

This Report has been cleared for submission to the Board by Programme Manager, Marie O'Connor

Signed: *Marie O'Connor*

Date: 18th November 2022



MEMO

Office of
Environmental
Sustainability

To: Board of Directors

Date: 18th November 2022

From: Jim Johnson

Subject: Appeal of a decision by Kerry County Council to grant an Air Pollution Act licence (Reference AP20-01) to Roadstone Ltd.

Appeal Registration No: E0010-01

Recommendation: The Board is asked to **APPROVE** the decision recommended hereunder with respect to the appeals submitted to the Agency in relation to the Air Pollution Act licence (Reference AP20-01) granted to Roadstone Ltd., Fortunestown, Tallaght, Dublin 24 for atmospheric emissions from the operation of an asphalt plant at Clasheen, Killarney, Co. Kerry.

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 ("the Act"). The industrial processes are listed in the Third Schedule of the Air Pollution Act 1987.

Under Section 34(1) of the Air Pollution Act an appeal may be made in relation to the granting or refusing of a licence under the Act. The Environmental Protection Agency ("the Agency") is the statutory authority for appeals in relation to Air Pollution Act licences since the 31 August 2015. Prior to this date the statutory authority for appeals was An Bord Pleanála.

On 18th May 2021 Kerry County Council (KCC) granted a licence (Reference number: AP20-01) for the operation of an asphalt plant at Clasheen, Killarney, Co. Kerry. This decision has been appealed to the Agency by third parties. The asphalt plant is to be located in an existing sand and gravel pit approximately 3km south east of Killarney. The site is accessed directly from a national road (N22) that runs between Killarney and Cork.

The plant will manufacture bitumen, macadam and asphalt for infrastructure projects. The plant includes aggregate feed bins, conveyors, storage tanks (bitumen and fuel), an oil-fired aggregate rotary dryer, bitumen mixing hopper, control room and hot storage bins which discharge hot mix to trucks. Waste gases from the burner will pass through a bag-house with dust filters before discharging to atmosphere from a 15m high stack.

2 Third Party Appeals

The Agency received four third party appeals in relation to the granting of the licence. Details of the appeals and submissions are listed in the table below.

Type	Name	Date received
Third party appeals	Mr Christopher Wright & Others	17 June 2021
	Mr Dave Murphy & Others	14 June 2021
	Mr and Ms Gleeson	14 June 2021
	Phil, Doreen and Philip Horan	17 June 2021
First party submission/observations on the appeals	SLR Consulting Ireland on behalf of the applicant	29 July 2021 20 August 2021 21 September 2021
Third party submissions/observations	Mr Christopher Wright & Others	22 September 2021
	Mr Dave Murphy & Others	21 September 2021
	Mr and Ms Gleeson	25 September 2021
	Phil, Doreen and Philip Horan	30 August 2021 24 September 2021
Local Authority	Kerry County Council (KCC)	23 September 2021
Submissions on Appropriate Assessment	Mr Dave Murphy & Others	29 April 2022 15 July 2022
	Mr and Ms Gleeson	04 May 2022 19 July 2022
	Phil, Doreen and Philip Horan	02 June 2022
	SLR Consulting Ireland on behalf of the applicant (includes NIS)	03 June 2022

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

3 Consideration of the appeal

3.1 Planning and other matters raised

The Agency's consideration of the appeal is limited to the appeal of the decision of the Local Authority to grant the licence and to the conditions attached to the licence. In addition, the licence is limited to matters related to air pollution. The appeals raise a number of issues that are outside of the scope of the appeal. These included issues related to dust from the existing quarry, traffic to and from the site, discharges to water and water abstraction and whether there is a need for the plant.

3.2 Air emissions

Third party appeals

- a) The appellants object to the granting of the licence on the basis that emissions to air from the plant will affect the health of residents in the area, land use in the area, a school at Lissivigeen, local amenities including a local road to the north of the quarry, and the tourist industry.
- b) They also submit that emissions from the plant would impact the River Flesk, Killarney Lakes and Sheheree Bog.
- c) It was questioned whether the stack would be high enough to disperse air emissions to avoid impacts in the surrounding area.

- d) It was also submitted that the topography of the area prevents air dispersion and that it was not appropriate to use data from Cork Airport meteorological station in the air quality assessment as the meteorological conditions are not comparable. One appeal also submitted that it was not appropriate to use wind data from Valentia Island station.
- e) It was also questioned why an air pollution licence could be granted when residents in Killarney will be subject to regulations governing the burning of specified fuels ('smoky coal ban').
- f) One submission questioned why the applicant had not been asked to provide monitoring results from other sites to demonstrate compliance.

