

This Report has been cleared for submission to the Board by Sharon Finegan, Director

Signed:



Date: 07<sup>th</sup> July 2022



# MEMO

Office of  
Environmental  
Sustainability

**To: Board**

**Date: 07<sup>th</sup> July 2022**

**From: Jim Johnson, Inspector**

**Subject: Appeal of Air Pollution Act licence granted to John Madden and Sons Ltd, for an Asphalt Plant at Tonroe, County Galway by Galway County Council.**

**Appeal Registration No: E0007-01**

**Recommendation:** The Board are asked to **APPROVE** the decision recommended hereunder with respect to the appeals submitted to the Agency in relation to the Air Pollution Act licence granted to John Madden and Sons Limited.

## 1. Background

Air Pollution Act licences are single media licences for certain industrial processes not included in the First Schedule of the EPA Act 1992 as amended, and are granted by Local Authorities under the Air Pollution Act 1987 as amended.

As of the 31 August 2015, the Agency is the statutory authority for appeals in relation to Air Pollution Act licences. Prior to this date the statutory authority for these appeals was An Bord Pleanála.

The licence relating to this appeal is for the operation of an asphalt plant at Tonroe, Ardrahan, Co. Galway. The asphalt plant would use crushed and screened rock and bitumen to produce asphalt/bituminous macadam with emissions to air from an 18.3 m high stack. Galway County Council (GCC) issued a decision to grant a licence for the plant on 20<sup>th</sup> October 2020 (Reference AP13/20). The plant is to be located in an inactive quarry located approximately 1.5 kilometres north of Ardrahan village.

## 2. Third Party Appeals

The Agency received two third party appeals against the decision of Galway County Council to grant the licence. The Agency also received a number of submissions/further submissions on those appeals. These are listed in the table below.

Type	Name	Date received
Third party appeals	Mr. and Mrs. Brennan, Tonroe, Ardrahan, Co. Galway	13 November 2020
	TMS Environment Limited (TMS) on behalf of Lagan Materials Ltd. Rosemount Business Park, Ballycoolin Road, Dublin 11	13 November 2020

Third party submission on the appeals	Mr. and Mrs. Brennan, Tonroe, Ardrahan, Co. Galway	07 December 2020
First party submission on the appeals	Tobin Consulting Engineers acting on behalf of the applicant	18 December 2020
Non-party submission on the appeals	The Tonroe/Castletaylor (Ardrahan Co. Galway) Action Group against Air Pollution.	21 December 2020
Further submissions on the appeals	Tobin Consulting Engineers acting on behalf of the applicant	06 September 2021
	The Tonroe/Castletaylor (Ardrahan Co. Galway) Action Group against Air Pollution	07 September 2021
Submission on Appropriate Assessment	The Tonroe/Castletaylor (Ardrahan Co. Galway) Action Group against Air Pollution	26 <sup>th</sup> April 2022

### 3. Consideration of the appeals

The issues raised in the appeals are dealt with under the headings below. However, the original documents may be referred to for greater detail and expansion of points.

Those who raised the appeal are clearly identified under each topic and where relevant a number of appeals are addressed under one heading. The submissions made by the First Party in relation to the Third-Party Appeals are dealt with under the relevant headings.

#### 3.1 Emissions to air

##### Third Party Appeal/Submissions: Mr and Mrs Brennan and The Tonroe/Castletaylor (Ardrahan Co. Galway) Action Group against Air Pollution

The issues raised in relation to emissions to air are summarised as follows:

- The application did not adequately describe the stack and as a result emissions from the plant were not adequately assessed, that there is no guarantee emissions will comply with relevant air quality standards and that the stack is insufficient to provide adequate dispersion of air pollutants;
- That 'monitoring results' submitted in the licence application should not be considered in assessing the licence application as there is no industrial activity at the site currently.

