.

This report provides the relevant ecological information on the proposed project to assist the Agency to make a determination in relation to the likely impact on Natura 2000 sites. This report was prepared by Carl Dixon MSc. who has worked on Screening/NIS's for a range of small and large-scale projects, including assessments of aquatic impacts.

3. Stage 1 Screening Of Proposed Development

3.1 Introduction

This screening process provides an assessment of the European Sites that the proposed development could potentially affect. Specifically this process:

- Identifies designated Natura 2000 sites and the pathways by which these sites could potentially affected by the proposed development
- Provides an outline summary of the proposed development works;
- Summarises what the possible effects on those European Sites could be; and
- Screens out European Sites that are unlikely to be affected.

The facility operates under planning permission issued by Offaly County Council (PL2/17/240) and an Industrial Emissions (IE) Licence (W0104-03) issued by the Environmental Protection Agency (Agency). The IE licence restricts the annual waste intake to 60,000 tonnes. AES has applied to the Agency for a review of the licence to increase the amount of waste accepted annually to 80,000 tonnes. There will be no changes to the site infrastructure as it can be accommodated within the existing waste processing area and therefore there will be no requirement for any additional buildings or equipment onsite.

The operational hours are 6am to midnight Monday to Saturday and 7am to 11pm on Sundays. All waste processing is carried out inside the Process Building. The black bin waste is bulked up and transferred to other sites for further treatment. The construction and demolition waste is sorted to remove large items and the materials are then sent to other sites for further treatment/recovery. The mixed dry recyclables are manually and mechanically separated, then baled. The bales are stored in the open yard.

Water is obtained from the local Group Water Scheme and electricity is supplied by a utility company. Diesel for the waste collection trucks and the forklifts used to handle the waste is stored in above ground tanks located at the southern boundary. Diesel for the on-site electricity generator is stored in an internal tank.

Sanitary wastewater is treated in an on-site treatment plant and the treated effluent is stored in an above ground holding tank before being sent for further treatment at the Irish Water sewage treatment plant. Floor wash water in the Process Building is collected in an underground sump inside the building and pumped to the wastewater holding tank, from where it is sent to the Irish Water treatment plant.

Rain water run-off from the hardstanding areas and buildings is collected and some is used on-site. The current licence authorises the discharge of surplus rainwater to a drain at the southern boundary of the through a series of oils interceptors. The drain joins the Tullamore River, which is approximately 750 m south of the site. Due to concerns over the quality of the surface water, the discharge to the drain stopped at the end of Q2 2017 and since then all run-off has been collected and tankered off-site for treatment.

The IE Licence specifies emission limit values for the rain water run-off, dust and noise and requires regular surface water, groundwater, dust and noise monitoring to confirm compliance with the emission limit values and it they are exceeded to ensure corrective actions are carried out.

The proposed increase in the annual waste throughput will not require the expansion of the site, the construction/provision of any new buildings/structures, or any alteration to the existing site layout and operations. There will be no change to the waste acceptance and operational hours. It will not give rise to any new emissions to surface water or sewer, nor will it contribute to increased noise, dust and odour emissions. Figure 3.1 shows the location of Natura 2000 sites within 15Km of the proposed development.

