Non-Technical Summary

1. Introduction

This document forms the application for a bespoke waste environmental permit under the Environmental Permitting (England and Wales) Regulations 2016. The applicant and operator of the waste facility is Let's Recycle Artificial Grass Ltd (hereafter LRAG). The application is for a waste permit to allow physical treatment and storage of non-hazardous waste to allow. The site has an existing exemption, WEX391524 and is applying for a bespoke waste permit due to the withdrawal of 'Storing and treating waste artificial turf: Regulatory Position Statement (RPS) 279'. A pre-application enquiry was made in March 2024 to the Environment Agency (EA) refer to Appendix 21 – 'Basic pre-application EPR/VP3926MP001 CRM0813329'.

2. Location

The application site is located at Belvoir Business Park, Woolsthorpe Road, Nottinghamshire, NG13 0GN. The site location is at National Grid Reference: SK 81342 34940. The site is immediately surrounded by open agricultural land with trees along the east boundary of the site. Refer to Appendix 3 – 'Site Boundary Plan'.

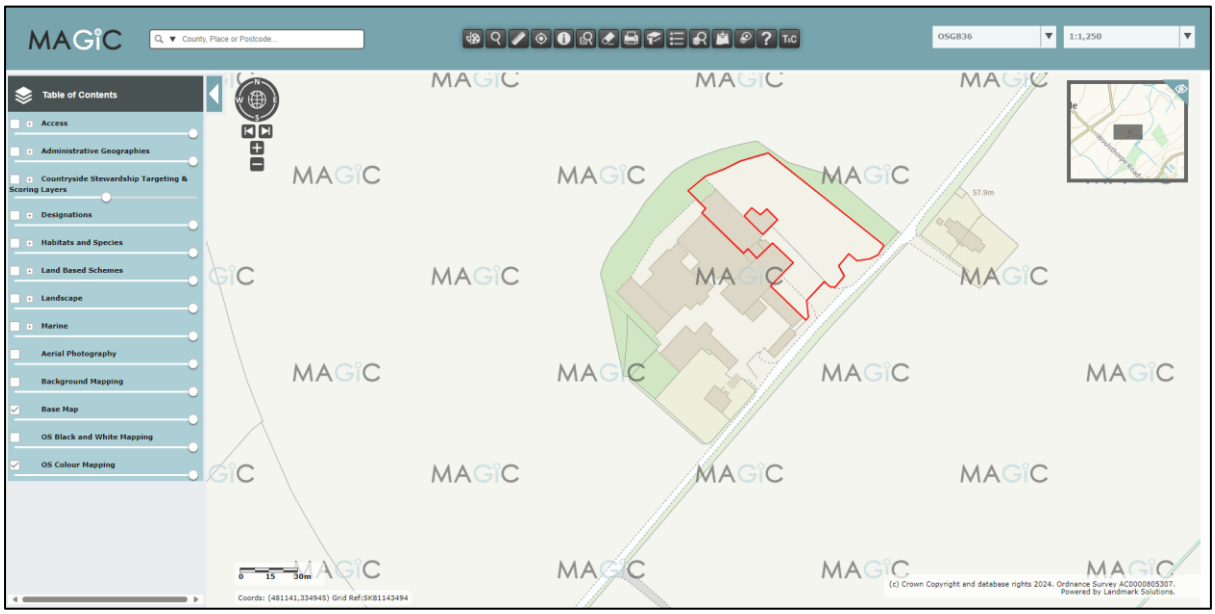

Figure 1 Site location outline in red

3. Activities

The site will bring in waste artificial grass from mainly sports facilities. The waste comes to the site in rolls. The waste artificial grass is washed, separated, shredded and bagged. The sand and rubber granules will be washed twice and will be reused on new artificial grass. The waste plastic is shredded and stored in 1 tonne hessian bags for a short period of time, whilst awaiting collection before onward treatment at a permitted facility to be made into other plastic products i.e. kickboards and garden benches etc.

For LRAG to continue to expand and increase output, the business requires a bespoke waste permit.

The application for a bespoke permit is to carry out the following activities as set out in the charging scheme:-

- '1.16.12 Physical treatment of non-hazardous waste.'

The facility will be designed and operated to ensure compliance with all relevant requirements of the conditions of the permit. The proposed activities covered by the Environmental Permitting (England and Wales) Regulations 2016 are provided in Table 1.