Submission on behalf of the applicant

- a) SLR Consulting Ireland ('SLR') on behalf of the applicant made a submission on 29th July 2021 which responded to the issues raised in the appeals. The submission referred to the air quality impact modelling study submitted as part of the licence application (October 2020) which concluded that the maximum predicted concentrations for SO₂ and NO_x (including NO₂) beyond the boundary would be substantially below the National Air Quality Standards (NAQS). It further states that the modelling assessment was conservative as the emissions from the plant would be lower in practice. They also referred to monitoring of ambient dust deposition as part of monitoring of the ongoing quarrying activities as well as the measurements of PM₁₀ (particulate matter) near the site boundary in January 2021 to demonstrate compliance with dust limits set by the planning permission for the sand pit.

In relation to impacts at Lissivigeen national school the submission states that "the effect of emissions on current background air quality would be minor or insignificant".

In relation to impacts at the local road north of the site, it refers to the air quality modelling study and submits that "plume dispersion from the exhaust stack is unlikely to result in significant air quality impact likely to cause effect to the amenity near the northern boundary of the quarry."

- b) With regard to impacts on Sheheree Bog SAC and the River Flesk, SLR referred to additional air modelling submitted to KCC as further information in March 2021. "The results of the air quality impact modelling study by Envirocon (March 2021) relating to the potential effect of the emissions from the exhaust stack on deposition/acidity in the vicinity of Sheheree SAC demonstrate that even based on maximum 'worst-case' emissions the predicted rates are insignificant within the area near the SAC. The predicted annual deposition rate of nitrogen and sulphur over the River Flesk was also shown to be negligible compared to critical load values."

SLR also submitted on behalf of the applicant a Natura Impact Statement (NIS) on 03rd June 2022 that included additional modelling and assessment of impacts of emissions of sulphur (S) and nitrogen (N) from the plant on the integrity of Sheheree (Ardagh) Bog SAC and Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC which includes the River Flesk. The NIS concluded that the results of the assessment supported the conclusions of the earlier report (March 2021) and that 'impacts from the asphalt plant emissions will have an imperceptible effect on the existing air quality and N deposition at the 3 conservation sites.'

- c) With regard to the adequacy of the stack height, the submission referred to a modelling study (SLR, February 2021) submitted as part of the application which evaluated the impact of local terrain on the predicted ground-level impacts of the plume. They cite the results of the study that "indicated that impaction of the emission plume was unlikely to occur that would result in a significant deterioration of air quality within this area".

- d) SLR submitted that even though Valentia meteorological station is closer, it is more appropriate to use the data from the Cork meteorological station in air dispersion modelling for the following reasons:

"The nearest meteorological station may be exposed to a substantially different wind field pattern either due to coastal or significant terrain factors compared to the location where the study is taking place."

"The nearest synoptic meteorological stations to the Clasheen site are Cork Airport and Valentia. A comparison of hourly data over a number of years was carried out and it is shown that the Met Eireann site exhibits substantial coast influences that given the separation distance from Clasheen and the presence of the Kerry mountain range do not reflect the wind field experienced in the Killarney area. In addition, a comparison of predicted results based on each station showed that the higher concentrations tended to result from using the Cork Airport data."

"From this assessment it was considered that the use [of] climatological data from Cork Airport was appropriate for overall wind-field conditions within the Killarney area and so was the location selected for the modelling studies."

"Even though Killarney has higher rainfall rates compared to rainfall data from Cork Airport, the wind direction and wind speed are the primary climatological factors that affect atmospheric stability and hence dispersion patterns from an exhaust stack."

- e) The submission also points out that the regulations governing the burning of domestic fuels do not apply to the industrial activities and that the regulation of emissions from asphalt plants is provided for by licensing by the local authority.
- f) The submissions of the applicant did not comment on point (f) above.

Consideration of the appeal

Assessment of air emissions from the asphalt plant stack

An air quality impact assessment report was submitted as part of the licence application (Envirocon, October 2020). The report used an air dispersion model to predict the impact of air emissions from the asphalt plant stack on ambient air quality. Modelling was carried out with the plant at maximum volume flow and maximum concentrations of NO₂, SO₂ and particulates in the stack exhaust gas in order to capture worst case operating conditions. These were the same concentrations and maximum volume flow rate that are in Appendix A of the licence:

Appendix A:

Parameter	Emission Limit
Maximum volume flow	56,000 Nm ³ /hour
Nitrogen Oxides (as NO ₂)	450 mg/Nm ³
Sulphur Dioxide (SO ₂)	350 mg/Nm ³
Particulates	50 mg/Nm ³

The modelling used five years of hourly meteorological data from Cork Airport meteorological station (2015-2019). The model predicted ambient ground level concentrations for every hour of the five years of meteorological data at every point of a grid beyond the site boundary as well as at the 19 nearest houses.

Having reviewed the report, I am satisfied that the modelling was carried out in accordance with published Agency guidance and was sufficiently detailed and conservative to assess the impact of emissions to air from the asphalt plant stack.