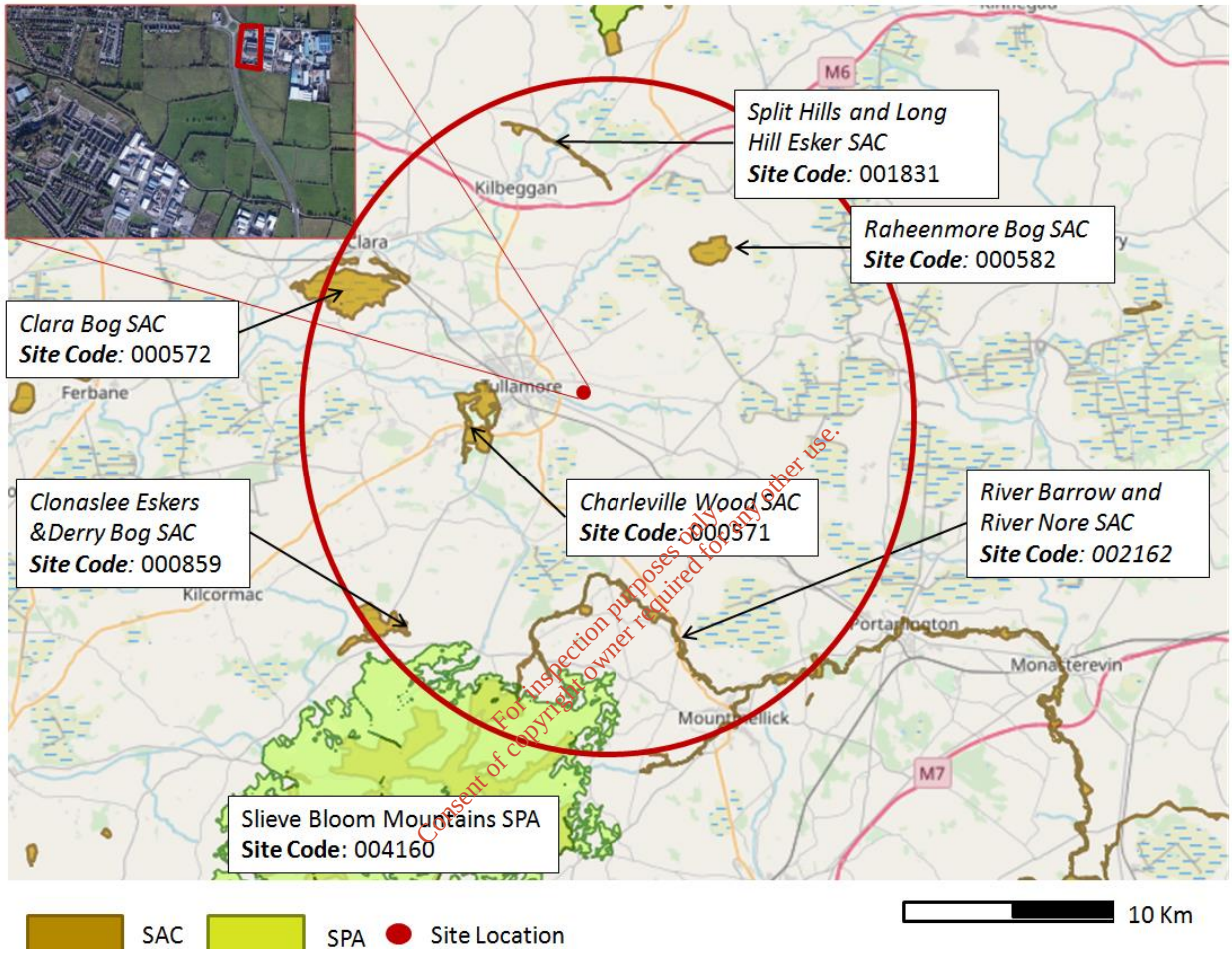


Figure 3.1 Location of Natura 2000- Sites 15 km from Proposed Development

3.2 Designated Sites

The following section outlines the Natura 2000 Sites present within 15 km of the proposed development. This distance is based on the absence of a a significant pathway from source to receptor and takes into account the nature of the proposed project and the location of designated sites.

The EU Habitats Directive contains a list of habitats (Annex I) and species (Annex II) for which SACs must be established by Member States. Similarly, the EU Birds Directive contains lists of important bird species (Annex I) and other migratory bird species for which SPAs must be established. Those that are known to occur at a site are referred to as 'qualifying interests' and are listed in the Natura 2000 forms which are lodged with the EU Commission by each Member State. A 'qualifying interest' or 'special conservation interest' is one of the factors (i.e. the habitat or species that is present) for which the site merits designation.

The integrity of a European Site, referred to in Article 6.3 of the EU Habitats Directive, is determined based on the conservation status of the Qualifying Interests of the SAC or Special Conservation Interests of the SPA. The Qualifying Interests for each site have been obtained through a review of the Conservation Objectives available from the National Parks and Wildlife Service (NPWS). The National Parks and Wildlife Service (NPWS) is responsible for the designation of SACs and SPAs in Ireland.

3.3 Natura 2000 Sites

Adopting a precautionary principle, the Natura 2000 sites within 15km of the works were included in this assessment. All are listed in Table 3.3.1 and can be seen in Figure 2.1. Of these, the Natura 2000 sites deemed relevant and screened in for Appropriate Assessment are those which have Conservations Objectives or Qualifying Interests (QIs)/Special Conservation Interests (SCIs) which may be impacted by the proposed works.

Those sites or individual qualifying interests that are screened out for Appropriate Assessment and require no further assessment at this stage (primarily as a result of being too great a distance away from the site and having different habitat requirements) are not assessed further.

Table 3.3.1 SACs and SPAs within 15km of the Proposed Works

Site Name	Site Code	Qualifying Habitats	Qualifying Species	Distance from Project	Connectivity
Charleville Wood SAC	000571	[91A0] Old sessile oak woods with Ilex(Holly) and Blechnum (Fern)	[1016] Vertigo moulinsiana (Snail)	3 Km West	The AES facility is hydraulically connected to the Charleville Wood as rainwater from the site drains to the Tullamore River, which is approximately 750 km south of the site and flows through Charleville Wood. **Screened In.**
Clara Bog SAC	000572	[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco Brometalia)(*important orchid sites) [7110] * Active raised bogs [7120] Degraded raised bogs still capable of natural regeneration [7150] Depressions on peat substrates of the Rhynchosporion habitat [91D0] * Bog woodland	[1065] Euphydryas (Eurodryas, Hypodryas) aurinia (Butterfly)	7 Km North West	The AES facility is located a substantial distance away from this SAC. The site is not hydraulically connected to this SAC. Owing to the scale and nature of the development and lack of a source-pathway-receptor linkage no impact on this Natura 2000 site has been identified. **Screened Out.**
Raheenmore Bog SAC	000582	[7110] * Active Raised Bogs [7120] Degraded raised bogs still capable of natural regeneration [7150] depressions on peat substrates of the rhynchosporion	N/A	5.5 Km North East	
Clonaslee Eskers & Derry Bog 00859	000859	[7230] Alkaline fens	[1013] Vertigo geyeri (Snail)	9.5km Southwest	

