# Application

# GALWAY COUNTY COUNCIL

## AIR POLLUTION ACT, 1987

APPLICATION FOR LICENCE

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Please complete in Block Capitals

**1 (a) Name and address of Applicant:**

John Madden and Sons,
Kilmaine Rd,
Curraboy (Knox),
Ballinrobe,
Co. Mayo_____

**(b) Name and address of Agent:**

John Dillon
TOBIN Consulting Engineers
Block 10-4
Blanchardstown Corporate Park,
Dublin 15_____

**(c) Telephone No of Agent:**

__01 8030401____
John Dillon, TOBIN 086 8661739_____ _____
Telephone No of Applicant: __ (094) 954 1166_____
Planning Register No: __PL07 .301871___
__17/1438_____

**2. Name and address of the premises from which the emission(s) is/are to be made including National Grid Reference:**

Tonroe,

Ardrahan,

County Galway_____

Irish Grid Ref 145242, 214230

UTM 512054, 5891865_____

**3. Give a general description of the process or activities giving rise to the emission(s)**

The asphalt plant is to occupy an area of 2.86 hectares. The asphalt plant facility comprises of storage bins, a filler silo, a mixing plant, a burner, dryer and bagging house as well as hoppers to load aggregate into the plant. The plant is centrally located within the 2.86 hectare site. Other ancillary works include the provision of visitor/staff car parking, the renovation of the existing office, the incorporation of an internal delivery and dispatch road with truck parking areas and the decommissioning of the existing septic tank on site. The application is for a maximum of 80,000 tonnes of imported stone will be used to produce a maximum of 100,000 tonnes of asphalt/bituminous macadam annually. The imported stone will be combined with 20,000 tonnes of other imported material including sand, hardchip and bitumen. It is estimated that approximately 400 tonnes of finished product will be produced per day with an average of 800 – 1,000 tonnes being produced at peak times.

**4(i) Location of point(s) of emission(s) (to be shown on a 1/500)**

See attached map 7625-2090 and 7625-2091

Detailed plant layout on PP2034

**4(ii) Details of size and construction of all outlets. (Plans and Elevations in triplicate indicating the premises, source of**

**emissions, diameter and point of emissions, ducting systems and any works, apparatus or plant from which the emissions are to be made must accompany this application form):**

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The proposed stack is the main air emission on the site. Please see attached drawings.

## 5. Details of provisions made for monitoring of all emission(s) including details of frequency and method used:

Monitoring of emissions of nitrous oxides (NOX), sulphur dioxide (SO2), particulate matter (PM) and carbon monoxide (CO) should be undertaken at the plant. Compliance should be assessed against the Air Quality Standards Regulations 2011, which incorporate European Commission Directive 2008/50/EC. These standards are based on the protection of human health. The applicable standards for NOX (as NO2), SO2, PM10/PM2.5 and CO are outlined in Table 1 below. The emissions proposed will be below the proposed standards outlined in the air emissions model.

Even assuming worst case emissions, emissions of NO2, SO2, CO and particulates (PM10 / PM2.5) at their proposed maximum emission limit values are in compliance with both the applicable short-term and long-term ambient air quality standards at all off-site locations.

Maximum annual mean concentrations of NO2 and SO2 at the nearby designated sites are within the limit values for the protection of ecosystems.

There will be no risk to the ambient air quality environment due to emissions from the asphalt batching plant.

***Table 1*** Ambient Air Quality Standards 2011

| Pollutant | Regulation[Note 1] | Limit Type | Value |
|---|---|---|---|
| Nitrogen Dioxide ($NO_2$) | 2008/50/EC | Hourly limit for protection of human health - not to be exceeded more than 18 times/year | 200 µg/m$^3$ $NO_2$ |
| | | Annual limit for protection of human health | 40 µg/m$^3$ $NO_2$ |
| | | Annual critical level for protection of vegetation | 30 µg/m$^3$ NO + $NO_2$ |
| Sulphur Dioxide ($SO_2$) | 2008/50/EC | Hourly limit for protection of human health - not to be exceeded more than 24 times/year | 350 µg/m$^3$ |
| | | Daily limit for protection of human health - not to be exceeded more than 3 times/year | 125 µg/m$^3$ |
| | | Critical limit for the protection of ecosystems | 20 µg/m$^3$ |
| Particulate Matter (as $PM_{10}$) | 2008/50/EC | 24-hour limit for protection of human health - not to be exceeded more than 35 times/year | 50 µg/m$^3$ $PM_{10}$ |
| | | Annual limit for protection of human health | 40 µg/m$^3$ $PM_{10}$ |
| Particulate Matter (as $PM_{2.5}$) | 2008/50/EC | Annual limit for protection of human health | 25 µg/m$^3$ $PM_{2.5}$ |
| Carbon Monoxide (CO) | 2008/50/EC | 8 - hour limit for protection of human health | 10,000 µg/m$^3$ |

The production of asphalt does not fall under specific BAT guidance however, a number of BAT guidance documents have been reviewed in order to determine the most appropriate monitoring technique and frequency. The BAT Guidance Note for the Cement and Lime Sector (EPA, 2008) specifies continuous monitoring of gas volume, temperature, CO, $CO_2$, $NO_X$ and particulate matter from kiln exhausts for cement production. This same document stipulates *"Periodic monitoring of particulates, $NO_X$, $SO_2$, CO, and $CO_2$, the frequency to*

*be set taking account of the nature, magnitude and variability of the emission and the reliability of the controls"* for lime production. In some cases, continuous monitoring of the above parameters may be required for kiln exhausts based on the nature, variability and magnitude of the emission.