##### Third Party Appeal: TMS Environmental Ltd (on behalf of Lagan Materials Ltd)

Issues raised in relation to emissions to air are summarised as follows:

- That the air dispersion modelling assessment underestimated the actual worst-case emissions because the volume used in the model (70,000 Nm<sup>3</sup>/hr) is lower than the maximum volume flow output of the plant (78,285 m<sup>3</sup>/hr);
- Concentration emission limit values (ELV) used in the air dispersion modelling assessment are significantly lower than what has been permitted in the licence. They submit that emissions at the licensed limits will breach air quality standards (AQS) and will have adverse impacts on SACs in the area. They express the view that it is not possible to maintain SO<sub>2</sub> and NO<sub>x</sub> emissions at or below the modelled values when operating asphalt plants.

### First Party Submission on the two appeals received:

TOBIN Consulting Engineers on behalf of the applicant made two submissions in relation to the appeals. These are summarised as follows:

- The modelling assessment used a volume flow of 70,000 Nm<sup>3</sup>/hr, which is above the maximum volume rate in the application and the licence - both were 63,665 Nm<sup>3</sup>/hr. The maximum volume flow in the licence is not 78,285 m<sup>3</sup>/hour as stated by TMS Env. Ltd.
- Air dispersion modelling demonstrates that emissions from the plant will not give rise to exceedances of relevant air quality standards or limits for ecosystems. They further state that the plant will be able to operate within the values modelled and provide a letter from the manufacturer to confirm the plant can achieve the emission concentrations used in the modelling assessment.
- SO<sub>2</sub> emissions will be mitigated by using low sulphur fuel and through absorption in the alkaline dust layer formed on the bag filters in the plant.

### Assessment of the appeal

The applicant used a computer model to assess the impact of the plant on ambient air quality. The model was an air dispersion screening model 'AERSCREEN', developed by the USEPA and recommended for use by the EPA<sup>1</sup>. Screening models are conservative in their prediction of ambient pollutant concentrations by using worst case meteorological conditions e.g. minimum wind speed. If the ambient pollutant levels predicted by a screening model, including background concentrations, are below the relevant ambient air quality standard for the pollutant assessed, then further assessment with a more advanced model is generally not required. This inspector is satisfied that the screening model selection was appropriate and in accordance with the Agency's guidance, and furthermore, is satisfied that advanced modelling is not required.

In the consideration of the appeal, the following points were noted in relation to air modelling:

- At the emission limit values proposed and modelled by the applicant, the model predicted that emissions of NO<sub>2</sub>, SO<sub>2</sub>, CO and particulates (PM10 / PM2.5) would not exceed air quality standards for the protection of human health or ecosystems (Appendix 1).
- As part of the licence application, the applicant submitted detailed drawing of the asphalt plant (PP2034) including the dimensions of the stack as 18.3m. Details of the stack were also included in the air modelling screening assessment report (Section 3.2 and Appendix 1).
- The stack height included in the modelling assessment proved adequate for the dispersion of pollutants at the emission limits proposed.
- The modelling report adequately compares the predicted values with the air quality standards.

In relation to the appeal by TMS Env. Ltd – the flow limit in the licence sets the permitted maximum volume flow, irrespective of the maximum output of the plant. In relation to their point about emission concentrations it is noted that there is a significant difference between those in the licence vs. those that were modelled (Table below). There has been no assessment of the impact of the emissions at the limits in the licence by the local authority. Emissions at the higher limits in the licence could give rise to exceedance of air quality standards. However, the applicant has stated they can operate within the limits they have

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<sup>1</sup> Air Dispersion Modelling from Industrial Installations Guidance Note (AG4)

modelled which indicate compliance with air quality standards for the protection of human health or ecosystems.

Parameter	Model input parameters	Emission limit values in licence
Maximum volume (Nm <sup>3</sup> /hour)	70,000	63,665
Sulphur dioxide (SO <sub>2</sub> ) (mg/Nm <sup>3</sup> )	100	500
Nitrogen oxides (NOx) (mg/Nm <sup>3</sup> )	200	400
Dust (mg/Nm <sup>3</sup> )	20 (as PM <sub>10</sub> )	50

I recommend that the emission limits in the licence be restricted to those included in the air dispersion modelling assessment and that the applicant be required to demonstrate to the satisfaction of Galway County Council that they can operate within those limits.