The table below gives details of the worst case predicted impact of the pollutants at the receptor grid outside the site boundary. The predicted ambient concentration is the sum of the contribution from process emissions and background concentrations. The modelling can also be considered conservative as it is unlikely that the plant would operate continuously all year at the emission limits.

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 ($\mu\text{g}/\text{m}^3$) Note 1
SO ₂	99.7%ile hourly	6	91	97	28	350
	99.2%ile daily	6	53	59	47	125
	Annual Note 2	3	7.5	10.5	53	20
Nitrogen Oxides (as NO ₂)	99.8%ile hourly	3	43	46	23	200
	Annual	3	3	6	15	40
NO _x	Annual Note 2	4	10	14	47	30
Particulates (as PM ₁₀)	90.4%ile daily	4	12	16	32	50
	Annual	1	12	13	33	40

Note 1: Air Quality Standards Regulations, SI180/2011.

Note 2: National Air Quality Standard for the protection of ecosystems

The air dispersion modelling assessment shows that the predicted environmental concentrations are below (compliant with) the relevant air quality standards and that the operation of the plant will not have a significant impact on the receiving environment. The modelling can also be considered conservative as it is unlikely that the plant would operate continuously at the emission limits.

In June 2022, additional air dispersion modelling was included as an addendum to the Natura Impact Statement (NIS). The modelling assessed the impact of NO_x and SO₂ emissions from the plant at the three closest European Sites: Killarney National Park, Macgillycuddy Reeks, Caragh River SAC, River Flesk, Sheheree (Ardagh) Bog SAC and Killarney National Park SPA. This modelling used lower emission limit concentrations for NO_x and SO₂. The NIS stated that "emission measurements obtained from numerous asphalt plants in Ireland in recent years demonstrate that the NO_x and SO₂ emission concentrations in the stack exhaust are generally well below 350 and 250 mg/Nm³ respectively. In order that representative maximum emission rates are applied to the Appropriate Assessment for the 3 European sites the maximum concentrations present in the exhaust air can be reduced significantly below the limit values used in the 2021 study."

Parameter	Emission Limit in Appendix A and modelled in application (Oct 2020)	Revised emission limits (addendum to NIS) (June 2022)
Maximum volume flow	56,000 Nm ³ /hour	No change
Nitrogen Oxides (as NO ₂)	450 mg/Nm ³	350 mg/Nm ³
Sulphur Dioxide (SO ₂)	350 mg/Nm ³	250 mg/Nm ³
Particulates	50 mg/Nm ³	No change

Background NO_x and SO₂ concentrations used in the model were based on EPA rural monitoring locations located elsewhere in Ireland (Zone D). The higher end of the range was used for Killarney National Park, Macgillycuddy Reeks, Caragh River SAC, which is close to the N22 national road. The other two European Sites and large parts of the Killarney National Park SAC are distant from roads and background NO_x concentrations would typically be <2 µg/m³ at these locations. The predicted maximum impact on ambient NO_x and SO₂ concentrations at nearby European sites due to emissions from the plant are outlined in the table below.

Site (distance)	Parameter	Background concentration (µg/m ³)	Process contribution (PC) to PEC (µg/m ³)	PC as a % of Air Quality Standard	Predicted Environmental Concentration (PEC) (µg/m ³)	PEC as % of Air Quality Standard	Air Quality Standards (µg/m ³)
Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (0.6 km to SAC boundary)	NO _x (as NO ₂)	9	<1	<3%	10	33%	30 ^{Note 1}
	SO ₂	3	<1	<5%	4	20%	20 ^{Note 2}
Sheheree (Ardagh) Bog SAC (2.8 km to west)	NO _x (as NO ₂)	<2	<0.1	<1%	<2	<7%	30 ^{Note 1}
	SO ₂	<2	<0.1	<1%	<2	<10%	20 ^{Note 2}
Killarney National Park SPA (3.5 km to west)	NO _x (as NO ₂)	<2	<0.1	<1%	<2	<7%	30 ^{Note 1}
	SO ₂	<2	<0.1	<1%	<2	<10%	20 ^{Note 2}

Note 1: Critical level for protection of vegetation

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

The air dispersion modelling demonstrated that concentrations peak within a few hundred metres of the plant and decrease rapidly with distance from that point. The process contribution of emissions from the asphalt plant to ambient NO_x and SO₂ concentrations at the sites is predicted to be very low – less than 3% and 5% for NO_x and SO₂ at the nearest boundary of Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC and less than 1% for Sheheree (Ardagh) Bog SAC and Killarney National Park SPA.

Nitrogen deposition is listed as an attribute of the conservation objectives for Sheheree (Ardagh) Bog SAC. The conservation objectives quote the critical load for raised bogs as being between 5 and 10kg N/ha/yr. The annual nitrogen (N) deposition rate (kg N/ha/year) due to emissions from the plant was also modelled. The predicted contribution to nitrogen deposition at the site was less than 0.1 kg N/ha/yr (table below). At this level of nitrogen deposition, the impact on the SAC can be considered undetectable and the site is outside the zone of influence of the plant¹.

