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Recd. 23/11/20. EA

17<sup>th</sup> November 2020

Reg. No. E0007-01

PA Reg. Ref: AP13/20

**Re: Appeal - Licence for the operation of an asphalt plant to John Madden and Sons Limited at Tonroe, Ardrahan, County Galway**

Dear Sir/Madam,

Enclosed is a copy of two appeals under the Air Pollution Act 1987 in relation to the decision regarding the above.

So that consideration of the appeals may proceed, you are requested to forward **two hard copies and one electronic copy on CD-Rom** of the following documents to the Environmental Protection Agency (“the Agency”) **within two weeks** of the date of this letter:

1. The application made to the planning authority.
2. A copy of the public notice published in respect of the application.
3. Any drawings, maps, particulars, information, evidence or written study received or obtained from the applicant in accordance with the provisions of Article 8 of the Air Pollution Act, 1987, (Licensing of Industrial Plant) Regulations, 1988.
4. Details of any investigations carried out under the provisions of Article 8 of the said Regulations by the authority in connection with the application.
5. A certified copy of the relevant Manager’s Order.
6. A copy of the Air Emissions Licence.
7. Copies of any technical or other reports relevant to the decision on the application.
8. Copies of any submissions or objections made to the planning authority in relation to the application.
9. Plans and particulars in relation to any relevant planning applications on the site.

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Please note that the parties to the appeals are being notified that copies of the documents relevant to the application the subject of the appeal will be available for inspection at your offices after the expiration of a **period of fourteen days** from the date of this letter.

It is assumed that the local authority has notified observers of the decision made and of the right of appeal.

The local authority may make to the Agency, in writing, such observations on the appeals as it thinks fit. Where practicable observations should be submitted with the documents listed above but the furnishing of the documents need not be held up until observations are available. Any observations should be furnished **within one month** of the date of this letter if they are to be taken into account in the determination of the appeals.

Please quote the above EPA appeal reference number in any further correspondence.

Yours sincerely,

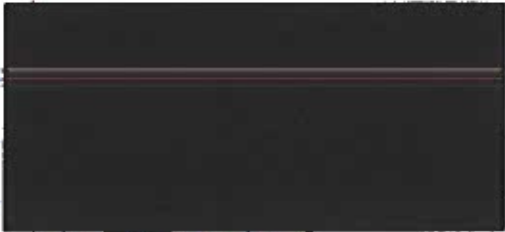
*Dorota Richards*

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Dorota Richards  
Programme Officer,  
Office of Environmental Sustainability.

Enc.

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11/11/2020

Environmental Protection Agency  
13 NOV 2020

Dear Sir,

We are writing to object, to the Licence given to John Madden by Galway County Council, for his Tar Plant in Ardraham, County Galway. The Licence Number is: AP13/20 We are living locally and are very worried that there will be serious pollution from this Tar Plant. We believe it will cause health problems for people living in the area.

There is already a big dust and noise problem at the site and this will make that problem worse. We believe there will be problems with smells from the tar, dust in the air and a lot of loud noises, because of the operation of this plant. We don't want this plant making tar, down the road from us, no more than anybody else would.

Please, do not allow this to go ahead. I object to this Tar Plant on health and safety grounds and on environmental grounds.

Yours Sincerely,



£60 appeal fee enclosed.

Environmental Protection Agency  
13



Environmental Protection Agency,  
PO Box 3000,  
Johnstown Castle Estate,  
Co Wexford,  
Y35 W821

11 November 2020

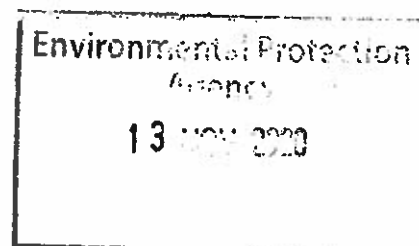
**Re: Appeal against the granting of an air emission licence by Galway County Council to John Madden and Sons Ltd. for the operation of an asphalt plant at Tonroe, Ardrahan, Co Galway – Air Emission Licence Ref: AP13/20**

To Whom It May Concern:

TMS Environment Ltd. (TMS) have been requested by our client, Lagan Materials Ltd., to appeal the decision made by Galway County Council (GCC) on the 20<sup>th</sup> of October 2020 to grant an Air Emission Licence (AEL) to John Madden and Sons Ltd. for the operation of an asphalt plant at Tonroe, Ardrahan, Co Galway.