I also recommend that the % Sulphur content in Gas Oil (Appendix A.2) be amended to bring it into line with Directive (EU) 2016/802 relating to sulphur content of certain liquid fuels.

### Recommendation

- Replace the emission limits in Appendix A.2 'Stack Monitoring Limits' of the licence with the following:

Parameters	Emission limit values
Maximum volume to be emitted	70,000 Nm <sup>3</sup> per hour
Sulphur Dioxide (SO <sub>2</sub> )	100 mg/Nm <sup>3</sup>
Nitrogen Oxide (NOx)	200 mg/Nm <sup>3</sup>
Dust	20 mg/Nm <sup>3</sup>

- Under fuel type specification for Gas Oil (Appendix A.2) change % w/w Sulphur content from '<0.2%' to '<0.1%'.

- Insert new **Condition 1.5** as follows:

1.5 Prior to the commencement of the activity, the licensee shall carry out a test programme to demonstrate that the plant can operate within the emission limit values in Appendix A.2 of the licence and the noise limits in Condition 3.8.

The licensee shall submit to Galway County Council a written report on the test programme to include the following:

- Results of air emissions monitoring from the stack
- Results of noise monitoring at noise sensitive locations

The activity shall not commence without the prior written approval of Galway County Council that they are satisfied, on the basis of the monitoring results, that the industrial plant can be operated within the limits of the licence.

### **3.2 Environmental nuisance – dust, odour, noise**

#### Third Party Appeal/Submissions: Mr and Mrs Brennan and The Tonroe/Castletaylor (Ardrahan Co. Galway) Action Group against Air Pollution

The appeal and submission from Mr and Mrs Brennan and the submission from the Tonroe/Castletaylor (Ardrahan Co. Galway) Action Group against Air Pollution raise a number of issues in relation to environmental nuisance from the proposed asphalt plant.

- These parties submit that the asphalt plant has the potential or is likely to give rise to nuisances to residents in the area including 'obnoxious gases and odours', smells from the tar, 'toxic and obnoxious odours and air pollutants', noise and dust which will pose a risk to the local environment and public health. They further submit that the applicant failed to assess the impacts on local residents.
- Mr and Mrs Brennan also submit that the applicant failed to assess the impact of emissions from the asphalt plant on surrounding properties.

#### First Party Submission on the appeal from Mr and Mrs Brennan:

The applicant submitted that dust, noise and odour will comply with national standards/limits and that ongoing environmental monitoring will ensure relevant standards are not breached. They further submit that the plant will not impair or interfere with amenities or with the environment as set out in Section 4 of the Air Pollution Act.

#### Assessment of the appeal

Odour can arise from bitumen fumes and the use of sulphur containing fuel. However, the EPA 2006 guidance for the sector does not refer to odour, which suggests it is generally not a significant issue for the sector. The nature and operation of the plant will limit fugitive odour emissions. For example, bitumen is stored in sealed tanks and mixed with aggregate in a closed container, trucks removing asphalt from the site are sealed and insulated in order to prevent heat loss from the asphalt material. Fuel combustion will not give rise to significant odour as sulphur content in fuel will be limited as specified in the licence. In addition, the air dispersion modelling demonstrates that air quality impacts due to emissions from the stack peak at a distance of 107m from the plant, decreasing with distance from this point. There are few residential receptors in the immediate vicinity of the proposed plant. The nearest residential receptors are approximately 360m and 500m away. Given the distance of the nearest receptors I consider it unlikely that odour will be a significant issue.

The licence also includes a number of conditions for the protection of the environment from fugitive emissions and odour as follows:

- Condition 3.4 requires the licensee to put in place a program, to the satisfaction of Galway County Council for the identification and reduction of fugitive emissions to air.
- Condition 3.5 requires the licensee to ensure that all operations on-site are carried out in a manner such that air emissions or odours do not result in significant impairment or significant interference with amenities or the environment beyond the site boundary.

I consider that the licence has a number of conditions, including those above, to provide for the protection of the environment by way of control and limitation of emissions.