Predicted maximum nitrogen deposition at SAC/SPA sites				
Site	Distance to asphalt plant	Nitrogen Deposition (kg N/ha/year)	% contribution to critical load	Critical load (kg N/ha/year)
Sheheree (Ardagh) Bog SAC	2.8 km to west	0.02	<1%	5-10

¹ EPA (2021) Assessment of the impact of ammonia and nitrogen on Natura 2000 sites from intensive agricultural installations. Environmental Protection Agency

Based on the applicant's proposal, I recommend the limits in the licence be updated with the revised lower values as modelled in the addendum to the NIS and that Condition 5.1 of the licence be added to require the applicant to demonstrate compliance with these limits prior to the commencement of operation of the plant. This also means that the worst case predicted impacts from NO_x and SO₂ will be lower than those predicted in the original application (October 2020) outlined above.

The specific issues raised in the appeals (as numbered above under third party appeals) are addressed below:

- a) The air quality impact assessments carried out as part of the licence application and appeal have demonstrated that air emissions from the plant stack will meet the requirements of the relevant ambient air quality standards for the protection of human health and ecosystems. Condition 5.2 of the licence limits emissions from the stack to those in Appendix A.1 that were modelled in the air quality assessment. The emission limits for NO_x and SO₂ inputted in the model were subsequently revised downwards. I recommend that Appendix A.1 of the licence be amended to reflect these new lower limits. It is also noted that the reference conditions in Condition 3.1 do not control for oxygen content, but that the concentrations modelled in the air quality assessment report were based on an oxygen content of 17%. I recommend Condition 3.1 be changed to specify 17% oxygen content as a reference.
- b) The air quality impact assessments have demonstrated that emissions from the plant at the limits in the amended licence will not have any adverse effects on the River Flesk, Killarney Lakes and Sheheree Bog.
- c) The stack height included in the modelling assessment proved adequate for the dispersion of pollutants at the emission limits proposed. The modelling took into account the elevated terrain in the vicinity of the proposed plant. Having assessed the relevant documentation, I am satisfied that the height of the stack is sufficient to allow adequate dispersion of the licensed industrial plant emissions.
- d) The air quality impact assessment used meteorological data from Cork Airport to model the impact of emissions from the asphalt plant. Agency guidance² on air dispersion modelling recommends that installations located more than 10 kilometres from the coast may be more appropriately assessed with an inland station which may be further from the modelling domain than a nearby coastal station. The site of the asphalt plant is more than 10 km from the coast and as such, it is appropriate to use data from an inland station. Agency guidance also states that mean annual wind speed and wind direction are the most important factors to consider when selecting a met station. Having reviewed the report, I am satisfied that the modelling was carried out in accordance with published Agency guidance with regard to the meteorological data used and was sufficiently detailed and conservative to assess the impact of emissions to air from the asphalt plant stack. The air quality impact assessment examined the wind data from Valentia Island station; however, it showed strong coastal influences that did not reflect the wind conditions at the subject site.
- e) With regard to the burning of specified fuels ('smoky coal ban') in domestic residences, in this case the appropriate controls for industrial plant such as asphalt plant is the Air Pollution Act, 1987 and associated regulation (Air Pollution Act, 1987, (Licensing of Industrial Plant) Regulations, 1988 (S.I. No. 266/1988)).
- f) With regard to compliance with emission limit values - Condition 5.1 of the revised licence requires the applicant to demonstrate compliance with the licence limits prior to the commencement of operation of the plant.

² Air Dispersion Modelling from Industrial Installations Guidance Note (AG4)

Recommendation:

Amend Condition 3.1 as follows:

3.1 The concentration limits for emissions to atmosphere specified in this licence shall be based on gas volumes under standard conditions of: Temperature 273K, Pressure 101.3kPa, dry gas, **17% oxygen**.

Reason: To clarify the interpretation of emission limit values.

Amend Condition 5.1 as follows:

5.1 **Prior to the plant becoming operational, a commissioning** programme for the **new** plant shall be agreed with the Licensing Authority to demonstrate the achievement of the necessary operational parameters and the specified **air and noise** emission limit values of this licence. The results of this programme shall be forwarded to the Licensing Authority as soon as they are available.

Reason: To provide for the protection of the environment.

Amend Appendix A.1 Emission to Atmosphere as follows:

A.1 Emission to Atmosphere

Emissions Point: Single Exhaust Stack

Volume to be emitted: 56,000 Nm³ per hour maximum

Parameter	Emission Limit Value (mg/Nm ³)	Monitoring Frequency
NO _x (as NO ₂)	350	Quarterly
Sulphur Dioxide	250	Quarterly
CO	500	Quarterly
Particulates	50	Continuous

3.3 Odour

A number of appeals submitted that odours from the plant will affect local residents and tourists to the area.