Table 1 Waste Activities

Activity reference	**Description for waste operations**	**Limits of specified activities and waste types**
AR1 Waste site with treatment for waste artificial grass and sand and rubber granules for reused.	R3: Recycling/reclamation of inorganic materials. R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced). D14: Repackaging prior to submission to any of the operations numbered D1 to D13. D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced).	From receipt of non-hazardous waste to despatch of treated product for further treatment. Physical treatment consisting of beating, separation, screening, washing, shredding of waste artificial grass. Temporary storage of non-hazardous waste following treatment, pending dispatch off site to permitted facility. All wastes shall be stored on an impermeable surface with a sealed drainage system that meet CIRIA 736 or an equivalent approved standard. The quantity of waste treated for disposal shall not exceed 40 tonnes per day. Waste types and quantities as specified in Table 2.

4. Waste Types

As part of the permit application, LRAG seek to obtain all codes listed in Tables 2. Table 2 details permitted waste types for treatment and associated storage of waste artificial turf and associated sand and rubber granules infill including European Waste Catalogue (EWC) codes.

Table 2 EWC codes and descriptions permitted on site for activity in AR1 (Table 1).

EWC Code	Description	Processing activity	Tonnage	Recovery code
17 09 04	Waste artificial turf and associated sand and rubber granules	Beating, washing, separation, screening, shredding and baling	40 tonnes per day	R13
~~19 12 04~~	~~Plastic and rubber granules~~	~~Beating, washing, separation, screening, shredding and baling~~	~~40 tonnes per day~~	~~R13~~

Table 3 details the EWC code which the shredded and bagged waste artificial grass (carpet) is transferred under.

It is proposed that the disposal of the shredded bagged waste artificial grass from the site will be under EWC waste code as follows:

Table 3 EWC Waste code for the removal of the bagged artificial grass waste

~~EWC Code~~	~~Description~~	~~Tonnage~~	~~Recovery coded~~
~~20 01 39~~	~~Plastics (shredded and bagged waste artificial grass)~~	~~30 tonnes per day~~	~~D15~~

5. Application Site Condition Report

An application Site Condition Report (SCR) has been prepared for the land proposed as part of this new bespoke environmental permit application. Refer to 'Appendices 4 – Site Condition Report' and Appendix 8 – 'Melton Mowbray Council' where the local authority confirmed that they 'don't believe they have any sites that are considered contaminated land.'

6. Site Surroundings and Receptors

The site is on Charmouth mudstone formation an underlain by a bedrock aquifer secondary (undifferentiated).

The site is not located on a designated groundwater Source Protection Zone (SPZ), however, the site is classified as high with soluble rock risk according to the groundwater vulnerability as per the Department for Environment, Food and Rural Affairs (DEFRA) Magic Map website.

The ground is composed of Soilscape 18, slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils.

The site is not located in a Flood Zone and the closest surface water features to the site is a field drain located to the south of the site, 228 metres. This drain feeds into the Winter Beck (Bottesford), that joins the River Devon which feeds into the River Trent. The Grantham Canal lies north east of the site and is over 1km from the site boundary. The River Devon lies east of the site and is located 2.1km from the site boundary.

The nearest residential properties is 21.8 metres south of the site boundary, and the nearest Site of Special Scientific Interest (SSSI) and National Nature Reserves (NNR) site is 1.8km north east, Muston Meadows. Refer to Appendix 6 – 'Sensitive receptors maps', that shows, the receptors within 1km, and 2.5km from the site boundary. Appendix 6, includes searches for boreholes and any risk of flooding to the site, and includes the prevailing wind direction over the site.

7. Ecology

All existing planting and vegetation surrounding the site and at the site boundaries will be maintained. The site metal fencing has hessian to reduce the risk of any sand being blown off site.

8. Operating Techniques

All permitted wastes listed in Table 2 and 3, and activities will be stored and treated on an impermeable surface with a sealed drainage system that meets CIRIA 736 or an equivalent approved standard required. Appendix 19 – 'C1013654 Drain Survey' is the current drainage for the site as new drainage plan will be developed for the site that meets CIRIA 736 or equivalent approved standard required.

