APPLICATION FOR AN ENVIRONMENTAL PERMIT UNDER THE ENVIRONMENTAL PERMITTING (ENGLAND AND WALES) REGULATIONS 2016 (AS AMENDED)

APPLICATION REF: PAN-016818
SCHEDULE 5 NOTICE RESPONSE
END OF WASTE JUSTIFICATION

MINERS PARK, LLAY INDUSTRIAL ESTATE, LLAY, WREXHAM

ECL Ref: PLAT.01.02/EoW
Version: Issue 1
September 2022

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ACRONYMS / TERMS USED IN THIS REPORT

BSI	British Standards Institution
DMP	Dust Management Plan
ECL	Environmental Compliance Limited
EMS	Environmental Management System
EoW	End of Waste
EP	Environmental Permit
ERA	Environmental Risk Assessment
EWC	European Waste Catalogue
Ha	Hectares
LEV	Local Exhaust Ventilation
NGR	National Grid Reference
NRW	Natural Resources Wales
OS	Ordnance Survey
PAHs	Polycyclic aromatic hydrocarbons
Platts	Platts Agriculture Limited
rWFD	Revised Waste Framework Directive
The Facility	Platts Agriculture Wood Waste Processing Facility
VOC	Volatile Organic Compounds
WRAP	Waste & Resources Action Programme

1. INTRODUCTION

1.1. Background

1.1.1. Environmental Compliance Limited ("ECL") has been commissioned by Platts Agriculture Limited ("Platts") to demonstrate End of Waste ("EoW") classification for the processed manufacturing wood waste as part of the Environmental Permit ("EP") application (Application Reference PAN-016818) to undertake a bespoke waste operation at their wood waste processing site, hereafter referred to as "the Facility", located on Miners Park, Llay Industrial Estate, Llay, Wrexham LL12 0PJ.

1.1.2. Platts is proposing to accept and process approximately 60,000 tonnes per annum of non-hazardous manufacturing wood waste at the Facility. The maximum daily receipt proposed is 300 tonnes to account for the varying cycles of trailer changeovers at the wide range of collection sites.

1.1.3. It is proposed that animal bedding will be produced from clean, uncoated, and untreated waste wood only.

1.1.4. Manufacturing waste wood will not be used to produce animal bedding but will be used to produce a cubicle conditioner. The two wood types will not be mixed.

1.1.5. Any manufacturing waste wood will be stored entirely separately from the clean, uncoated, and untreated waste wood and will be pulverised to produce the cubicle conditioner for use in the agricultural livestock sector. It is this manufacturing wood waste which is subject to this EoW assessment as it is believed that the cubicle conditioner should be regarded as a product and not waste.

1.2. Facility Location

1.2.1. The Facility is located on Miners Road within Llay Industrial Estate which consists of industrial and commercial units surrounded predominately by rural land use. The Facility is centred on Ordnance Survey ("OS") National Grid Reference ("NGR") 332077 356370. The Facility will occupy an area of approximately 1.56 Hectares ("Ha").

1.2.2. The exact location of the Facility and the proposed Environmental Permit Boundary (outlined in green) is indicated on the Site Location Plan (Drawing PLAT.01.02-01), which is contained in Appendix I of this document.

1.3. Schedule 5 Notice Request

1.3.1. The Schedule 5 Notice dated 19th July 2022 stated:

"Action: Provide further information to demonstrate that the processed wood waste meets 'end of waste'. This must be done via an individual assessment on a case-by-case basis produced in accordance with Article 6 of the revised Waste Framework Directive, including procedures you will have in place to ensure that this is carried out for all waste treated on site."

1.4. Demonstrating End of Waste – Assessment Criteria

1.4.1. EoW can be determined using one of the three methods:

- compliance with end of waste regulations;
- meeting a quality protocol; and
- through an individual assessment on a case-by-case basis.

1.4.2. As end of waste regulations nor a quality protocol exist for wood or wood related materials, EoW is determined through an individual assessment on a case-by-case basis demonstrating that the claim of EoW has a valid basis.

1.4.3. A case-by-case basis assessment is made taking into account waste law principles, relevant case law and the revised Waste Framework Directive ("rWFD").

1.4.4. Article 6 (1) of the rFWD sets out the criteria that must be met for a substance, material or object which has undergone recycling or other recycling operation to no longer be considered waste and therefore achieves EoW status:

a) the substance or object is to be used for specific purposes;

b) a market or demand exists for such a substance or object;

c) the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and

d) the use of the substance or object will not lead to overall adverse environmental or human health impacts.