Split Hills and Long Hill Esker SAC	001831	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	N/A	6.5Km North	The AES facility is located a substantial distance away from this SAC. The site is not hydraulically connected to this SAC. Owing to the scale and nature of the development and lack of a source-pathway-receptor linkage no impact on this Natura 2000 site has been identified. **Screened Out.**
River Barrow and River Nore SAC	002162	Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Reefs [1170] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] Mediterranean salt meadows (Juncetalia maritimi) [1410] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] European dry heaths [4030] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Petrifying springs with tufa formation (Cratoneurion) [7220] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] Trichomanes speciosum (Killarney Fern) [1421]	Margaritifera durrovensis (Nore Pearl Mussel) [1990] Vertigo moulinsiana (Desmoulin's Whorl Snail) [1016 Margaritifera margaritifera (Freshwater Pearl Mussel) [1029] Austropotamobius pallipes (White-clawed Crayfish) [1092] Petromyzon marinus (Sea Lamprey) [1095] Lampetra planeri (Brook Lamprey) [1096] Lampetra fluviatilis (River Lamprey) [1099] Alosa fallax fallax (Twaite Shad) [1103] Salmo salar (Salmon) [1106] Lutra lutra (Otter) [1355]	6 Km South	

Slieve Bloom SPA	004160	Circus cyaneus (Hen Harrier) [breeding]	N/A	9Km South	The site is located 9km from the proposed development. As a result of the distance from this SPA and lack of suitable habitat for the relevant QI bird species within the proposed development site no impact on this Natura 2000 site has been identified. **Screened Out.**

4. Assessment of Potential Impacts

The potential impacts associated with the proposed development are discussed in the following section with respect to their likelihood to have significant impacts on Natura 2000 sites.

As part of the assessment direct, indirect and cumulative impacts will be assessed. Direct impacts refer to habitat loss or fragmentation arising from land-take requirements for development or agricultural purposes. Indirect and secondary impacts do not have a straight-line route between cause and effect, and it is potentially more challenging to ensure that all the possible indirect impacts of the project/plan - in combination with other plans and projects have been established.

As part of the assessment the potential for impacts associated with the development were reviewed as outlined below:

- Direct Impact-Loss of Habitat
- Direct Impact / Indirect -Impacts on Water Quality and Fauna
- Direct Impact- Spread of Invasive Species
- Cumulative Impacts

4.1 Direct Impacts

The AES facility is not situated within any SACs or SPAs therefore no direct impacts on any European Sites through land take or fragmentation of habitats will occur.

4.3 Indirect Impacts

Given the distance of the site from the following SAC's the lack of an identified pathway and the nature of the project, no potential for adverse effects on the following European site at construction stage has been identified:

- Clara Bog SAC
- Raheenmore Bog SAC
- Clonaslee Eskers and Derry Bog 00859
- Split Hills and Long Hill Esker SAC
- River Barrow and River Nore SAC
- Slieve Bloom SPA

There is no hydrological connectivity between the proposed works and the sites and no potential for impacts on these sites has been identified. As a result, they are not carried forward for stage 2 Natura Impact Assessment.

The site is indirectly connected to the Charleville Wood SAC via the Tullamore River via the following potential pathways:

- Rainwater from the site drains to the Tullamore River, which is approximately 750 km south of the site and flows through Charleville Wood.
- Sanitary waste effluent from the sites storage tanks is transferred to an Agency approved treatment facility. This currently comprises the Tullamore WWTP and subsequently treated effluent from the WWTP discharges to the Tullamore River. Given the potential for the risks to water quality impacts from the AES facility it will be carried forward to NIA.

- Sanitary wastewater and leachate from the process building and sump if not monitored may overflow from and infiltrate the surface water system resulting in negative impacts on the Tullamore River and Charleville Wood SAC, if the run-off is not collected tankered off-site.

A site synopsis for the Charleville Wood SAC is included in **Appendix 1.** It is noted that the neither of the qualifying interests for the Charleville Wood SAC (Old sessile oak woods with Ilex(Holly) and Blechnum (Fern) and *Vertigo moulinsiana* (Snail) occur within river habitats and thus the potential for impacts is minimal.