The grounds of this appeal are summarised as follows:

1. A significant error was made in the Screening Air Model Assessment Report which resulted in Galway County Council making a decision based on incorrect information;
2. The operation of this asphalt plant will result in uncontrolled emissions that will breach the Air Quality Standards; and
3. Failure to complete an Appropriate Assessment Screening which would have demonstrated that a full Appropriate Assessment was required for the proposed development.



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## **Background to this Appeal**

TMS received the full AEL application file from GCC on the 18<sup>th</sup> of April 2020 and following review of this file made a formal submission to GCC on the 7<sup>th</sup> of May 2020 outlining our concerns regarding the failure to screen for the requirement for an Appropriate Assessment and highlighting errors in the Screening Air Model Assessment Report submitted as part of the application.

TMS made three further submissions to GCC, on the 26<sup>th</sup> of May 2020, the 27<sup>th</sup> of July 2020 and the 26<sup>th</sup> of August 2020 outlining deficiencies in the AEL application submitted to GCC and requesting GCC to halt consideration of the AEL application until a fully satisfactory AEL application was submitted by the applicant.

GCC granted the AEL to John Madden and Sons Ltd. on the 20<sup>th</sup> of October 2020 without any request for further information or clarification of the issues raised in the above referenced TMS submissions.

The full grounds of this appeal are set out in detail below.

- 1. A significant error was made in the Screening Air Model Assessment Report which resulted in Galway County Council making a decision based on incorrect information & the operation of this asphalt plant will result in uncontrolled emissions that will breach the Air Quality Standards**

A Screening Air Model Assessment Report was provided as part of this application. This report set out to *"ensure that the air emissions from the Asphalt Batching Plant, based on the proposed licence limit values, would not lead to levels of pollutants which would exceed the air quality guideline values"*.

A Screening Air Model Assessment Report is essential for an AEL application because the Local Authority is obliged to ensure that the air quality in and around a site is not being compromised and that the requirements of the Air Quality Standard Regulations (SI No 180 of 2011) which define acceptable levels of named substances in ambient air in accordance with EU Directives are met. In particular, levels of sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO) are of concern as these combustion gases have the potential to adversely impact upon the nearest sensitive receptors.

The AEL application is required to contain sufficient information on the asphalt plant emissions to allow the Local Authority to properly assess the potential impacts of the plant on surrounding sensitive receptors against the statutory Air Quality Standards.

The Screening Air Model Assessment Report references the potential pollutants of concern and also the Air Quality Standards required to be met for the emissions to air from the asphalt plant. Table 2 "Process Emission Details" of the Screening Air Model Assessment Report outlines the input data used in the screening model to estimate the level of pollutants emitted to air from the asphalt plant. The volume flow used in the Screening Air Model Assessment Report is reported as 70,000 Nm<sup>3</sup>/hr; however, the proposed asphalt plant has a maximum volume flow output of 78,285 m<sup>3</sup>/hr.

The use of the lower figure for volume flow in the Screening Air Model Assessment Report will result in an under-estimation of the concentration of the pollutants in the emissions stream. The actual concentrations of the pollutants in the emissions stream are likely to be approximately 12% higher for the worst-case than the figures reported.

The most significant error in the Screening Air Model Assessment Report is the use of the incorrect emission concentration levels to represent the worst-case scenario for the asphalt plant. Table 3 "Air Emission Rates from Permitted Asphalt Batching Plant at Tonroe Quarry in Ardrahan, Co. Galway Under Worst-Case Conditions" of the Screening Air Model Assessment Report presents the predicted emission rate for each parameter based on the purported worst-case emission concentration. This Table is presented below for reference.