1.4.5. To ensure a high level of protection of the environment and human health and facilitate the prudent and rational utilisation of natural resources, the information provided to demonstrate EoW shall include the following as per Article 6 (2) (a) to (e) of the rWFD:

e) permissible waste input material for the recovery operation;

f) allowed treatment processes and techniques;

g) quality criteria for end-of-waste materials resulting from the recovery operation in line with the applicable product standards, including limit values for pollutants where necessary;

h) requirements for management systems to demonstrate compliance with the end-of-waste criteria, including for quality control and self-monitoring, and accreditation, where appropriate; and

i) a requirement for a statement of conformity.

1.5. Proposed Waste Codes and Feedstock Variability

1.5.1. In order to reduce variability in the feedstock, Platts propose to limit acceptance of waste wood at the Facility to two European Waste Catalogue ("EWC") codes as shown in Table 1.

1.5.2. It should be noted that Platts no longer propose to accept EWC 17 02 01 for treatment at the Facility. The only EWC code which will be processed at the Facility to produce the cubicle conditioner product is EWC 03 01 05.

1.5.3. It is recognised that EWC 03 01 05 covers a very wide range of manufacturing facilities therefore, pre-acceptance checks are undertaken on the source material to determine whether it would be acceptable for use as a cubicle conditioner. If, after the checks have been completed, it is considered acceptable then the supply would be subject to routine sampling and analysis to ensure continued suitability.

Table 1: Proposed EWC to be Accepted

Code	Description
02	**WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING**
02 01	Wastes from agriculture, horticulture, forestry, hunting and fishing
02 01 07	Wastes from forestry
03	**WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD**
03 01	Wastes from wood processing and the production of panels and furniture
03 01 05	Sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 0 4

1.5.4. Platts trailers are unloaded, and wood waste inspected within the confines of the main building. The waste wood is then fed into the process system. To ensure the 'clean' and 'manufacturing' wood wastes are not mixed, the system is cleared between processing of the different waste types.

1.5.5. The process flow schematic is presented in Appendix II. In summary, to clear the process system, it is run dry i.e. it continues to run once empty. This acts to remove most of the waste wood from the system. Platts will ensure there is no residual material which could cause contamination by flushing the system with one bucket of the alternate waste type to be processed.

1.5.6. The system will be run dry following flushing with any output, including the 'flushed' output, 'deemed' as cubicle conditioner as it will contain a mixture of the manufacturing and clean waste types and will therefore not be suitable for use as animal bedding.

1.5.7. Source variability is assessed on a case by case basic for each supply site and as part of the EoW assessment. The guidance suggests that a minimum of 20 samples are required for statistical purposes, however assessments have been undertaken for all sites where 10 or more samples have been taken.

1.5.8. Sample results for all supply sites are provided as Addendums to this report, however, formal assessments for those sites with less than 10 samples have not been undertaken. The individual site spread sheets containing sample results will be updated and once 10 samples have been analysed, the individual assessment for the site will be undertaken.

2. END OF WASTE CRITERIA – WFD ARTICLE 6 (1)

2.1. Substance or Object to be Used for Specific Purposes

2.1.1. The processed manufacturing wood waste is to be used for a specific purpose as a cubicle conditioner by farmers. This is the only use, and the material is ready for use following processing at the Platts Facility and does not require any further processing or treatment before final use. Therefore, the material will be deemed to have ceased being waste at the point it is baled and packaged ready for despatch to customers at the end of the process.

2.1.2. The cubicle conditioner is important for animal welfare, acting to control moisture levels and keep animals clean and hygienic through application of a limited quantity, 1 scoop (approximately 250 grammes) to the mat or mattress. Appendix III illustrates weighed 'scoops' of cubicle conditioner.

2.2. A Market or Demand Exists for Such a Substance or Object

2.2.1. The applicant is Platts Agriculture Limited. The Company formed in 1973 and is a market leading UK manufacturer and supplier of quality animal bedding and conditioner. Platts was awarded the Royal Warrant in 2018 as a mark of recognition for the supply of goods to Her Majesty the Queen.

2.2.2. Platts have been operating for 49 years with a well-established customer base of equine and dairy farmers that rely on the products including the cubicle conditioner with repeat purchases made year on year for the welfare and performance of their herds.

2.2.3. Certain ambiguity within the regulations and cross referencing in the PAS 111 guidance document meant Platts believed they were operating within the requirements of the legislation. However, recent discussions have highlighted that they require an Environmental Permit for their activities and therefore, a Permit application has been submitted (Application Reference PAN-016818).

2.2.4. Platts have applied for an Environmental Permit to process up to 60,000 tonnes of material a year encompassing both the clean and manufacturing wood waste. The clean is for bedding whilst the manufacturing is for the cubicle conditioner, used at a typical rate of approximately 250 grammes per cubicle per application.