4.8 Invasive Species

The presence of invasive species would have the potential to lead to an offence under the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011). However, no invasive, non-native species were recorded during a site survey on 30 July 2018. No invasive species occur within the confines of the AES Site. It is comprised of hard standing areas and waste processing buildings. No impact on European designated sites in respect of invasive species has been identified.

4.9 Screening Statement Conclusions

The main issues to be assessed as part of a Natura Impact Statement were identified as follows:

- Risk to the Charelville Wood SAC as a result of risk to water quality.
- Risk to relevant Annex I or Annex II species associated with the Charelville Wood SAC.

The location of the above designated sites relative to the location of the AES facility is shown in Figure 3.1 of the report. It was determined during the screening process that one Natura 2000 site namely Charelville Wood SAC may potentially be indirectly impacted as a result of the proposed development.

The project creates a risk from water pollution events during construction works, and has the potential to cause disturbance to fauna within Charelville Wood SAC. A Natura Impact Assessment has been carried out in the following section in order to assess the risk of the proposed project to this Natura 2000 site.

5. Natura Impact Statement

Based on the results of screening, as outlined in Section 4.6, a Natura Impact Statement will be required

5.1 Stages of Natura Impact Assessment

The stages of the Natura Impact Assessment are broadly in line with those required for an Appropriate Assessment in accordance with the European Commission Methodological Guidance on the provision of Article 6(3) and 6(4) of the 'Habitats' Directive 92/43/EEC (EC 2001) and the European Commission Guidance 'Managing Natura 2000 Sites'

In complying with the obligations under Article 6 and following the above Guidelines, this NIA has been structured in a stage by stage approach as outlined in Table 5.1.1.

Table 5.1.1 Stages of Natura Impact Assessment

Stages of the Natura Impact Assessment	Description of Requirements in accordance with Article 6
Stages 1 & 2	Identification of the location and compilation of the information required regarding the Natura 2000 sites and the qualifying interests and conservation objectives for the sites.
Stage 3	Undertake an assessment of likely significant effects. As part of Stage 3 it is required to provide the following: ○ Description of the project. ○ Identification of the main features of the proposed project, (scale and size, physical changes that will result from the project). ○
Stage 4	Assessment of '*in combination effects'.* These include *ex situ* and *in situ* projects/developments.
Stage 5	Conclusion as to whether or not the project may give rise to significant effects.

The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures. First the project should aim to avoid any negative impacts on European sites by identifying possible impacts early in the planning stage, and designing the project in order to avoid such impacts. Second, mitigation measures should be applied, if necessary, during the NIA process to the point, where no adverse impacts on the site(s) remain. If the project is still likely to result in adverse effects, and no further practicable mitigation is possible, then it is rejected. If no alternative solutions are identified and the project is required for imperative reasons of overriding public interest (IROPI test) under Article 6 (4) of the Habitats Directive, then compensation measures are required for any remaining adverse effect.

This stage of the NIA identifies and provides information regarding the Charleville Wood SAC which has been brought forward to the NIA and the qualifying interests and conservation objectives for the site.

5.2 Characteristics of the Designated Sites

5.2.1 Charleville Wood SAC (000571)

Qualifying interests

91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles
1016 Desmoulin's Whorl Snail Vertigo moulinsiana

Conservation Objective:

Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

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

5.3 Likely Significant Effects

This section uses the information collected on the sensitivity of each European site and describes any likely significant effects arising from the proposed development. The likely significant effects of the proposed development are presented in the following sections.

5.3.1 Direct Effects

The screening has identified that there will be no direct impact or habitat fragmentation within European sites. Having established no direct impacts or habitat fragmentation, this assessment concentrates on potential indirect impacts.

5.3.2. Indirect Effects

The proposed development could potentially result in a negative impacts on water quality via the Tullamore River, either alone or in combination with other projects or plans, as a result of indirect pollution through surface water discharges. The effect could be significant in terms of changes in water quality which would affect the habitats listed as qualifying interests for the Charleville Wood SAC.

5.3.3 Mitigation Measures

For the purposes of this report the term "*mitigation measures*" are considered to be "*those measures which aim to minimise, or even cancel, the negative impacts on a site that are likely to arise as a result of the implementation of a plan or project. These measures are an integral part of the specifications of a plan or project*". (Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC, January 2007).

The following text sets out in summary the mitigation measures. During construction the following measures will be undertaken to protect the environment:

Protection of Watercourses

- Rainwater run-off from the building roofs is harvested for use on site, with the surplus entering the facility's surface water drains. Rainwater run-off from the yards is collected in surface channels that have a series of gullies that connect to underground sewer lines (150mm diameter). These sewers connect to 4 No. Class 1 Full retention oil interceptors located near the southern site boundary. Each interceptor has a working capacity of 20.5m^3. Prior to Q3 2017, after passing through the interceptors, the water entered a pump sump fitted with a sonic level detector and was pumped to a man-made drain at the south- east site boundary. The drain joins the Tullamore River approximately 750 m south of the facility. At the end of Q2 2017 the discharge to the rain stopped and all surplus run-off is now collected and tankered off-site for treatment.