In their submission, SLR, on behalf of the applicant, referred to an odour assessment carried out as part of the licence application and cite the conclusions of the report which stated that no odour nuisance would occur beyond the boundary of the sand pit at Clasheen.

Consideration of the appeal

With regard to odour the applicant carried out an odour assessment as part of the licence application. Potential sources of odour are from fugitive emissions from the transfer and storage of bitumen, mixing of bitumen with aggregate and the transfer of asphalt from overhead hot storage to trucks. The trucks are then covered before departing the quarry site. There is also a potential source of odour from the asphalt plant stack.

The bitumen is delivered in tankers and stored in heated steel double-skinned storage silos in order to be kept hot. These areas are sealed, with low potential for odour. The pipes transferring bitumen, the mixing tower and hot asphalt storage are also enclosed to maintain temperature with low potential for fugitive odour emissions. An odour assessment was carried out to assess the other potential sources of odour i.e. the loading of asphalt into trucks and from waste gases from the plant stack. The modelling was carried out in accordance with

Agency guidance¹ on air dispersion modelling. Odour emission rates used were based on 'worst-case' (maximum) total odour emissions from the operation of the plant. The EPA indicative odour limit for this category of activity is 3.0 odour units per m³ (OU_E/m³) as a 98th %ile of hourly values (i.e. it may be exceeded for 2% of the year which is 175 hours) at the worst-case sensitive receptor. The worst-case predicted values were less than 1.5 OU_E/m³ at the nearest receptors (house), with values ranging from 0.25 to 1 OU_E/m³.

It is also noted, that the licence includes a number of conditions for the protection of the environment from fugitive emissions and odour as follows:

- Condition 2.2 requires the licensee to ensure that operations onsite do not result in air emissions or odour that would result in significant impairment or interference with amenities or the environment beyond the site boundary.
- Condition 5.8 requires the licensee to prepare a programme, to the satisfaction of the Licensing Authority, for the identification and reduction of fugitive emissions to air using an appropriate combination of best available techniques.
- Condition 7.1 specifies that all site operations shall be carried out in such a manner as to ensure that no odour or dust nuisance occurs off site.

Based on the above, I consider that the controls and limitations of emissions will ensure the protection of the environment from odour emissions from the plant and that the concerns of the appellants have been addressed.

Recommendation:

No change

3.4 Noise

Two appellants made points in relation to noise. Mr Dave Murphy and Others (14th June 2021) raised concerns about the impact of noise from the plant on a local road used by walkers.

In their submission of 22 September 2022, (item 7.Property Values) Mr. Christopher Wright and Others questioned "what will be done to ensure that the local residents will not be subjected to noise pollution from Roadstone?"

The submissions by the applicant did not comment on this issue.

Consideration of the appeal

In the consideration of this appeal it was noted that KCC did not impose conditions in the licence relating to noise. Previously (Appeal Ref E0002-01), the Agency considered that noise, under the Air Pollution Act 1987 as amended, is a form of pollution and, that noise limitation and control should be considered for air pollution licences under the Act. I therefore recommend that noise limits and noise monitoring be required under the licence.

It is also noted that a noise impact assessment was not carried out or requested as part of the licence application; however, Condition 5.1 requires the licensee to demonstrate compliance with the emission limits in the licence prior to the plant becoming operational.

Insert the following terms, conditions and schedules:

Glossary of Terms

Daytime: 0700 hours to 1900 hours

Evening Time: 1900 hours to 2300 hours

Night-time: 2300 hours to 0700 hours

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.

CONDITION 5 EMISSIONS TO ATMOSPHERE

5.10 Noise from the plant shall not give rise to sound pressure levels measured at noise sensitive locations in the vicinity of the plant which exceed the limit value(s) set out in Appendix A.4.

Reason: To clarify the interpretation of limit values set in this licence.

CONDITION 7 AMBIENT MONITORING

7.7. The licensee shall carry out noise monitoring at the two nearest noise sensitive locations. This monitoring shall be undertaken within the first four weeks of operation of the plant, and quarterly thereafter, 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 Agency.

Reason: To provide for the protection of the environment by way of monitoring of emissions.

APPENDIX A

A.4 Noise

Emission Limit Values (Noise)

Daytime dB L _{Ar,T} (30 minutes)	Evening time dB L _{Ar,T} (30 minutes)	Night-time dB L _{Aeq,T} (15-30 minutes)
55	50	45 ^{Note 1}

Note 1: During night-time hours there shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise-sensitive location.

Emissions to Atmosphere, Monitoring Schedule (Noise)

Period	Minimum Survey Duration ^{Note 2}
Daytime	A minimum of 3 sampling periods at each noise monitoring location
Evening-time	A minimum of 1 sampling period at each noise monitoring location.
Night-time ^{Note 1}	A minimum of 2 sampling periods at each noise monitoring location.