2.3. Substance or Object Fulfils the Technical Requirements for the Specific Purposes and Meets the Existing Legislation and Standards Applicable to Products

2.3.1. There are no specific technical requirements laid down for animal bedding or cubicle conditioner or identified specific purposes. There are also no known standards for animal bedding.

2.3.2. The main requirements of animal bedding can be encompassed under the term animal welfare. The key aspects can be derived from the Department for Environment, Food and Rural Affairs ("DEFRA") publication "Code of Recommendations for the Welfare of Livestock: Cattle (March 2003).

2.3.3. The key aspects are:

- The facilities used for housing cattle should be well maintained and provided with dry bedding, or the facilities are well drained;
- The bedding material used should help prevent pressure sores, and help keep the cow's teats, udders and flanks clean;
- Cattle and their bedding need to be kept clean to reduce the risks of mastitis from bacteria in bedding material (known as environmental mastitis);
- Regular cleaning and changing of bedding along with keeping slurry to a minimum within the cubicle;
- Any internal surfaces of cubicles should not be treated with any paints or wood preservatives that may harm the animals.

2.3.4. As detailed previously, the manufacturing wood waste is not used as a 'bedding' material but as a cubicle conditioner. The bedding material consist of a rubber mat that the cow lays on and is regularly cleaned by the farmer. The cubicle conditioner is placed at the rear of the cubicle and used to soak up the slurry produced by the animal in order to maintain the mat as dry as possible. The quantity provided is only a scoop full, sufficient to soak up moisture, but not in a quantity that would cause any health issues for the animal.

2.3.5. Section 3.1.4 below and Appendix IV illustrate the benefits that farmers believe are derived from the use of the cubicle conditioner, and how animal welfare is improved because of it. Therefore, it is considered the product is making a positive contribution to animal welfare and delivering on the key aspects of the Code of Recommendations.

2.3.6. A further benefit is the reduced volume of material required to achieve the same aims of using traditional bedding materials such as straw. A basic example would be a farmer that receives one articulated lorry load of cubicle conditioner a year to provide sanitary provision for his cattle amounting to 22,000kg (22 tonnes). To provide the same level of sanitary provision with straw would require several lorry loads, along with the associated disposal of the used straw bedding and time/resource/equipment requirement to manage the straw bedding.

2.4. Use of the Substance or Object Will Not Lead to Overall Adverse Environmental or Human Health Impacts

2.4.1. Where possible, a 'comparator approach' should be used to assess whether a substance or object leads to overall adverse environmental or human health impacts. This is covered in detail in Section 3.1. of this document which describes the different approaches to comparing the material and the rationale behind them.

2.4.2. There is currently no non-waste comparator for wood waste as use for animal bedding or cubicle conditioner made available by the regulator. However, as part of Platts management and quality systems, sampling of wood waste materials received is undertaken for both the clean and manufacturing supplies. This means that at the time of this EoW assessment report being written there were 71 available sets of analysis results for clean wood waste supplies.

2.4.3. The results for these samples have been collated and assessed for use as an internal 'quality' standard with which to compare the manufacturing wood waste sample results.

2.4.4. For reference purposes, the results were also compared to PAS111, straw comparator, and Materials Applied to Land for each individual assessment. However, the individual assessment outcomes are based on the comparison against the clean wood waste internal quality standard. The collated results for this can be found can be found in Appendix V.

2.4.5. As there is no non-waste comparator made available by the regulator, a risk assessment has been undertaken for the final waste derived material. This is provided in Table 2 and as can be observed, the control measures detailed including the low application rate results in the overall risk being determined as insignificant. Therefore, there is no significant increase in risk to the environment or human health from use of the final waste derived material.

Table 2: Environmental Risk Assessment

Hazard	Receptors	Pathway	Risk Management	Probability of Exposure	Consequence	Overall Risk
Emissions to Air						
Fugitive Emissions to Air (e.g. dust)						
Releases of particulate matter (dusts) during product packaging, storage and transport	Human population in surrounding area	Release to Air – windblown dispersion in atmosphere.	The Facility will be operated in accordance with the Dust Management Plan ("DMP") (PLAT.01.02/DMP) which will form part of the Environmental Management System ("EMS"). The DMP is contained in Section 9 of the application submission and addresses the risk of fugitive emissions to air for all stages of the proposed activities. For the purpose of this EoW assessment, the ERA and related risk management measures focus on the risks associated with the final waste-derived material which is considered to be a product. The processed material is automatically packaged and palletised ready for external storage and forward transport to customers, or when required for bulk delivery, transferred directly to walking floor lorry trailer within an enclosed building. An extensive abatement plant prevents any fugitive dust emissions from being released. Any wood dust captured by the local exhaust ventilation ("LEV") system is fed back into the storage silo for processing. Regular daily checks are undertaken by Platts employee to ensure no bales have been damaged. The pallets of baled cubicle conditioner are transported by lorry to customers who will then store the bales appropriately to maintain their integrity until use. Bulk deliveries are transferred directly to enclosed storage at the farm using walking floor for controlled discharge to storage.	Low/Moderate Risk management measures should prevent release from reaching identified receptors	Harm to human health – respiratory irritation and illness. Possible dust nuisance – dust on cars, clothing etc.	Not significant if risk management measures are strictly adhered to.