- The process sump within the waste sorting building is fitted with a high level alarm and the contents are sent for treatment at the Irish Water wastewater treatment plant serving Tullamore. The wastewater is subject to regular testing to confirm it is suitable for treatment in the Irish Water plant.

- Discharges from the site are managed and limited to those levels set by the Agency in accordance with an existing IE licence (W0104-03). Currently the Agency has given approval for waste water emissions, including rainwater run-off, from the site to be sent to the Tullamore WWTP (D0039-01) for treatment.

- All hazardous liquids and hydrocarbons stored on site will be contained in a waterproof bunded area of sufficient volume to hold 110% of the volume of the largest tank within the bund. All valves on the tanks will be contained within the bunded areas.

- Diesel tanks onsite area regularly integrity tested to ensure that they are fit for purpose.

- A spill kit will be maintained onsite during construction. This will be equipped with suitable adsorbent materials, refuse bags etc. to allow for the appropriate clean up and storage of contaminated materials in the event of a spill or leak occurring.

- Waste acceptance procedures are in place to ensure that all waste processed within the building meets acceptance criteria and is transported by approved hauliers. After weighing, the vehicles drive to the Process Building where the waste is off-loaded and visually inspected. Unsuitable wastes are moved to a designated Quarantine Area where it is stored before being sent to appropriately licensed disposal/recovery facilities.

- All waste processing is carried out inside the Process Building to minimise the impacts of potential nuisances such as noise, dust and odours.

- AES has prepared an Accident Prevention Policy (APP) and Emergency Response Procedure (ERP). The APP specified the measures in place to minimise the risk of accidents and the ERP specifies response actions to deal quickly and efficiently with all foreseeable major incidents.

- Procedures are in place to respond to any emergency incidents which may occur on site. All appropriate staff will be trained and made aware of the relevant contingency plans. In the event of an incident the Agency will be notified immediately.

5.4 Surface Water

The Agency carries out a biological assessment of most river channels in the country on a regular basis. The assessments are used to derive Q values, indicators of the biological quality of the water. The biological health of a watercourse provides an indication of long-term water quality. The EPA Q value scheme is summarised in Table 5.4.1. The relationship between the Q-rating system and the Water Framework Directive classification as defined by the Surface Waters Regulations 2009 (S.I. 272 of 2009) is shown in Table 5.4.2.

The Q Value system, which is used by the Agency, describes the relationship between water quality and the macro-invertebrate community in numerical terms. The presence of pollution causes changes in flora and fauna of rivers. Well documented changes occur in the macro-invertebrate community in the presence of organic pollution: sensitive species are progressively replaced by more tolerant forms as pollution increases. Q5 waters have a high diversity of macro-

invertebrates and good water quality, while Q1 have little or no macro-invertebrate diversity and unsatisfactory water quality.

The intermediate ratings Q1-2, Q2-3, Q3-4 and Q4-5 are used to denote transitional conditions, while ratings within parenthesis indicate borderline values. Great importance is attached to the Agency's biotic indices, and consequently it is these data that are generally used to form the basis of water quality management plans for river catchments. The water quality of surface water in the vicinity of the site is outlined in Figure 5.4.3.

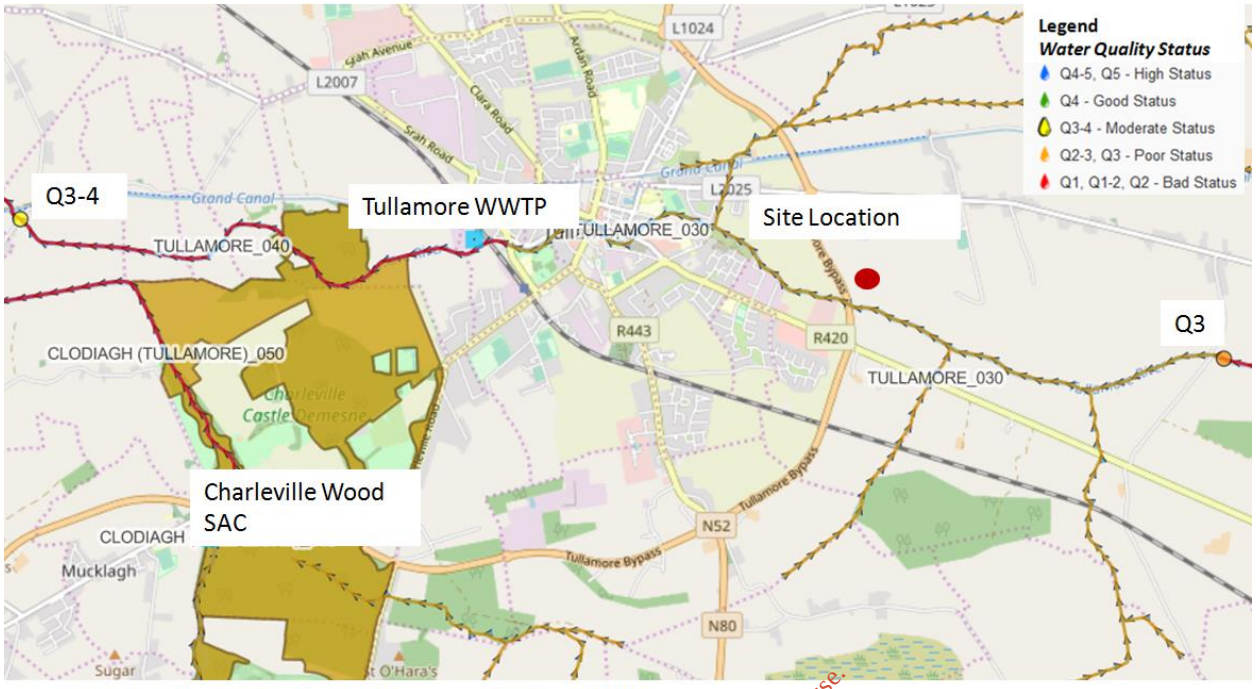
Table 5.4.1. EPA biotic index scheme.