Parameter	Worst-Case Emission Concentration (mg/Nm <sup>3</sup> )	Emission Rate (g/s)
NO <sub>2</sub>	200	3.89
CO	850	16.59
TSP (PM <sub>10</sub> ) <sup>Note 1</sup>	20	0.39
SO <sub>2</sub>	100	1.94

<sup>Note 1</sup> For the purposes of this modelling assessment it has been assumed that 100% of TSP emissions are of the size fraction PM<sub>10</sub>

**Table 3** Air Emission Rates From Permitted Asphalt Batching Plant at Tonroe Quarry in Ardrahan, Co. Galway Under Worst-Case Conditions.

The worst-case emission concentrations used as the input data for the Screening Model have been significantly under-represented for SO<sub>2</sub>, NO<sub>2</sub> and dust. Indeed the Screening Air Model Assessment Report does not "ensure that the air emissions from the Asphalt Batching Plant, based on the proposed licence limit values, would not lead to levels of pollutants which

would exceed the air quality guideline values" because the correct licence limit values have not been used in the screening model. Significantly lower emission limit values have been used for SO<sub>2</sub>, NO<sub>x</sub> and dust in the Screening Air Model Assessment Report. The impact of this is significant and is discussed in detail below.

The Environmental Protection Agency (EPA) publication entitled *Environmental Management in the Extractive Industry (Non-Scheduled Minerals) (2006)* sets out recommended emission limit values for emissions to air from asphalt plants regulated under the Air Pollution Act, as follows:

Sulphur dioxide (SO <sub>2</sub> ):	500mg/Nm <sup>3</sup>
Nitrogen oxides (NO <sub>x</sub> ):	450mg/Nm <sup>3</sup>
Dust:	50mg/Nm <sup>3</sup>

The above limits are also the emission limit values prescribed in the AEL as granted by GCC on the 20<sup>th</sup> of October 2020 and therefore it is clear that the correct figures for the worst-case assessment are the figures presented in the AEL as granted by GCC which are consistent with the EPA emission limit values.

It is clear from the above that the worst-case SO<sub>2</sub> emissions used in the Screening Air Model Assessment Report are understated by a factor of 5, the worst-case NO<sub>x</sub> emissions used are understated by a factor of 2.5 and the worst-case dust emissions used are understated by a factor of 2.5.

Furthermore, in our professional opinion, which is based on our extensive experience with the operation of asphalt plants, it is not possible to maintain SO<sub>2</sub> emissions to air below 100mg/m<sup>3</sup> and NO<sub>x</sub> emissions to air below 200mg/m<sup>3</sup> when using oil to fuel an asphalt plant. The figures used in the Screening Air Model Assessment Report to represent the worst-case emission concentrations are certainly not the worst-case emission concentrations and are in fact likely to be exceeded on a very regular basis. Therefore, it is our professional opinion that the Screening Air Model Assessment Report has significantly underestimated the actual worst-case emissions to air from the asphalt plant and has used figures to represent the worst-case that are not possible to maintain in an asphalt plant when burning oil.

We have used the data generated by the Screening Air Model Assessment Report itself to estimate the likely actual worst-case emissions to air from the asphalt plant by replacing the worst-case emissions concentrations erroneously used in the Screening Assessment Report with those concentrations as permitted in the AEL as per EPA Guidance.

Table 5 in the Screening Air Model Assessment Report (presented below for reference) shows the short-term predicted ground level concentration for the various parameters. For the purposes of generating an approximation of the corrected short-term ground level concentrations we have multiplied the Short-term Process Contribution figure by a factor of 5 for SO<sub>x</sub> and a factor of 2.5 for NO<sub>2</sub> and PM<sub>10</sub> (as outlined earlier, these parameters have been underestimated by these factors). It is considered that this revised figure will still underestimate the actual emission as the volume flow figure used in the model is approximately 12% less than the maximum volume flow output that the asphalt plant is capable of generating. We have prepared "Table 5 Updated" below which shows the estimated short-term ground level concentrations at the worst-case location using the AEL limits as the worst-case, by multiplying each parameter by the appropriate factor.