Table 2: Environmental Risk Assessment (Cont.)

Hazard	Receptors	Pathway	Risk Management	Probability of Exposure	Consequence	Overall Risk
Emissions to Air (Cont.)						
Fugitive Emissions to Air (e.g. dust) (Cont.)						
Releases of particulate matter (dusts) during product application	Human population in surrounding area	Release to air / inhalation during product application in cubicle	The cubicle conditioner is applied to the rubber mat at the rear of the cubicle by a scoop with approximately 250 grammes used. Large farms utilise application equipment that automatically dispenses the desired quantity to the rear of cubicles. The application rate is such that there is no risk to human health from dust generation when the material is applied in the cubicle.	Low The quantities involved and the application method is such that minimal dust will be generated.	Harm to human health from dust inhalation.	Not significant if recommended application rates are adhered to and appropriate storage of the bales maintained.
Releases of particulate matter (dusts) during product application	Animal health at point of use.	Direct contact or release to air / inhalation during application in cubicle.	The cubicle conditioner is applied to the rubber mat at the rear of the cubicle by a scoop with approximately 250 grammes used. Large farms utilise application equipment that automatically dispenses the desired quantity to the rear of cubicles. The application rate is such that there is no risk to animal welfare from either contact or dust generation when the material is applied in the cubicle.	Low The quantities involved and the application method is such that minimal dust will be generated.	Harm to animal health from dust inhalation.	Not significant if recommended application rates are adhered to and appropriate storage of the bales maintained.

3. END OF WASTE CRITERIA – WFD ARTICLE 6 (2)

3.1. Permissible Waste Input Material for the Recovery Operation

3.1.1. Platts propose that the process input for the cubicle conditioner is manufacturing pre consumer wood waste classified as EWC 03 01 05.

3.1.2. PAS 111, which is an industry standard and not a regulatory standard, states that treated wood should not be used as a feedstock for animal bedding or soiling materials due to direct animal welfare concerns and indirect animal welfare and environmental concerns when the material is ultimately spread onto land usually via manure systems.

3.1.3. Platts have undertaken research with farmers using the cubicle conditioner to address these concerns and to demonstrate that manufacturing pre-consumer wood waste for use as cubicle conditioner is a permissible waste input material.

3.1.4. In regards to direct animal welfare concerns, testimonials from farmers have confirmed that the use of cubicle conditioner has improved animal welfare and health including but not limited to:

- reduced veterinary visits;
- cleaner animals;
- reduced cases of mastitis;
- reduced cases of hock sores; and
- improved somatic cell counts.

3.1.5. Farmer testimonials are provided in Appendix IV of this document. These have been obtained as part of a call campaign as well as via electronic customer surveys. Testimonial evidence is saved as recorded phone calls or copies of electronic survey responses received. This evidence is available to NRW on request.

3.1.6. It is clearly demonstrated that the cubicle conditioner produced from manufacturing wood waste classified as EWC 03 01 05 improves animal health and does not pose a threat to animal welfare.

3.1.7. In terms of potential environmental concerns when the material finds its way onto land usually via manure systems, the 71 clean waste sample analysis results have been assessed in order to set a benchmark. The maximum result for every substance that was found across the 71 samples was combined to generate a total maximum substance concentration figure. The figure obtained was 0.07%.

3.1.8. In addition to the benchmark, and with the regulatory stance that the material is waste, the WM3 guidance has been referenced and in particular Chapter 14 – Assessment of hazard HP14 Ecotoxic substances. The cut-off value for substances in this chapter is 0.1%.

3.1.9. However, the EoW assessment has gone beyond the WM3 guidance through using the 0.1% cut-off as an absolute for every single substance identified in both clean and manufacturing samples irrespective whether the substances display or are associated with hazard statements H400, H410, H411, H412, H413 or H420.

3.1.10. This is illustrated in the individual assessments provided as Addendums to this report as separate Excel spreadsheets for ease of reference. The outcome is that no substance has been identified at a level anywhere near the 0.1% cut-off.