In relation to noise, Condition 3.8 of the licence specifies noise limits measured at noise sensitive receptors. These noise limits are as per EPA Guidance<sup>2</sup> for the sector. However, it is noted that a noise impact assessment was not carried out as part of the licence application. I

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<sup>2</sup> EPA Guidance Environmental Management in the Extractive Industry (Non-Scheduled Minerals) 2006

therefore recommend that prior to the commencement of the activity, the applicant demonstrate that operation of the plant will not give rise to noise levels that would exceed noise limits at noise sensitive receptors as recommended in Section 3.1 above. In addition, I recommend including a condition (Condition 3.9) requiring regular noise monitoring at noise sensitive locations.

The issue of dust is dealt with in more detail in Section 3.1. It is also noted that the licence provides for the ambient monitoring of dust deposition at five locations (Appendix A.1) and that the licence also provides for the monitoring of emissions abatement equipment (pressure differential across bag filters) as a control measure (Condition 3.7, Appendix B). I consider these conditions as well as the recommendation in Section 3.1 provide for the adequate protection of the environment from dust impacts from the plant.

### **Recommendation**

**Noise** – Insert the following term and condition:

#### **Glossary of terms**

Noise-sensitive location (NSL): Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other installation or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.

**3.9** The licensee shall carry out noise monitoring at noise sensitive locations in the vicinity of the plant. This monitoring shall be undertaken on an annual basis and shall be undertaken in accordance with the methodology specified in the 'Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)' as published by the Environmental Protection Agency. On the basis of results submitted, the local authority may review and alter the frequency of monitoring.

### **3.3 Issues related to Appropriate Assessment**

#### Third Party Appeal: TMS Environmental Ltd (on behalf of Lagan Materials Ltd)

TMS Environmental Ltd submitted that the application files contain no reference to the completion of an Appropriate Assessment or Appropriate Assessment screening report to determine if such an assessment was required. The appellant submits that, based on the likely worst-case emissions from the plant, a full Appropriate Assessment is required.

#### First Party Submission on the appeal:

TOBIN Consulting Engineers on behalf of the applicant submitted that a Natura Impact Statement (NIS) was submitted during the air pollution licence application process.

#### Submission on Appropriate Assessment: The Tonroe/Castletaylor (Ardrahan Co. Galway) Action Group against Air Pollution

As part of the Appropriate Assessment public consultation under the Habitats Regulations, a submission was made that expressed concern as to the potential impact of emissions from the plant on Ardrahan Grassland SAC and European Sites in general.

#### Assessment of the appeal

It is noted that a Natura Impact Statement was requested by Galway Co Co and submitted as part of the licence application on 05 October 2020. Refer to Section 4 Appropriate Assessment of the asphalt plant below.

**Recommendation**

No change

**3.4 Other issues raised**Third Party Appeal/Submissions: Mr and Mrs Brennan and The Tonroe/Castletaylor (Ardrahan Co. Galway) Action Group against Air Pollution

A number of additional issues were raised as follows:

- that the applicant 'failed to manage community relations in a proactive manner'.
- that the public were not informed due to 'poorly displayed public notices' and that parties 'were not correctly informed'.
- that a statement in the application that the asphalt plant does not require an integrated pollution, prevention and control (IPPC) licence nullifies the 'purpose, function, spirit and relevance' of the Air Pollution Act 1987

First Party Submission on the appeal/submissions:

TOBIN Consulting Engineers on behalf of the applicant submitted that the proposed plant will comply with the highest standards and will not give rise to breaches of the national air quality standards and that a number of points in the appeal relate to general planning which are not relevant to the air emissions application.

Assessment of the appeal

This first point appears to relate either to the previous use of the site as a quarry or communication between the applicant and local residents with regard to the proposed industrial plant. These matters do not fall under the scope of the Air Pollution Act, 1987, (Licensing of Industrial Plant) Regulations, 1988 (S.I. No. 266/1988).

It is not clear what notices are being referred to in the submission – Regulation 6 of the Air Pollution Act, 1987, (Licensing of Industrial Plant) Regulations, 1988 (S.I. No. 266/1988) requires the publication of a newspaper notice of the applicant's intention to apply for a licence. The applicant satisfied this requirement. The Regulations don't require the erection of site notices in the same way as for planning.