Waste material will be transported onto site and will be un-loaded in the waste processing area for inspection and acceptance checks. The waste artificial grass will be moved by telehandler awaiting treatment. The bagged plastic will be stored outside in one tonne hessian sacks before removal from site, refer to Appendix 18 – 'Site layout 2024'.

9. Annual Waste Throughput Tonnages

LRAG seek to have the total annual throughput tonnage limit for the activities of 12,000 tonnes to allow for the treatment and storage activities.

10. Key Technical Standards

The facility will comply with the technical standards specified by the EA in their guidance document:

- 'Guidance : Control and Monitor of emissions for your environmental permit'.
- 'Non-hazardous and inert waste : appropriate measures for permitted facilities'.
- 'Waste duty of care code of practice'.

11. Pollution control measures

A number of measures have been designed into the site to prevent or reduce the potential for pollution to arise from activities. These can be summarised as:

The site will have impermeable surface with a sealed drainage system with an oil interceptor that meets CIRIA 736 or an equivalent approved standard.

A Fire Prevention Plan (FPP) has been developed with this permit application. Refer to Appendix 16 – 'Fire Prevention Plan' and reports on the artificial grass screening used to demonstrate that the waste does not contain persistent organic pollutants (POPs) refer to Appendices 12.

12. Monitoring

Air – Visual inspection will be carried out daily during operational hours. The site will not be carrying out high dust producing processing activities.

Groundwater – No monitoring of groundwater is proposed as fugitive releases to groundwater will be prevented by conducting all operations, including the unloading of waste, storage of waste streams in areas sealed with an impermeable surface and sealed drainage system to prevent a pathway for migration of pollutants to groundwater that meets CIRIA 736 or an equivalent approved standard.

13. Fire Prevention Plan

A FPP has been developed for the site and is part of the sites Environmental Management System (EMS), however the FPP will be a standalone document. The site will use sand to put out any fire, that could occur on site. These are detailed in the Appendix 16 – 'Fire Prevention Plan'.

The fire prevention measures at the site are included, in detail in the FPP, refer to Appendix 16 – 'Fire Prevention Plan'. The main fire prevention measures on site include managing the waste volumes stored on site, and the time waste is stored on site. Minimising both volume and storage times reduces not only the risk of self-combustion but, also will help reduced other emissions such as dust and odour.

There will be control measures such as out of hours site security and Closed-Circuit Television (CCTV) around the site. The CCTV can be accessed remotely by staff, and the site will have 24-hour patrols, which will be carried out seven days a week, this is to reduce the risk of fire, such as arson.

Should a fire occur on site, there will be a supply of sand held on site, this will be used for firefighting to put the fire out. The site will have ten Intermediate Bulk Containers (IBC's) which will contain approximately 1.25 ton of sand in each. In addition the site will have sand which has been treated and graded that can be used for firefighting. Refer to the FPP Appendix 18 – 'Site Layout 2024' for the location of these.

A technical report was commissioned to test the waste artificial grass in accordance with BS4790:1987 on the risk of ignition of the waste material. Refer to Appendix 15 – 'Labosport Technical Report – Confidential'. The results show that the waste artificial grass ignition classification is deemed as 'low radius'.

14. Noise and Vibration

A noise and vibration assessment has not been carried out as the equipment is bespoke to the site and is still in the phase of being built.

A noise and vibration impact assessment will be carried out once the permit has been issued. This will need to be included as an improvement condition. Following the noise and vibration impact assessment, any recommendation or requirements that are identified to do with noise and vibration from the site activities will be acted on, this is to minimise any impact on sensitive receptors near to the site.

15. Waste Wash Water

The wash water used for cleaning the waste artificial grass will be recirculated within an enclosed bunded metal system. Figure 2 shows stage 1 of the process, refer to Appendix 14 – 'Artificial Grass Report' which includes the water storage and reuse.