3.1.11. The higher cut-off value for individual HP14 substances is 1% for use in the HP14 equations. However, the EoW assessment goes beyond this and sets a maximum level of 0.1% as a total combined substance concentration for all substances identified through analysis. This is also illustrated in the individual assessments provided as Addendums.

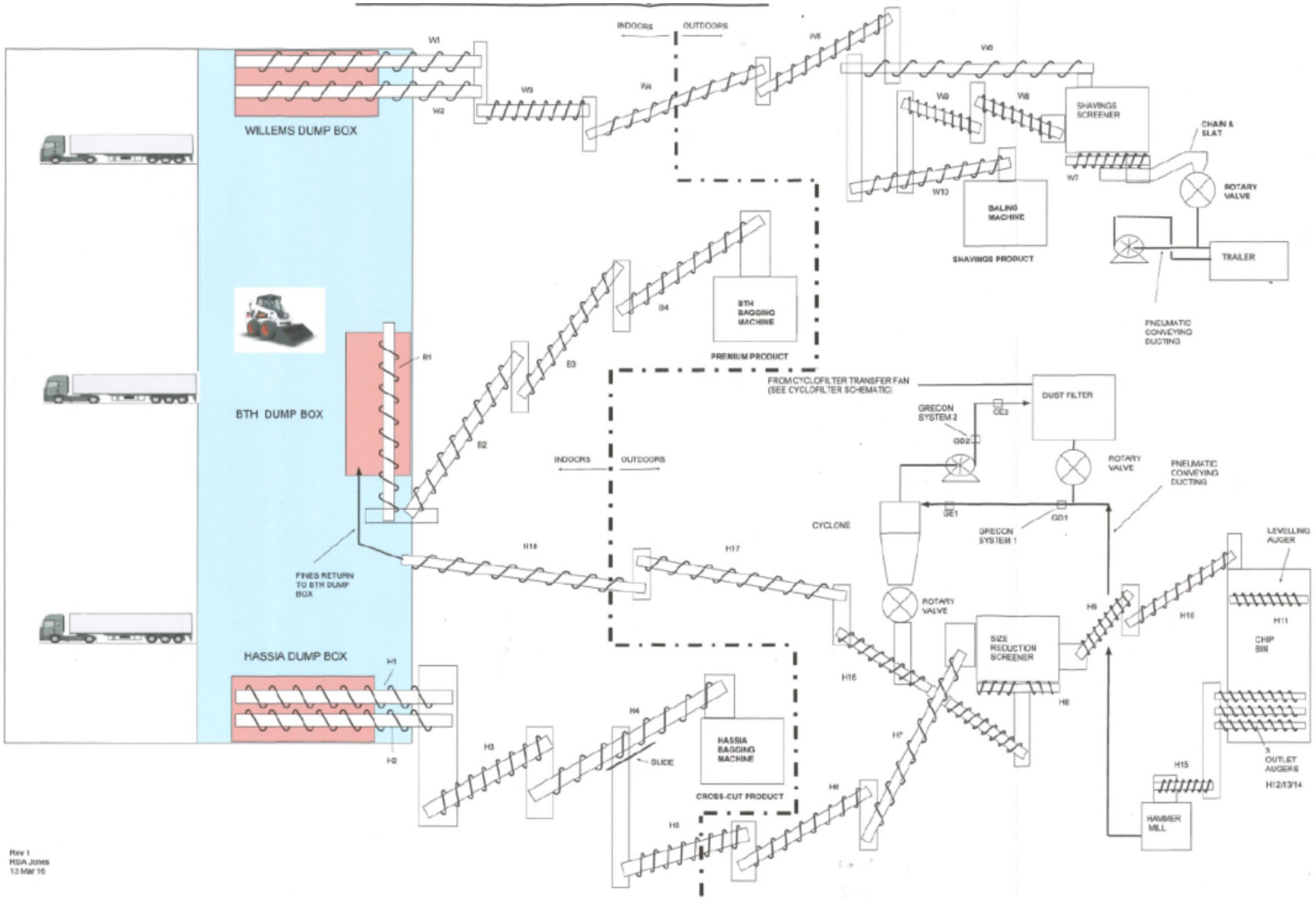
3.1.12. It is clearly demonstrated both through the analysis results and in consideration of the quantities of material used, that the manufacturing wood waste does not pose a threat to the environment. Additionally, the small quantities used reduces any potential impacts for the farmers using and handling the material.

3.2. Allowed Treatment Processes and Techniques

3.2.1. The overall process flow schematic is presented in Figure 1.

3.2.2. Waste processing at the Facility is limited to pulverisation of the waste wood for size reduction. There are no other outputs from this process as dust abstracted during the processing is directed to a collection trailer and also bagged as cubicle conditioner.