Q value	Water quality	Pollution	Condition
5	Good	Unpolluted	Satisfactory
4	Fair	Unpolluted	Satisfactory
3	Doubtful	Moderately polluted	Unsatisfactory
2	Poor	Seriously polluted	Unsatisfactory
1	Bad	Seriously polluted	Unsatisfactory

Source: EPA

Table 5.4.2. Correlation between the WFD classification and Q values

Ecological status WFD	Q Values
High	Q5, Q4-5
Good	Q4
Moderate	Q3-4
Poor	Q3, Q2-3
Bad	Q2, Q1



5.4.3 EPA water quality monitoring locations in relation to the proposed development site.

5.5 Water Framework Directive

The Water Framework Directive (WFD) is a key initiative aimed at improving water quality throughout the EU. It applies to rivers, lakes, groundwater, and coastal waters. The Directive requires an integrated approach to managing water quality on a river basin basis; with the aim of maintaining and improving water quality. The Directive requires that management plans be prepared on a river basin basis and specifies a structured approach to developing those plans. It requires that a programme of measures for improving water quality be brought into effect.

Specifically, the WFD aims to: protect/enhance all waters (surface, ground and coastal waters); achieve "good status" for all waters by December 2027; manage water bodies based on river basins (or catchments); involve the public; and streamline legislation.

The WFD assesses the water quality of rivers and ranks their status as follows: High, Good, Moderate, Poor, Bad and Yet to be determined. It also determines the “Risk” level of a river from those "*At risk of not achieving Good Status" through to those "strongly expected to achieve Good Status*".

Ireland’s hydrometric areas, used as management units for hydrological areas (EPA, OPW, ESBI, Local Authorities etc). They are made up of amalgamations of large river basins.

With regard to surface water emissions from the site all is now collected and tankered off-site for treatment meaning they do not present a risk to the Tullamore River and the River Brosna, which flows through the Charleville Wood SAC. The proposed development will not result in any

changes to the current emissions to surface water and will have no discernible impact on surface water.

Table 5.5.1 EPA Monitoring Stations near the AES Site

Area	Station	Name	Q Value Score	Q Value Status
Downstream Tullamore WWTP and AES Facility	RS25T030100	Br S of Cappincur	3	Poor
Downstream Of Tullamore WWTP and AES Facility	RS25T030400	Bridge SW of Ballycowen bridge	3-4	Moderate

The nearest Agency monitoring stations to facility are shown above in Table 5.5.1. The upstream water monitoring location near the AES facility is just before the Town on Tullamore and notes a quality status of Q3 which signifies poor water quality status. The nearest downstream monitoring location after the discharges from the AES facility and the Tullamore WWTP notes a slight improvement in water quality and has a status of Q3-4 which is noted as Moderate water quality status (Q3-4). These are also illustrated in Figure 5.4.3 which also shows the Water Framework assessment for River Tullamore. The latest projection for the upstream section of the river is "*under review*" by the EPA while the downstream section is noted to be "*at risk*" of not achieving Water Framework objectives.

Table 5.5.2 provides a summary of monitoring results for designated ambient monitoring points for Tullamore WWTP. The upstream and downstream annual mean values are shown (mg/l), and the difference between both monitoring stations is given as a percentage of the Environmental Quality Standard (EQS) where relevant.