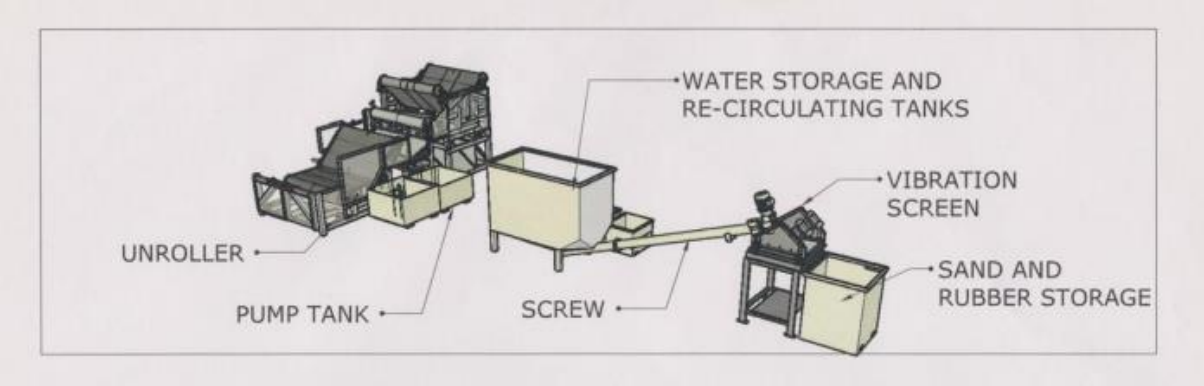

Figure 2 Stage 1 process

16. Emissions

There will be no point source emission to land associated with this new permit.

The potential source of fugitive emissions to air have been identified in Table 3.

Hazard	Receptor	Pathway	Risk Management	Exposure	Consequence	Overall risk
To Air						
Sources: Sand	Neighbouring businesses and residential properties.	Air	Dust blown from sand	Sand could have the potential to reach nearby neighbours and surrounding land during certain weather conditions and operations (uncovered washed sand). Careful management should prevent this happening.	Nuisance – sand on surrounding vegetation, cars, clothing. Smoothing and direct damage to nearby vegetation.	Not significant if carefully managed.
Noise: Beating	Neighbouring businesses and residential properties.	Air	Noise travel	Noise could have the potential to reach nearby neighbours, businesses and wildlife. Careful management to reduce risk. Noise impact assessment to be carried out when permit issued and mitigating measures to be implemented if found to be at risk.	Nuisance – noise on surrounding neighbours, businesses and wildlife.	Not significant if carefully managed. Noise Impact Assessment (NIA) to be carried out once equipment has been installed. Mitigation is to be put in place to minimise impact on receptors if identified in NIA.
Noise: Dryer	Neighbouring businesses and residential properties	Air	Noise travel	Noise could have the potential to reach nearby neighbours, businesses and wildlife. Careful management to reduce risk. Noise impact assessment to be carried out when permit issued and mitigating measures to be implemented if found to be at risk.	Nuisance – noise on surrounding neighbours, businesses and wildlife.	Not significant if carefully managed. Noise Impact Assessment (NIA) to be carried out once equipment has been installed.

Hazard	Receptor	Pathway	Risk Management	Exposure	Consequence	Overall risk
						Mitigation is to be put in place to minimise impact on receptors if identified in NIA.
Noise: Shredding	Neighbouring businesses and residential properties	Air	Noise travel	Noise could have the potential to reach nearby neighbours, businesses and wildlife. Careful management to reduce risk. Noise impact assessment to be carried out when permit issued and mitigating measures to be implemented if found to be at risk.	Nuisance – noise on surrounding neighbours, businesses and wildlife.	Not significant if carefully managed. Noise Impact Assessment (NIA) to be carried out once equipment has been installed. Mitigation is to be put in place to minimise impact on receptors if identified in NIA.
To Water						
Wash water run off to nearby field drain	Drainage ditches Overtop of bund	Land	Wash water from treatment of waste artificial grass	Wash water is recirculated within an enclosed metal bunded tank.	Pollution of watercourses leading to eutrophication and poisoning of flora and fauna	Not significant if managed carefully.

Table 3 Fugitive emissions

Waste is unloaded, stored and loaded on an impermeable surface that's meets CIRIA 736 or an equivalent approved standard. Site surface water run-off from the site will be collected within the sealed drainage system, so there is very low risk of contaminated run off. Sand will be used to smother out any fire on site, the post fire contaminated sand will be removed from the site as non-hazardous waste for disposal to a permitted facility.

Fugitive release to the groundwater will be prevented by carrying out operations, including the unloading of waste, sorting and storage of waste streams will be on an impermeable surfacing to prevent a pathway for migration to the ground, that meets CIRIA 736 or an equivalent approved standard.