Figure 1: Overall Process Flow Schematic



3.3. Quality Criteria for EoW Materials Resulting From The Recovery Operation In Line With The Applicable Product Standards, Including Limit Values for Pollutants Where Necessary

3.3.1. There are no product standards for animal bedding, however the PAS111 suggests certain substance concentrations for various uses of wood waste. There is a requirement for biological testing which Platts do undertake. Despite NRW saying they do not recognise PAS111, they have referenced Platts to it on various occasions throughout the Environmental Permit application process. The Schedule 5 Notice to which this report is a partial response also refers Platts to PAS111.

3.3.2. The PAS111 describes Grade A "clean" recycled wood and states that prior to processing may contain nails and metal fixings, minor amounts of paint and some surface coatings. It goes on to say that some visible particles of coatings and light plastics will remain.

3.3.3. To minimise contaminant material content, Platts only accept pre-consumer materials and nothing which may have any form of metal fixings or attachments. Additionally, sources where 'hogged' coated material is fed through abatement plant is avoided.

3.3.4. Likewise, there are no product standards for cubicle conditioner, therefore, Platts have utilised their clean wood waste sample results to generate an internal benchmark for the manufacturing wood waste.

3.3.5. Platts have set a maximum total substance concentration limit of 0.1%, along with an absolute limit of 0.1% concentration for any substance identified through analysis. They have an internal target of total substance concentration value of less than 0.07% (derived from the total maximum concentration of substances identified in the 71 clean wood waste samples).

3.4. Requirements for Management Systems to Demonstrate Compliance with the EoW Criteria, including for Quality Control and Self-Monitoring, and Accreditation, where appropriate

3.4.1. As part of Platts' EMS, sampling and testing procedures have been implemented.

3.4.2. The sampling and testing methodology has been informed by reviewing PAS111 document commissioned by Waste and Resources Action Programme ("WRAP") in collaboration with the British Standards Institute ("BSI"). The document was developed for the wood waste recycling industry sector to provide clarity on what may be deemed appropriate reuse of various wood waste streams.

3.4.3. Much of the PAS111 deals with waste derived from or containing post-consumer wood waste, and how it should be dealt with and processed for various end uses. Section 4.3.3 of the PAS111 document refers to animal bedding and details that wood used for animal bedding should be tested in accordance with sections 6.3.1 and 6.3.2 of the PAS111 document.

3.4.4. These sections in PAS 111 deal with the sampling and testing methodology and relate to wastes that contain post-consumer wood waste and potential physical contaminants such as concrete, grit, glass, metals, and plastics, none of which are relevant for the wood waste supplies that Platts' propose to accept. Therefore, much of the sampling and testing methodology is not applicable to how Platts' operate.

3.4.5. There is specific reference to the potential for pathogens to be present in recycled wood waste and that testing should be undertaken where recycled wood waste is used for animal bedding. Additionally, moisture content is a key aspect as elevated levels can accelerate the growth of mould and pathogens. It recommends the moisture content should be less than 30% by weight. Table 3 below repeats the biological testing requirements for wood waste outputs destined for animal bedding.

Table 3: Biological Testing Requirements

Parameter	Test Method	Unit	Upper Limit
Escherichia coli	BS ISO 16649-2	CFU/g fresh mass	1,000
Salmonella spp	Schedule 2, Part II of BS EN ISO 6579	25g fresh mass	Absent

3.4.6. Both biological and moisture testing is being undertaken for the bedding material, however, biological testing is not undertaken for the conditioner as it would not be within the cubicle long enough to pose a risk to animal health.

3.4.7. Additionally, analytical suites covering metals, volatile organic compounds ("VOC's"), Phenols and Polycyclic aromatic hydrocarbons ("PAH's") have been developed to assess the wide range of substances that may be present in the wood waste streams to ensure that substance concentrations are sufficiently low so as not to be deemed either a risk to the environment, human health, or animal welfare. The development of the suites has been informed by discussions with the laboratory and review of the industry sector.

3.4.8. In order to generate more sample analysis results the largest suppliers of waste wood have been sampled on a weekly basis. This applies to the 10 largest suppliers that account for approximately 60% of the overall supplies. The review of the additional data helps inform the longer-term sampling and analysis requirements that will form the acceptance procedures.

3.4.9. It is envisaged that future sampling of wood from regular suppliers may be undertaken in two ways. Firstly, each load received will be sampled and the material held in a sealed container with mixing of the material on each addition from a new load. At the end of the month, a sample from the homogenised mix would be taken and sent for analysis. Secondly, each month a specific randomly selected trailer would be sampled and sent for analysis. This would provide spot checks on individual loads along with monthly averages. All results would be combined into the library of results.