Note 1: Night-time measurements should be made between 2300hrs and 0400hrs, Sunday to Thursday, with 2300hrs being the preferred start time.

Note 2: Sampling period is to be the time period T stated as per *Schedule 1.1 Emission Limit Values (Noise)*, of this licence. This applies to day, evening and night time periods.

Amend the following conditions:

CONDITION 2 MANAGEMENT OF THE ACTIVITY

2.2 The Licensee shall ensure that all operations onsite shall be carried out in a manner such that air emissions, **noise** or odours do not result in significant impairment of, or significant interference with amenities or the environment beyond the site boundary.

Reason: To make provision for the management of the activity.

CONDITION 6 EMISSION MONITORING

6.1.2 The Licensee shall nominate an independent company to carry out air emission **and noise** monitoring at the site. This company shall be adequately equipped to carry out the required monitoring and be competent in this monitoring either by experience or by qualification.

6.2 Monitoring of emissions to the atmosphere, dust deposition **and noise** shall be carried out as specified in Appendix A of this licence, when maximum emissions to the atmosphere are occurring. The Licensing Authority may decide to reduce the frequency of monitoring following the examination of the trends shown by the monitoring data as submitted.

Reason: To provide for the protection of the environment by way of monitoring of emissions.

CONDITION 8 RECORDING AND REPORTING

8.6 The Licensee shall submit to the Licensing Authority, a year from the date of grant of this licence, and each calendar year thereafter, an Annual Environmental Report. This report shall include as a minimum the following information:

- Emissions to the atmosphere monitoring summary
- Ambient Air and Dust Deposition monitoring summary
- Complaints Summary
- **Air pollution** emission and environmental incident report.
- Evaluation of the operation of the bag filter.
- **Noise Monitoring Summary.**

Reason: To provide for the collection and reporting of adequate information on the activity.

3.5 Monitoring

Mr. Christopher Wright and Others questioned who would carry out monitoring and testing of air emissions from the plant and monitoring of the impact on the River Flesk and lands nearby.

SLR, on behalf of the applicant, referred to the monitoring requirements in Condition 6 and Condition 7 of the licence – that require emissions monitoring and ambient monitoring respectively.

Consideration of the appeal

The licence specifies a number of conditions with regard to the monitoring of air emissions from the plant as follows:

- Condition 5.1 requires a commissioning programme for the plant be put in place within one month of the date of issue of the licence to demonstrate to Kerry County Council (the licensing authority), that the emissions limit values in the licence can be achieved.
- Condition 6.2 requires monitoring to be carried out as specified in Appendix A of the licence.
- Condition 6.4 requires continuous monitoring of dust emissions from the plant stack.

Based on the above, I consider that the controls and limitation of emissions are sufficient to ensure monitoring of emissions to the environment.

It should also be noted that the River Flesk is monitored as part of the EPA national rivers monitoring programme.

Recommendation:

No change

3.6 Hours of operation

A number of appellants queried what hours the asphalt plant would be allowed to operate.

SLR, on behalf of the applicant, referred to Condition 4 attached to the current planning permission (P. Refs. 10/1163; 10/91163) which sets out the permitted operating hours of the asphalt plant to be between the hours of 04.00 and 19.00 Monday to Saturday.

Consideration of the appeal

In their licence application Roadstone Ltd requested the hours of operation in planning permission (Ref 10/1163) as follows:

4. Hours of operation shall be restricted to between the hours of 04.00 and 19.00 Monday to Saturday.

The licence conditions relevant to hours of operation as follows:

1.4 For the purpose of limitation of emissions, the period during which the licensed production facility shall conduct operations involving emissions to air shall be between 06.00- and 19.00-hours Monday to Friday inclusive and 06.00 and 14.00 Saturday. [underline added]

The facility shall not operate on Sundays or Public Holidays

Condition 1.4 restricts the hours involving emissions to air, whereas planning permission sets the hours of operation in general.

Condition 1.6 allows the Licensing Authority reserves the right to limit the hours of operation which the licensed production facility shall conduct operations involving emissions to air should the Licensing Authority see fit.

There are also lower noise limits for the night time period up to 07:00 am at NSLs giving further protection to the local environment.

I consider these conditions to be adequate for the protection of the environment.

Recommendation:

No change

4 Appropriate Assessment

Appendix 1 lists the European Sites assessed, their associated qualifying interests and conservation objectives.

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 Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (000365), Sheheree (Ardagh) Bog SAC (000382) and Killarney National Park SPA (004038).

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. A Natura Impact Statement was received by the Agency on 03 June 2022.