The BAT Guidance Note for the Ceramics Sector (EPA, 2008) specifies monitoring for $NO_X$ and particulates from kiln stacks should be carried out quarterly. Annual monitoring of boiler stack emissions of $NO_X$, CO and particulates is required under the BAT Guidance Note for the Metal Foundry Sector (EPA, 2012) with stack sampling from other sources to be carried out periodically.

Continuous monitoring of the asphalt batching plant stack could be considered particularly onerous and unnecessary considering the rural nature of the facility and the relatively low emission concentrations. Therefore, annual monitoring has been proposed.

The proposed monitoring methodology for $NO_X$, $SO_2$, CO, particulates, volume flow and temperature is detailed in Table 2. The monitoring methodology suggested is in line with the EPA Emissions Monitoring Guidance Note AG2. The frequency of the monitoring regime has also been outlined based on a review of the aforementioned BAT Guidance Notes.

***Table 2*** Proposed Monitoring Regime

| Parameter | Monitoring & Analysis Method | Monitoring Frequency |
|---|---|---|
| $NO_X$ (as $NO_2$) | Portable flue gas analyser | Annually |
| $SO_2$ | Portable flue gas analyser | Annually |
| CO | Portable flue gas analyser | Annually |
| Particulates | Gravimetric analysis | Annually |
| Velocity | Pitot tubes | Annually |
| Flow | - | Annually |
| Temperature | - | Annually |

## 6. Details of any special arrangements to prevent accidental emission(s):

Accidental emissions may occur in the event of a malfunction of the equipment at the plant or if adequate servicing is not undertaken. Bag filters will be installed on equipment to reduce particulate emissions. In the event that the bag filter is not maintained and replaced regularly this could result in failure of the filter and a high concentration of particulates may accidentally be released to atmosphere. In order to prevent this, regular maintenance and checks of the filter system will be undertaken. Table 3 outlines the procedures that may lead to accidental emissions and the procedures in place to prevent these.

Table 3 – Sources and Measures

| Source of Accidental Emissions | Pollutant Released | Measures to Reduce Risk of Accidental Emissions |
|---|---|---|
| Failure of bag filter | Particulates | Regular maintenance and checks of filter system |
| Spills when loading / along conveyor | Particulates | Processes enclosed where possible, regular inspections and maintenance to avoid malfunction of the conveyor |
| Fugitive emissions of dust from improper storage of fine materials | Particulates | All fine materials are to be kept in silos or in covered storage to minimise dust emissions |

***Table 3*** Accidental Emissions

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## 7. General

**(a) Date of commencement of the emission:**

Under construction – Mid 2020 _____

**(b) Emission (Volume to emitted in m³):**

**(i) Normal per day:**

250,000_Nm3/day_____

**(ii) Maximum in any one day:**

636,650 Nm3/hr – 10 hours at max capacity_____

**(iii) Maximum rate per hour:** _63,665 Nm3/hr _____

**(iv) (c) (i) Temperature of emission:** _343.1 Degrees Kelvin_____

**(v) (ii) Humidity of emission: __5% v/v average with virtually all values falling between 5% and 7%_____**

**(d) The period or periods of the day in which the emission(s) is/are to take place:** ___8am to 6pm_____

**(e) Any seasonal, or other variations (including any arising from plant malfunction), in volumes of emission(s):**

Emission will depend on demand in the Construction sectors. Emissions will not occur on Sunday, Bank and Builders holidays_____

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**8. Particulars of treatment. (NB Best practicable means to be used):**

- Low emissions plant chosen for the site
- Low Sulphur Fuel
- Covered storage buildings
- All conveyors and plant will be enclosed, to reduce dust emissions;
- Bag filters to reduce dust are proposed
- All fine materials will be kept in silos or in covered storage to minimise dust and to ensure that the product remains dry, so that less fuel will be required to be consumed in the Asphalt Plant production process, thus reducing the carbon emissions from the production process;
- Dust Suppression on site
- The site will have covered storage for hardcore etc to minimise fuel requirement for drying / heating and so curtail air emissions

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**9. Details of any ambient air monitoring carried out in the vicinity of premises:**_____

- Regular Dust Monitoring on site in accordance with planning conditions
- Annual monitoring of stack for Particulates, $SO_2$ and $NO_2$

**10. Details of any dispersion modelling carried out in the vicinity of premises:**

A detailed air screening model for the facility has been conducted. See attached report (reference 20/11427AR01 Tonroe Asphalt Plant - Aerscreen Modelling Assessment).