3.4.10. Where supplies are less regular, i.e. not more than one trailer a month, then each load would be sampled and sent for analysis. Again, all results would be combined into the library of results.

3.5. Requirement for a Statement of Conformity

3.5.1. The EoW protocols require a 'statement of conformity' for all material being passed on as a 'product' having achieved end of waste status based on the assessment parameters.

3.5.2. There are two specific criteria that must be complied with for the processed material to be considered to have met the end of waste classification. These are:

- the total concentration of all substances identified through analysis within a sample must be less than 0.1%.
- the concentration of any individual substance identified through analysis within a sample must be less than 0.1%.

3.5.3. In addition to the specific criteria, Platts have an internal target of the total concentration of all substances identified through analysis of any sample should be less than 0.07%, being the total maximum concentration identified for clean wood waste.

3.5.4. The Statement of Conformity Certificate is provided in Appendix VI.

4. CONCLUSION

4.1. End of waste assessments have been undertaken on a 'case by case' basis for individual supply sites for the purpose of determining whether the material, after processing, is suitable to be supplied on to customers for use.

4.2. The regulator has not provided any comparator data or suggested substances for assessments to be undertaken. For information purposes only, comparison to PAS111, Straw and Materials Applied to Land have been included in the individual assessments. However, the comparator information relied on for the assessments relates to data gathered from sample analysis results of clean wood waste materials.

4.3. A total of 71 sets of results have been assessed and used to generate a benchmark with which to compare the manufacturing wood waste received for processing. In addition, the WM3 waste guidance has been referenced to establish specific criteria for controlling the quality of material that will be passed on to ensure there will not be any impact on animal welfare, human health, or the environment from the use of the materials processed.

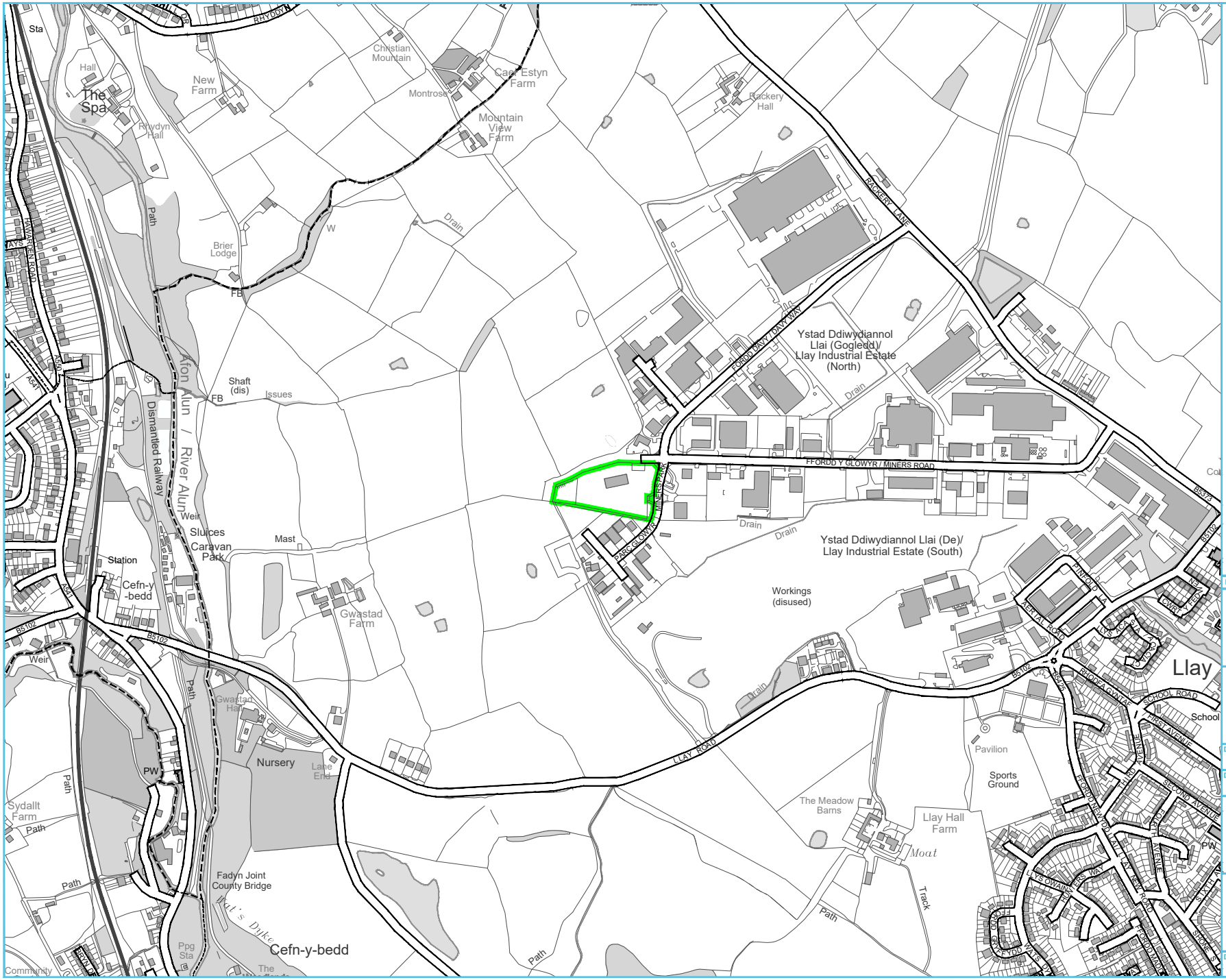
4.4. A maximum total substance concentration of 0.1%, along with an absolute maximum individual substance concentration of 0.1%, are considered extremely conservative and provide more than sufficient protection against any potential impact on animal or human health, and the environment.