Table 5.5.2 Ambient Monitoring Report Summary - Tullamore WWTP

Parameter Name	Upstream Monitoring Point Location	Upstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS	% of EQS
Total Hardness (as CaCO3) mg/l	RS25T030300	394	RS25T030400	389.55		

Parameter Name	Upstream Monitoring Point Location	Upstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS	% of EQS
Conductivity @25°C µS/cm	RS25T030300	762.4	RS25T030400	878.64		
Ammonia-Total (as N) mg/l	RS25T030300	0.09	RS25T030400	0.06	0.14	-21.9
Dissolved Oxygen % Saturation	RS25T030300	80.6	RS25T030400	83.82		
Nitrate (as N) mg/l	RS25T030300	2.72	RS25T030400	6.4		
BOD - 5 days (Total) mg/l	RS25T030300	0.96	RS25T030400	1.16	2.6	7.5
Ortho-Phosphate (as P) - unspecified mg/l	RS25T030300	0.04	RS25T030400	0.04	0.075	-9.7
Dissolved Oxygen mg/l	RS25T030300	8.7	RS25T030400	9.23		
Alkalinity-total (as CaCO3) mg/l	RS25T030300	340	RS25T030400	303.91		
pH units	RS25T030300	8.1	RS25T030400	7.96		
True Colour mg/litre Pt Co	RS25T030300	33.6	RS25T030400	35.73		
Nitrite (as N) µg/l	RS25T030300	49.42	RS25T030400	55.6		
Chloride mg/l	RS25T030300	32.36	RS25T030400	58.19		
Temperature °C	RS25T030300	11.7	RS25T030400	11.26		
Total Oxidised Nitrogen (as N) mg/l	RS25T030300	2.76	RS25T030400	6.44		

A recent AER (Annual Environmental Report) for the treatment plant was completed for the 2018 reporting period. The ambient monitoring results meet the required EQS. The discharge from the

wastewater treatment plant does not have an observable negative impact on the water quality nor is it having an observable negative impact on the WFD status.

Surface water quality monitoring undertaken for the AES facility also indicated that emissions from the site are not having an negative impact on the river. The water quality values for the River Tullamore show an improvement downstream of both the AES facility and Tullamore WWTP which also demonstrates that they are not having a negative impact on the river.

5.5.2. Likely Effects on Tullamore River and Charleville Wood SAC

It is concluded that there will be no direct or indirect impacts on the Charleville Wood SAC from the proposed development due to the limited potential for impacts and the implementation of best practice mitigation measures, which will prevent the release of any pollutants to the aquatic environment.

5.6 Cumulative Impacts

Cumulative impacts or effects are changes in the environment that result from numerous human-induced, small-scale alterations. Cumulative impacts can be thought of as occurring through two main pathways: first, through persistent additions or losses of the same materials or resource, and second, through the compounding effects as a result of the coming together of two or more effects.

As part of the Natura Impact Assessment, in addition to the proposed development, other relevant projects and plans in the region must also be considered at this stage. This step aims to identify at this early stage any possible significant in-combination or cumulative effects/impacts of the proposed development with other such plans and projects on the European sites. An assessment for potential cumulative impacts is undertaken in Table 5.6.1 of the report.

Table 5.6.1 Cumulative Impacts with other Plans and Projects

Name of Plan/ Project	Key Issues Directly Linked to Relevant European Sites	Potential Cumulative or In-Combination Impacts
Offally County Development Plan 2014-2020	The core strategy of the plan includes: • Sustainable development, agriculture, • communities and tourism; • Protect and conserve cultural, natural and built heritage; • Measures to adapt and mitigate against • climate change; and • Sustainable management of water resources.	Positive Impacts
Tullamore Electoral Area Local Area Plan 2011	The policies and objectives of this Plan provide a framework for sustainable development responding to the needs of communities within the Electoral Area. The Plan includes policies and objectives to: • Promote the delivery of the physical, social and environmental infrastructure necessary; • Support rural settlements; • Provide guidance on climate change; • Support the conservation of biodiversity; and A) Promote sustainable development B) Land is zoned for new development. An AA process was however applied to the making of the draft plan. Any new proposals for development on such zoned land will be required to be subject to the AA process.	Positive Impacts
Water Framework Management Plan	The RBMPs aim to protect, improve and manage the water bodies within each river basin sustainably.	Positive Impacts-By controlling emissions from the site to ensure no potential impacts on water bodies within the Management Plan.
NPWS Conservation Management Plans	Conservation objectives have been published for Charleville Wood SAC.	Positive Impacts-By controlling emissions from the site to ensure no potential impacts on conservation objectives of the site.

Name of Plan/ Project	Key Issues Directly Linked to Relevant European Sites	Potential Cumulative or In-Combination Impacts
Planning Search – Offaly County Council.	Local planning applications that may have a cumulative or in combination impact with the proposed works.	None. No other construction projects are ongoing at the site and no impacts from the proposed development are anticipated on the NATURA 2000 network, therefore no cumulative or in combination impacts will arise.