This determination has been made in light of the following reasons:

- Due to the proximity of the industrial plant to three European Sites. The proposed plant is located ca. 600m from Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (site code 000365), ca. 2.9km from Sheheree (Ardagh) Bog SAC (000382) and ca. 3.5km from Killarney National Park SPA (004038). It is noted from the application that air emissions from the plant will extend to a section of the Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC and as such they are within the zone of influence of the plant.
- The plant will emit nitrogen oxides (NO_x) and sulphur oxides (SO_x) to air. These emissions will give rise to atmospheric nitrogen and sulphur which could adversely impact qualifying interests at European Sites through nitrogen deposition and acidification. Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (site code 000365) includes a number of habitats listed as qualifying interests that are sensitive to nitrogen deposition. With regard to Sheheree (Ardagh) Bog SAC (000382), nitrogen deposition is an attribute of the Conservation Objectives for habitat 7110 Active raised bogs*. Information in relation to European Sites is available on www.npws.ie (* indicates a priority habitat under the Habitats Directive).
- The licence application documents including the Air Impact Assessment Report (October 2020), Appropriate Assessment Screening Report prepared by SLR (February 2021), Response to request for clarification of further information (March 2021) and the Appropriate Assessment Screening determination (dated 16 April 2021) of Kerry County Council for the Air Pollution Licence Application (where it was determined that Appropriate Assessment was not required) were considered as part of this Appropriate Assessment screening. Account has also been taken of information on the European Sites in question on www.npws.ie and on the Agency's expertise.
- Taking all of the foregoing into account it is considered that significant effects on European Sites and their qualifying interests due to emissions to air from the plant cannot be ruled out at the screening stage and based on the precautionary principle this determination is that a Stage 2 Appropriate Assessment is required.

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 Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (000365), Sheheree (Ardagh) Bog SAC (000382) and Killarney National Park SPA (004038), 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 Kerry 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 at European Sites. However, 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.
- Air dispersion modelling has demonstrated that the contribution of emissions from the plant to nitrogen deposition at raised and blanket bogs within the SACs is less than 1% of their critical loads and at a magnitude that is insignificant. These sites can be considered outside the zone of influence of emissions from the plant when the controls in the licence are taken into account.
- The licence specifies noise emission limit values at nearby noise sensitive locations and monitoring which will prevent noise impacts beyond the site boundary. In addition, the distances to European Sites and qualifying interests within those sites is such that it can be considered that noise will not have an adverse impact on these sites. The nearest SAC is approximately 600m away and the River Flesk, where otters might be present, is ca. 700m away. The location of Lesser Horseshoe Bat roosts and foraging grounds are several kilometres away and can be considered outside the zone of influence of the plant.
- 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 Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (000365), Sheheree (Ardagh) Bog SAC (000382) and Killarney National Park SPA (004038).

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 Kerry County Council to grant the licence (Reference AP20-01) under the Air Pollution Act 1987 to Roadstone Ltd., for atmospheric emissions from the operation of an asphalt plant at Clasheen, Killarney, Co. Kerry, subject to the amendments detailed in this report.



Jim Johnson
Inspector ELP

Appendix 1 Appropriate Assessment

Assessment of the effects of the industrial plant on European sites and proposed mitigation measures.

European Site (site code)	Distance/ Direction from site of asphalt plant	Qualifying Interests (* denotes a priority habitat)	Conservation Objectives	Assessment
Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC (000365)	ca. 0.6 km to south	<p>Habitats</p> <p>3110 Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)</p> <p>3130 Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea</p> <p>3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation</p> <p>4010 Northern Atlantic wet heaths with Erica tetralix</p> <p>4030 European dry heaths</p> <p>4060 Alpine and Boreal heaths</p> <p>5130 Juniperus communis formations on heaths or calcareous grasslands</p> <p>6130 Calaminarian grasslands of the Violetalia calaminariae</p> <p>6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)</p> <p>7130 Blanket bogs (* if active bog)</p> <p>7150 Depressions on peat substrates of the Rhynchosporion</p> <p>91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles</p> <p>91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)*</p> <p>91J0 Taxus baccata woods of the British Isles*</p> <p>Species</p> <p>1065 Marsh Fritillary (<i>Euphydryas aurinia</i>)</p>	<p>NPWS (2017) Conservation Objectives: Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC 000365. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.</p>	<p>There is the potential for air emissions of sulphur, nitrogen and particulates to impact habitats and species listed as qualifying. The amended licence will limit emission limits to those modelled and assessed by the applicant. At these emission limits, the impact of emissions from the industrial plant, including background concentrations, will be significantly below the relevant air quality standards for the protection of ecosystems and vegetation. The contribution from the asphalt plant to ambient NOx and SO₂ concentrations at the sites is predicted to be very low – less than 3% and 5% for NOx and SO₂ at the nearest boundary of the SAC.</p> <p>The deposition of atmospheric nitrogen can also impact sensitive habitats by changing nutrient status. Nitrogen sensitive habitats such as blanket bogs and oligotrophic waters within the SAC are more than 3km from the plant – air dispersion modelling demonstrated that at this distance the effect of emissions from the plant will be less than 1% of the lower end of the critical load for raised and blanket bogs (5-10 kg/ N/ha/yr), which can be considered insignificant.</p> <p>In addition, the licence specifies a number of conditions to control emissions to air as follows:</p> <p>Condition 5.1 requires the applicant to demonstrate compliance with these limits prior to commencing operation.</p> <p>Condition 5.2 requires that activities on site not give rise to emissions to atmosphere which exceed the limits specified in Appendix A.1 of the licence and there be no other emission to the atmosphere of environmental significance.</p> <p>Condition 6 requires monitoring of air emissions in accordance with Schedule A.</p> <p>The activity will generate noise which could impact on species such as Lesser Horseshoe Bat and otter. However, the bat roosts</p>