It is not possible to comment on what parties were informed of in relation to the appeal. All submissions received on the appeal have been taken into consideration.

The appropriate authorisation for the activity is a licence under the Air Pollution Act 1987. The manufacture of asphalt does not require a licence under the EPA Acts 1992 as amended.

**Recommendation**

No change

**4. Appropriate Assessment**

Appendix 2 lists the European Sites assessed, their associated qualifying interests and conservation objectives along with the assessment of the effects of the industrial plant on the European Sites.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the industrial plant, individually or in

combination with other plans or projects is likely to have a significant effect on any European Site. In this context, particular attention was paid to the European Sites at Castletaylor Complex SAC (site code 000242), Ardrahan Grassland SwAC (site code 002244), Kiltiernan Turlough SAC (site code 001285) and Lough Fingall Complex SAC (site code 000606).

The industrial plant is not directly connected with or necessary to the management of any European site and it could not be excluded, on the basis of objective information, that the industrial plant, individually or in combination with other plans or projects, would have a significant effect on any European site and accordingly determined that an Appropriate Assessment of the industrial plant is required.

This determination was based on the proximity of the industrial plant to European Sites and the potential for significant effects on their qualifying interests. A Natura Impact Statement was submitted as part of the licence application.

An Inspector's Appropriate Assessment has been completed and has determined, based on best scientific knowledge in the field and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 as amended, pursuant to Article 6(3) of the Habitats Directive, that the industrial plant, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site, in particular Castletaylor Complex SAC (site code 000242), Ardrahan Grassland SAC (site code 002244), Kiltiernan Turlough SAC (site code 001285) and Lough Fingall Complex SAC (site code 000606), having regard to their conservation objectives and will not affect the preservation of these sites at favourable conservation status if carried out in accordance with the conditions, and amended schedules and conditions, attached to the licence to be granted by Galway County Council, for the following reasons:

- There will be no direct loss of habitat at European Sites as the asphalt plant site will be outside the boundaries of European Sites.
- There is the potential for air emissions of sulphur and nitrogen to impact terrestrial habitats listed as qualifying interests in this SAC. The amended licence will restrict emission limits to those modelled by the applicant. At these emission limits, the impact of emissions from the industrial plant will be below the relevant air quality standards for the protection of ecosystems and vegetation.
- Dust from the operation of the plant could negatively impact vegetation of the nearest SACs. However, emissions of dust are controlled in the licence by emission limit values, and conditions which require that bag filters be in place for dust abatement and that the pressure across these filters be monitored. The licence also specifies ambient dust deposition limit values in the surrounding area. With these measures in place there will be no adverse impacts on the integrity of European Sites.
- The licence specifies noise emission limit values at noise sensitive locations and monitoring to demonstrate compliance with these limits. Based on these noise controls and bat surveys which found no evidence of Lesser Horseshoe Bat (*Rhinolophus hipposideros*) in the vicinity of the plant, and the distance to the nearest roosting site (ca. 5 km) and foraging area (2.5 km) in Lough Fingall Complex SAC (site code 000606), it can be concluded that noise from the plant will not adversely affect the integrity of this site.
- No significant in-combination effects are predicted; therefore, no additional mitigation measures are required.



In light of the foregoing reasons no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of those European Sites at Castletaylor Complex SAC (site code 000242), Ardrahan Grassland SAC (site code 002244), Kiltiernan Turlough SAC (site code 001285) and Lough Fingall Complex SAC (site code 000606).

## **5. Overall recommendation and notes**

It is recommended that the Agency, in accordance with Section 34 of the Air Pollution Act 1987 as amended, direct Galway County Council to grant the licence (Reference AP13/20) under the Air Pollution Act 1987 to John Madden and Sons Ltd, for atmospheric emissions at a site located at Tonroe, Ardrahan, Co. Galway, subject to the amendments detailed in this report.