Parameter	Mass Emission (g/sec)	Background Concentration (µg/m <sup>3</sup> ) <sup>Note 1</sup>	Short-term Process Contribution (µg/m <sup>3</sup> )	Short-term Predicted Environmental Concentration (µg/m <sup>3</sup> )	Short-term Environmental Assessment Level (µg/m <sup>3</sup> )
NO <sub>2</sub> - Hourly	3.89	26.9	106.80	133.70	200
CO - 8-Hour	16.53	500	1037.12	1537.12	10,000
PM <sub>10</sub> - Daily	0.39	17.7	16.27	33.97	50
SO <sub>2</sub> - Hourly	1.94	9.8	135.57	145.37	350
SO <sub>2</sub> - Daily	1.94	5.7	81.34	87.04	125

Note 1 Background values based on guidance issued in Air Dispersion Modelling from Industrial Installations Guidance Note (AG4)

Table 5 Predicted Short-Term Ground Level Concentrations at the Worst-Case Location

Parameter	Background Concentration (ug/m <sup>3</sup> )	Short-term Process Contribution (ug/m <sup>3</sup> )	Short-term Predicted Environmental Concentration (ug/m <sup>3</sup> )	Short-term Environmental Assessment Level (ug/m <sup>3</sup> )
NO <sub>2</sub> Hourly	26.9	267	294	200
PM <sub>10</sub> Daily	17.7	41	59	50
SO <sub>2</sub> Hourly	9.8	678	688	350
SO <sub>2</sub> Daily	5.7	407	412	125

Table 5 Updated Revised predicted short-term ground level concentrations at worst-case location

It is clear from "Table 5 Updated" above that the Air Quality Standards will be breached at the worst-case location for all three parameters presented. In fact, the prescribed daily limit for SO<sub>2</sub> emissions (125ug/m<sup>3</sup>) will be breached by in excess of 300% (412ug/m<sup>3</sup>). This clearly



demonstrates that a very significant problem exists with the proposed operation of an asphalt plant at this location.

The proposed asphalt plant is located in very close proximity to two Natura 2000 sites. The Castletaylor Complex SAC (Site Code 00242) is located c. 195m north of the asphalt plant and the Ardrahan Grassland SAC (Site Code 002244), is located c. 620m south of the asphalt plant.

The data generated by the Screening Air Model Assessment Report has been used to estimate the likely worst-case emission level concentrations from the asphalt plant at the above referenced Natura 2000 sites by replacing the worst-case emission concentrations used in the Screening Air Model Assessment Report with the actual worst-case concentrations as permitted in the granted AEL and as per EPA Guidance.

Table 7 from the Screening Air Model Assessment Report (presented below for reference) shows the maximum predicted annual mean concentration for the various parameters within the two Natura 2000 sites. For the purposes of generating an approximation of the corrected annual average concentrations we have multiplied the Annual Average PC figure in Table 7 of the Screening Air Model Assessment Report by a factor of 5 for SO<sub>2</sub> and a factor of 2.5 for NO<sub>2</sub> (for the reasons outlined earlier) "Table 7 Updated" below shows the estimated short-term ground level concentrations at the Natura 2000 sites using the above described methodology.

Parameter	Mass Emission (g/sec)	Background Concentration (µg/m <sup>3</sup> ) <sup>Note 1</sup>	Annual Average PC (µg/m <sup>3</sup> )	Annual Average PEC (µg/m <sup>3</sup> )	Annual Ambient EAL (µg/m <sup>3</sup> )
Castletaylor Complex SAC & pNHA - NO <sub>2</sub>	3.89	6	7.05	13.05	30
Castletaylor Complex SAC & pNHA - SO <sub>2</sub>	1.94	3	9.88	12.88	20
Ardrahan Grassland SAC - NO <sub>2</sub>	3.89	6	3.83	9.83	30
Ardrahan Grassland SAC - SO <sub>2</sub>	1.94	3	6.37	9.37	20