European Site (site code)	Distance/ Direction from site of asphalt plant	Qualifying Interests (* denotes a priority habitat)	Conservation Objectives	Assessment
		1095 Sea Lamprey (<i>Petromyzon marinus</i>) 1096 Brook Lamprey (<i>Lampetra planeri</i>) 1099 River Lamprey (<i>Lampetra fluviatilis</i>) 1029 Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) 1106 Salmon (<i>Salmo salar</i>) 1303 Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>) 1024 Kerry Slug (<i>Geomalacus maculosus</i>) 1833 Slender Naiad (<i>Najas flexilis</i>) 1355 Otter (<i>Lutra lutra</i>) 1421 Killarney Fern (<i>Trichomanes speciosum</i>) 5046 Killarney Shad (<i>Alosa fallax killarnensis</i>)		<p>and foraging locations identified in the conservation objectives are at a sufficient distance (ca. 2.5km to boundary of foraging location and ca. 5km to nearest bat roost) that they are outside the zone of influence of the plant. In addition, noise from the activity will be controlled by emission limits and monitoring requirements to prevent adverse noise impacts beyond the site boundary.</p> <p>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>
Sheheree (Ardagh) Bog SAC (000382)	2.9 km to west	Habitats 7110 Active raised bogs* 7120 Degraded raised bogs still capable of natural regeneration	NPWS (2015) Conservation Objectives: Sheheree (Ardagh) Bog SAC 000382. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	<p>The conservation objective for this qualifying interest is to restore the favourable conservation condition of active raised bogs with a specific target of ensuring that the air quality surrounding bog is close to natural reference conditions, and that the total nitrogen deposition at the bog site should not exceed 5kg N/ha/yr.</p> <p>The predicted long-term NO_x and SO₂ concentrations due to emissions from the asphalt plant are equivalent to <1% of the air quality standard for the protection of ecosystems and vegetation at the Sheheree Bog SAC. In addition, the contribution of NO_x emissions from the asphalt plant to nitrogen deposition at the site is insignificant – less than 1% of the lower end (conservative) of the critical load range for raised and blanket bogs (5-10 kg/N/ha/yr).</p> <p>In addition, the licence specifies a number of conditions to control emissions to air as follows: Condition 5.1 requires the applicant to demonstrate compliance with these limits prior to commencing operation. Condition 5.2 requires that activities on site not give rise to emissions to atmosphere which exceed the limits specified in</p>

European Site (site code)	Distance/ Direction from site of asphalt plant	Qualifying Interests (* denotes a priority habitat)	Conservation Objectives	Assessment
				<p>Appendix A.1 of the licence and there be no other emission to the atmosphere of environmental significance.</p> <p>Condition 6 requires monitoring of air emissions in accordance with Schedule A.</p> <p>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>
Killarney National Park SPA (004038)	3.5 km to west	<p>Birds</p> <p>A098 Merlin (<i>Falco columbarius</i>)</p> <p>A395 Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>)</p>	<p>NPWS (2022) Conservation objectives for Killarney National Park SPA [004038]. Generic Version 9.0. Department of Housing, Local Government and Heritage.</p>	<p>Impacts on air quality could impact habitats on which these species depend. For example, Greenland White-fronted Goose forage over peat bogs and any change in the soil pH or soil nutrient status could potentially have an effect on the birds' foraging grounds. However, the air impact assessment has demonstrated that air emissions from the plant will have an insignificant effect on the SPA. The worst case predicted contribution is <1% of the relevant Air Quality Standard for NOx and SO₂. The licence limits emissions of SO₂, NOx and dust to those that were assessed by air dispersion modelling. In addition, the licence specifies a number of conditions to control emissions to air as follows:</p> <p>Condition 5.1 requires the applicant to demonstrate compliance with these limits prior to commencing operation.</p> <p>Condition 5.2 requires that activities on site not give rise to emissions to atmosphere which exceed the limits specified in Appendix A.1 of the licence and there be no other emission to the atmosphere of environmental significance.</p> <p>Condition 6 requires monitoring of air emissions in accordance with Schedule A.</p> <p>The SPA is outside the zone of influence of noise from the plant and the revised licence specifies conditions and limits to prevent adverse noise impacts beyond the site boundary.</p>