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Jim Johnson  
Inspector ELP

## Appendix 1 Results of air dispersion modelling

The table below gives details of the predicted impact of the proposed main channelled emissions to air at the emission limit values specified in Section 3.1 above. The values are the worst case predicted values using the screening model and occur 107m from the plant. The concentrations then decrease with increasing distance up to 1,000m, beyond which process contribution falls to background levels. The nearest residence is ca. 360m away.

Main channelled emissions impact						
Parameter	Averaging Period	Background concentration ( $\mu\text{g}/\text{m}^3$ )	Process contribution to PEC ( $\mu\text{g}/\text{m}^3$ )	Predicted Environmental Concentration (PEC) ( $\mu\text{g}/\text{m}^3$ )	PEC as % of Air Quality Standard	Air Quality Standards/ Guidelines ( $\mu\text{g}/\text{m}^3$ ) Note 1
Nitrogen Oxides (as $\text{NO}_2$ )	99.8%ile hourly	26.9	106.80	133.70	67%	200
	Annual	3	10.68	13.68	34%	40
$\text{SO}_2$	1 hour (99.73%ile)	9.8	135.57	145.37	42%	350
	24 hour (99.18%ile)	5.7	81.34	87.04	70%	125
Carbon monoxide (CO)	Maximum 8 hour	500	1037.12	1537.12	15%	10,000
$\text{PM}_{10}$	Daily (90.4%ile)	17.7	16.27	33.97	70%	50
	Annual	9	2.71	11.71	29%	40
$\text{PM}_{2.5}$	Annual	6	2.71	8.71	35%	25

Note 1: Air Quality Standards Regulations, SI 58/2009 and 180/2011, unless otherwise stated.

### Maximum Predicted Annual Mean Concentrations Within Designated Sites

Site	Parameter	Background concentration ( $\mu\text{g}/\text{m}^3$ )	Process contribution to PEC ( $\mu\text{g}/\text{m}^3$ )	Predicted Environmental Concentration (PEC) ( $\mu\text{g}/\text{m}^3$ )	PEC as % of Air Quality Standard	Air Quality Standards/ Guidelines ( $\mu\text{g}/\text{m}^3$ )
Castletaylor Complex SAC	Nitrogen Oxides (as $\text{NO}_2$ )	6	7.05	13.05	44%	30 <sup>Note 1</sup>
	$\text{SO}_2$	3	9.88	12.88	64%	20 <sup>Note 2</sup>
Ardrahan Grassland SAC	Nitrogen Oxides (as $\text{NO}_2$ )	6	3.83	9.83	33%	30 <sup>Note 1</sup>
	$\text{SO}_2$	3	6.37	9.37	47%	20 <sup>Note 2</sup>

Note 1: Critical level for protection of vegetation

Note 2: Annual & Winter critical level for the protection of ecosystems

## Appendix 2 Appropriate Assessment

List of European Sites assessed, their associated qualifying interests and conservation objectives.

European Site (site code)	Distance/ Direction from site of asphalt plant	Qualifying Interests (* denotes a priority habitat)	Conservation Objectives	Assessment
Castletaylor Complex SAC (site code 000242)	0.2 km north	<b>Habitats</b> 3180 Turloughs* 4060 Alpine and Boreal heaths 5130 <i>Juniperus communis</i> formations on heaths or calcareous grasslands 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) 8240 Limestone pavements*	NPWS (2021) Conservation objectives for Castletaylor Complex SAC [000242]. Generic Version 8.0. Department of Housing, Local Government and Heritage	<p>There is the potential for air emissions of sulphur, nitrogen and particulates to impact the terrestrial habitats listed as qualifying interests in this SAC. The amended licence will restrict emission limits to those modelled by the applicant. At these emission limits, the impact of emissions from the industrial plant will be below the relevant air quality standards for the protection of ecosystems and vegetation. The licence requires the applicant to demonstrate compliance with these limits. Dust from the operation of the plant could negatively impact vegetation of the nearest SACs. However, emissions of dust are controlled in the licence by emission limit values, and conditions which require that bag filters be in place for dust abatement and that the pressure across these filters be monitored. The licence also specifies ambient dust deposition limit values in the surrounding area. On this basis, it is concluded that no adverse effects on the site's integrity will arise, in view of the site's conservation objectives on these habitats due to emissions from the plant.</p> <p>Caranavoodaun Turlough within Castletaylor Complex SAC is 1 km north of the asphalt plant. Air dispersion modelling has demonstrated that beyond 1 km the impact of emission from the plant are not significant. As such, the turlough is outside the zone of influence of air emissions from the plant.</p>
Ardrahan Grassland SAC (site code 002244)	0.6 km south	<b>Habitats</b> 4060 Alpine and Boreal heaths 5130 <i>Juniperus communis</i> formations	NPWS (2019) Conservation Objectives: Ardrahan Grassland SAC 002244. Version 1. National Parks and Wildlife Service,	There is the potential for air emissions of sulphur, nitrogen and particulates to impact the terrestrial habitats listed as qualifying interests in this SAC. The amended licence will restrict emission limits to those modelled by