<sup>Note 1</sup> Background values based on guidance issued in Air Dispersion Modelling from Industrial Installations Guidance Note (AG4)

**Table 7** Maximum Predicted Annual Mean Concentrations Within Designated Sites

Parameter	Background Concentration (ug/m <sup>3</sup> )	Annual Average PC (ug/m <sup>3</sup> )	Annual Average PEC (ug/m <sup>3</sup> )	Annual Ambient EAL (ug/m <sup>3</sup> )
Castletaylor SAC NO <sub>2</sub>	6	17.6	23.6	30
Castletaylor SAC SO <sub>2</sub>	3	49.4	52.4	20
Ardrahan SAC NO <sub>2</sub>	6	9.6	15.6	30
Ardrahan SAC SO <sub>2</sub>	3	31.9	34.9	20

**Table 7 Updated** Revised predicted annual mean concentrations within the Natura 2000 Sites

It is clear from "Table 7 Updated" above that the Air Quality Standards for SO<sub>2</sub> will be breached very significantly at both Natura 2000 sites (Castletaylor SAC and Ardrahan SAC). The critical annual mean concentration value for SO<sub>2</sub> for the Protection of Ecosystems is 20ug/m<sup>3</sup>. The estimated annual mean value for SO<sub>2</sub> at the Castletaylor SAC is 52.4ug/m<sup>3</sup> which equates to 262% of the Limit Value whilst the estimated annual mean value for SO<sub>2</sub> at the Ardrahan SAC is 34.9ug/m<sup>3</sup> which equates to 175% of the Limit Value. It is clear that the Air Quality Standards will be significantly breached at both of the SAC sites. Consequently, it is considered highly probable that the particularly delicate ecosystems at these European sites will be adversely impacted by the operation of the proposed asphalt plant.

## **2. Failure to complete an Appropriate Assessment Screening which would have shown that a full Appropriate Assessment was required for the proposed development**

Under the terms of the Habitats Directive, it is a legal requirement to consider if an Appropriate Assessment is required to be carried out for a particular plan or project. Appropriate Assessments are carried out to ensure the protection of Natura 2000 sites and their conservation objectives when considering whether to authorise or adopt a plan or project. Natura 2000 sites in Ireland are European sites, including Special Protection Areas (SPAs), and Special Areas of Conservation (SACs). The obligation to undertake appropriate assessment derives from article 6(3) and 6(4) of the Habitats Directive.

As outlined above, there are two Natura 2000 sites within the zone of influence of the proposed asphalt plant. The Castletaylor Complex SAC is located c. 195m north of the asphalt plant and the Ardrahan Grassland SAC is located c. 620m south of the asphalt plant. As the SACs are located in such close proximity to the asphalt plant, they require special

consideration and indeed strict mitigation measures are required for any activity that has the potential to give rise to significant environmental impacts upon them. It is therefore considered essential that an Appropriate Assessment screening be completed as part of the AEL application process.

The AEL application files for the proposed asphalt plant contain no reference to the completion of an Appropriate Assessment or an Appropriate Assessment Screening Report to determine whether such an assessment is required.

We are of the opinion that an Appropriate Assessment Screening will confirm that a full Appropriate Assessment is required for this project as it has been demonstrated that the likely worst-case emissions from the asphalt plant will exceed the Air Quality Standards for the protection of ecosystems at each of the two SACs. Consequently, a significant procedural issue exists in respect of compliance with the relevant regulatory requirements for this site.

In conclusion, on behalf of our client, Lagan Materials Ltd, we object to the granting of the AEL to John Madden and Sons Ltd. and appeal the decision made by Galway County Council on the following grounds:

1. A significant error was made in the Screening Air Model Assessment Report which resulted in Galway County Council making a decision based on incorrect information;
2. The operation of this asphalt plant will result in uncontrolled emissions that will breach the Air Quality Standards; and
3. Failure to complete an Appropriate Assessment Screening which would have demonstrated that a full Appropriate Assessment was required for the proposed development

The appeal fee of €60 is enclosed as per requirements.

Yours sincerely,



Senior Consultant  
TMS Environment Ltd.