The plans and projects listed in this section are not considered likely to act in combination with the proposed development to give rise to negative effects that have the potential to affect the conservation objectives of the European Sites considered here, including their structure and function.

No other pathways have been identified which could contribute to cumulative or in-combination effects and no significant potential cumulative or in-combination effects have been identified.

6. NIS Conclusion Statement

Following the implementation of operational mitigation measures described in sections 5.3.3 of the NIS the project will avoid significant negative impacts to key sensitive receptors and other qualifying features of the Natura 2000 sites.

On the basis of the findings of this NIS, it is concluded that the proposed development site does not support the species or habitats for which this Natura 2000 site was selected. Both surface and wastewater emissions from the site will be managed to ensure that the water quality of the designated Natura 2000 sites are not compromised and will remain compliant with the Surface Water Regulations S.I. 272 of 2009, and the European Communities (Quality of Salmonid Water) Regulations, 1988.

Based on the above, the project does not present any risk of a direct adverse effect on either the habitats or species for which Natura 2000 sites were selected. On the basis of the findings of report, it is concluded that:

- The proposed development is not directly connected to the management of a European site; For those European sites which do not support connectivity (either direct or indirect) to the proposed development, or where it has been established that there is no potential for impact, it can be objectively concluded that there is no likelihood of any significant negative effects on these European sites and therefore no further assessment is required;

- There is no potential for significant impacts on the Charleville Wood SAC.

In conclusion given the scale and nature of the project it can be objectively concluded that the proposed development on its own, and in combination with other plans and projects, will not have a significant impact on qualifying interests and conservation objectives for Natura 2000 sites, and that the integrity of these sites will not be adversely affected. No significant direct, indirect on Natura 2000 sites have been identified.

7. Reference List

1. Fossitt, J. A. (2000). A Guide to Habitats in Ireland. The Heritage Council of Ireland Series
2. Environmental Protection Agency Ireland (http://www.epa.ie/)
3. Invasive species Ireland (http://invasivespeciesireland.com/)
4. National Biodiversity Data Centre (http://www.biodiversityireland.ie/)
5. National Parks and Wildlife Service website (www.npws.ie)

Appendix 1
Natura 2000 Site Synopsis

Site Name: Charleville Wood SAC

Site Code: 000571

Site Name: Charleville Wood SAC Site Code: 000571 Charleville Wood is a large Oak woodland surrounded by estate parkland and agricultural grassland located about 3 km south-west of Tullamore in Co. Offaly. The site, which is underlain by deep glacial deposits, includes a small lake with a wooded island, and a stream runs along the western perimeter. The woodland is considered to be one of very few ancient woodlands remaining in Ireland, with some parts undisturbed for at least 200 years.

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

[91A0] Old Oak Woodlands
[1016] Desmoulin's Whorl Snail (Vertigo moulinsiana)

At Charleville Wood, approximately 10% of the woodland has been under-planted with conifers and other exotic trees, but the rest of the area is dominated by Pedunculate Oak (Quercus robur). Apart from Oak, there is much Ash (Fraxinus excelsior) and scattered Wych Elm (Ulmus glabra), while birch (Betula spp.) is a feature of the boggier margins. The shrub layer is composed largely of Hazel (Corylus avellana), Hawthorn (Crataegus monogyna) and Blackthorn (Prunus spinosa). The ground layer is varied, including damp flushed slopes with Ramsons (Allium ursinum) and drier, more open areas with a moss sward composed largely of Rhytidiadelphus triquetris. The fungal flora of the woodland is notable for the presence of several rare Myxomycete species, namely Hemitrichia calyculata, Perichaena depressa, Amaurochaete atra, Collaria arcyrionema, Stemonitis nigrescens and Diderma deplanata.

Extensive swamps of Bulrush (Typha latifolia) and Bottle Sedge (Carex rostrata) have developed in the lake shallows. The wooded island at its centre is famed for its long history of non-disturbance. Hazel, Spindle (Euonymus europaeus) and Ivy (Hedera helix) reach remarkable sizes here.

The lake is an important wildfowl habitat - it supports populations of Mute and Whooper Swan and a number of duck species, including Teal, Wigeon, Shoveler, Pochard and Tufted Duck.

A number of unusual insects have been recorded in Charleville Wood, notably Mycetobia obscura (Order Diptera), a species known from only one other site in Ireland. The site is also notable for the presence of a large population of the rare snail species, Vertigo moulinsiana.

Charleville Wood is one of the most important ancient woodland sites in Ireland. The woodland has a varied age structure and is relatively intact with areas of both closed and open canopy, with regenerating saplings present in the latter. The understorey and ground layers are also well-represented. Old oak woodland is a habitat listed on Annex I of the E.U. Habitats Directive, while the rare snail species, Vertigo moulinsiana, is listed on Annex II of this Directive. The wetland areas, with their associated bird populations, rare insect and Myxomycete species, contribute further to the conservation significance of the site.