European Site (site code)	Distance/ Direction from site of asphalt plant	Qualifying Interests (* denotes a priority habitat)	Conservation Objectives	Assessment
code 002244)		on heaths or calcareous grasslands 8240 Limestone pavements*	Department of Culture, Heritage and the Gaeltacht.	the applicant. At these emission limits, the impact of emissions from the industrial plant will be below the relevant air quality standards for the protection of ecosystems and vegetation. The licence requires the applicant to demonstrate compliance with these limits. Dust from the operation of the plant could negatively impact vegetation of the nearest SACs. However, emissions of dust are controlled in the licence by emission limit values, and conditions which require that bag filters be in place for dust abatement and that the pressure across these filters be monitored. The licence also specifies ambient dust deposition limit values in the surrounding area. On this basis, it is concluded that no adverse effects on the site's integrity will arise, in view of the site's conservation objectives on these habitats due to emissions from the plant.
Kiltiernan Turlough SAC (site code 001285)	1.5 km west	<b>Habitats</b> 3180 Turloughs*	NPWS (2021) Conservation Objectives: Kiltiernan Turlough SAC 001285. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.	The waterbodies within Kiltiernan Turlough SAC are 1.5 km from the asphalt plant. Air dispersion modelling has demonstrated that beyond 1 km the impact of emissions from the plant are not significant. As such, this SAC is outside the zone of influence of air emissions from the plant.
Lough Fingall Complex SAC (site code 000606)	2 km northwest	<b>Habitats</b> 3180 Turloughs* 4060 Alpine and Boreal heaths 5130 <i>Juniperus communis</i> formations on heaths or calcareous grasslands 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates ( <i>Festuco-Brometalia</i> ) (* important orchid sites)	NPWS (2019) Conservation Objectives: Lough Fingall Complex SAC 000606. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.	The activity will generate noise which could impact on bats. Lough Fingall Complex SAC (2km northwest) includes Lesser Horseshoe Bat ( <i>Rhinolophus hipposideros</i> ) as a qualifying interest. However, the bat roost location is in the western end of the SAC, over 5km from the asphalt plant. The Conservation Objectives delineate a foraging range 2.5 km around this roost, which is outside the zone of influence of the plant. A bat survey carried out in 2015 found no evidence of bats using the asphalt plant site or in the wider quarry area. In addition, an ecological survey of the area found limited

European Site (site code)	Distance/ Direction from site of asphalt plant	Qualifying Interests (* denotes a priority habitat)	Conservation Objectives	Assessment
		<p>7210 Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion davallianae*</p> <p>8240 Limestone pavements*</p> <p><b>Species</b> 1303 Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)</p>		<p>foraging habitat for the species that would act as a corridor from the roost site in the SAC. In addition, noise from the activity will be controlled by emission limits and monitoring requirements. On the basis of the above, it is concluded that there is no potential for significant adverse effects on the integrity of the SAC, in view of its conservation objectives.</p> <p>The turloughs and terrestrial habitats in this SAC are considered to be beyond the zone of influence of air emissions from the plant based on the air modelling assessment. At 2km from the plant, the impact of air emissions from the plant will be negligible.</p>