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**11. Reason for selection of the point of discharge, method of discharge and method of treatment:** _____

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The stack is orientated to the centre of the site, maximising the distance to the boundaries.

**The following measures are chosen to minimise and reduce the generation of dust and air emissions. These include:**

- Low emissions plant chosen for the site
- Low Sulphur Fuel
- Covered storage buildings
- All conveyors and plant will be enclosed, to reduce dust emissions;
- Bag filters to reduce dust are proposed
- All fine materials will be kept in silos or in covered storage to minimise dust and to ensure that the product remains dry, so that less fuel will be required to be consumed in the Asphalt Plant production process, thus reducing the carbon emissions from the production process;
- Dust Suppression on site

**12. Characteristics of the Emission(s)**

**Complete for all applicable characters giving concentration ranges where available.**

**Concentration to be expresses in mg/m³ where applicable.**

**The following list is meant to be indicative only – such other physical chemical or other characteristics as are pertinent to the effluent in question should be specified.**

| Characteristic | Prior to Treatment | As Discharged |
|---|---|---|
| **Temperature °C** | See Notes- Preventative of emission arising were taken at the early stages of design rather than treatment | 70° Celsius |
| **$SO_2$** | | 2-10mg/m $^3$ |
| **HCL** | | Not applicable |
| **No (x)** | | 10-50mg /$m^3$ |
| **Dusts (specify each) giving Composition, Toxicity & T.L.V.** | | 20mg/Nm3 |
| **Solvents (Specify each) Giving Toxicity & T.L.V.** | | Not applicable |
| **$CS_2$** | | Not applicable |
| **$H_2S$** | | Not applicable |
| **$CI_2$** | | Not applicable |
| **$NH_3$** | | Not applicable |
| **CO** | | 850mg/m3 |

| Characteristic | Prior to Treatment | As Discharged |
|---|---|---|
| **Organohalogen Compounds (Specify)** | | Not applicable |
| **Other toxic Substances – Specify** | | Not applicable |
| **Other Carcinogenic, Teratogenic or Mutagenic Compounds to include suspect materials** | | Not applicable |
| **Metals (Specify each):**<br>**(a) _____**<br>**(b) _____**<br>**(c) _____**<br>**(d) _____** | | Not applicable |
| **Any other components of significance** | | Not applicable |

***Note: 5-12 must be completed for each and every point of discharge to the atmosphere.***

**I hereby make application for a Licence pursuant to the provisions of the Air Pollution Act, 1987 and the Regulations made there under.**

**Signature of Applicant: ___ _**
**(John Dillon – Tobin are Agent on behalf of John Madden & Sons)**
**Date: _14/14/2020_____**

| FOR OFFICIAL USE ONLY | | | |
|---|---|---|---|
| **Date Application Received:** | | **Fee Paid:** | |
| **Amount:** | | **Date:** | |
| **Receipt No.:** | | **Reference No. in Local Authority Registar of Applications:** | |
| **Planning Ref No.:** | | **Licence Ref. No.** | |

# Galway County Council

Local Government (Air Pollution) Act, 1987
(Licensing of Industrial Plant) Regulations, 1988

**INFORMATION FOR THE APPLICANT ON MAKING AN APPLICATION**

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## 1. GENERAL

Under the Local Government (Air Pollution) Act, 1987, a licence is required for Industrial Plants.

This requirement does not apply to an industrial activity which is licensable under the EPA Act 1992.

## 2. WHO TO APPLY TO

All applications for air licence should be made to the Environment Section, Galway County Council, Prospect Hill, Galway.

## 3. DOCUMENTS TO BE SUBMITTED

**(a)** Three copies of each of the following documents should be submitted:

(i) Completed application form.

(ii) A site location map showing the site of the facility (scale 1/2500) in colour and any adjoining land in the same ownership differently coloured and with sufficient details to identify the site in relation to the appropriate Ordnance Survey map.

(iii) A detailed plan of the facility to a scale of not less than 1/500 showing all emission points, monitoring points access points to site and any other relevant information.

**(vi)** A copy of the relevant page of the newspaper in which notice of the application has been published.

**(b)** Fee of €126.00

## 4. NEWSPAPER ADVERTISEMENT

A newspaper advertisement is necessary in respect of the application. Prior to making an application for a licence, the application shall publish in a newspaper circulating in the functional area of the local authority concerned notice of intention to make such application. The advertisement must be published within a period of **two weeks** prior to the making of an application for a licence and should state the following:

(i) The Notice shall be headed **"Air Pollution Act, 1987 Licensing of Industrial Plant"** and shall

(a) state the name of the applicant and the name of the Local Authority to which application is being made,

(b) state the nature and location of the industrial plant in relation to which application is being made, and

(c) give a general description of the industrial process and of the emissions made or to be made from the plant.