Any potentially polluting spillages at the site will be subject to the procedures detailed in the sites EMS. The site will have a spill kit this will be located on the back of the telehandler.

17. Site infrastructure

Prior to treatment the rolled waste artificial grass will be stored outside on an impermeable surface with sealed drainage that meets CIRIA 736 or an equivalent approved standard.

The treatment involved with the waste artificial grass includes scrubbing, washing, beating, screening, separation, washing, shredding and then bagged. During the treatment the sand and rubber granules will be screened out. Refer to Appendix 13 – 'Artificial Grass Flow Chart' and Appendix 14 – 'Artificial Grass Report' on how the artificial grass waste material moves through the treatment process.

The sand and rubber granules goes through a screening and separation process. The sand and rubber granules will be washed a second time with mains water. The washed sand and rubber granules will be moved inside to dry to be reused on new artificial grass.

The beating, washing and shredding will be done outside and will be on an impermeable surface with a sealed drainage system that meets CIRIA 736 or an equivalent approved standard.

The waste water steel tank holds 4,000 litres of water refer to Appendix 14 - 'Artificial Grass Report' and is held in a primary, secondary metal containment.

The artificial grass is then shredded, and bagged whilst wet, then stored outside ready for removal off site for recovery at a permitted facility. The bagged plastic waste is removed from the site and is recycled into plastic products i.e. garden fencing, kickboards for sport facilities at a permitted facility to receive this waste (refer to 'Appendix 13 – Artificial Grass Flow Chart').

The treated and separated rubber granules and sand is stored in one-ton hessian bags. The sand is dried in bags in the building. The rubber granules will be dried and stored outside. The rubber granules and sand will be classified and graded for reuse.

The sand is graded to Turfsil Artificial – SP30, refer to Appendix 9 – 'Sand Technical Data Sheet' and the rubber granules is graded to Safety Data Sheet EC1907/2006, amended by EU 2015/830), refer to Appendix 10 – 'Rubber Safety Data Sheet Granulate' in accordance with the sport facilities standards.

The rubber granules and sand will be stored on site and will be within a building, refer to Appendix 18 - 'Site Layout 2024'. LRAG will be applying the EA guidance 'Check if your material is waste' when a material has not become waste Check if your material is waste - GOV.UK (www.gov.uk). The sand and rubber granules will be washed, screened, washed again, separated and dried to be used for the same purpose for which it was designed for. The sand and rubber granules will be used on new artificial grass surfaces i.e. *sport facilities*. Refer to Appendices 20 – 'Astro turf details' on the standards applied for the reuse of the sand and rubber granules.

18. Management Control Measures

Operations will be conducted in accordance with an EMS and includes a set of processes and practices that enable the company to reduce its environmental impacts. The management system includes an environmental risk assessment, maintenance plan, training plan, procedures for activities on site, contingency plan and accident prevention plan, and complaints procedures.

Good housekeeping practices will be employed on site to make sure the site is kept clear of dust, mud, litter and other debris. The site will be monitored by daily site inspections, and which will initiate cleaning such as, litter picking, road and yard sweeping and plant cleaning, as and when required.

Monitoring of the site, will ensure that all infrastructure and waste activities will be undertaken in accordance with the EMS, and the environmental permit so that the site activities do not give rise to pollution.

LRAG will have three people trained as Technical Competent Person (TCM) , refer to Appendices 2 – 'Delegates Booking Form and joining instructions' and as completed in the application form 'B2 general bespoke permit, section 3b'.

Training of staff is an important element in pollution prevention, and LRAG have a commitment to ongoing training of staff.

LRAG will enforce speed limits on site and reduce vehicle movements and idling of vehicles to reduce dust and noise from the site.

Appendix 11- 'EMS overview' is an overview of the Environment Management System (EMS) for the site and includes the requirement as per the 'Non-Hazardous and inert waste: appropriate measures for permitted facilities'.

19. Contingency Plans and Complaints

If things go wrong on site, for example, power cuts, plant breakdown etc., LRAG have contingency plans in place within the EMS.

LRAG have a comprehensive complaints procedures, which aim to assess and solve any issues. Refer to Appendix 11 – 'EMS Overview'.

20. Environmental Risk Assessment

An Environmental Risk Assessment has been carried out as part of the permit application, refer to Appendix 7 – 'Environmental Risk Assessment'.