4.5. For all supply sites with 10 or more sample analysis results, and end of waste assessment has been undertaken which confirms that it meets the total and the individual substance concentration limits.

4.6. It is therefore considered, when taking into consideration the small quantities of material being used and the extremely low substance concentrations present, that the material can be considered as 'end of waste' at the point at which it has been packaged after processing. The material has an established use, is considered to contribute to improving animal welfare, is a suitable alternative to traditional materials and has no greater risk or impact than those materials.

4.7. Furthermore, it is considered that the use of the material with the quality controls in place contributes to the circular economy, reduces the volume of materials that may have to be incinerated, and contribute to Welsh Government policy of making greater use of wood and therefore, contributes to the Well-being of Future Generations.

APPENDIX I
SITE LOCATION PLAN



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LEGEND

ENVIRONMENTAL PERMIT BOUNDARY

Rev	Date	Details	Chkd

Environmental Compliance Ltd.
Unit G1
The Willowford
Main Avenue
Treforest Industrial Estate
Pontypridd.
CF37 5YL

Tel: 01443 841760
Fax: 01443 841761
Email: info@ecl.world
Web: www.ecl.world

Client

PLATTS AGRICULTURE EST 1923

Date	Scale	Drawn by	Checked by	Approved by
27/01/2022	1:10K @ A4	GTB	HR	SM

Drawing Status

FINAL DRAWING

Project Title

ENVIRONMENTAL PERMIT APPLICATION
PLATTS AGRICULTURE LIMITED
MINERS PARK, LLAY INDUSTRIAL ESTATE
LLAY
WREXHAM

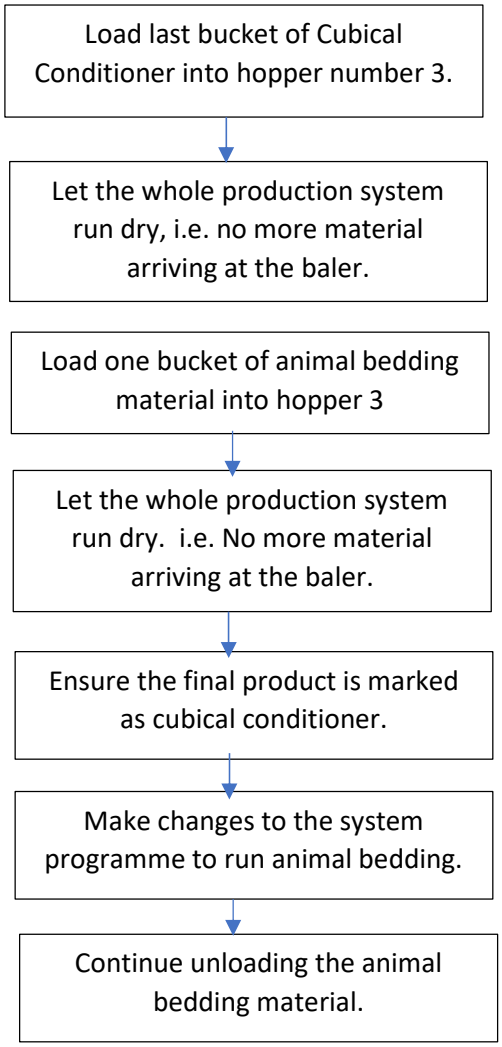
Drawing Title

SITE LOCATION PLAN

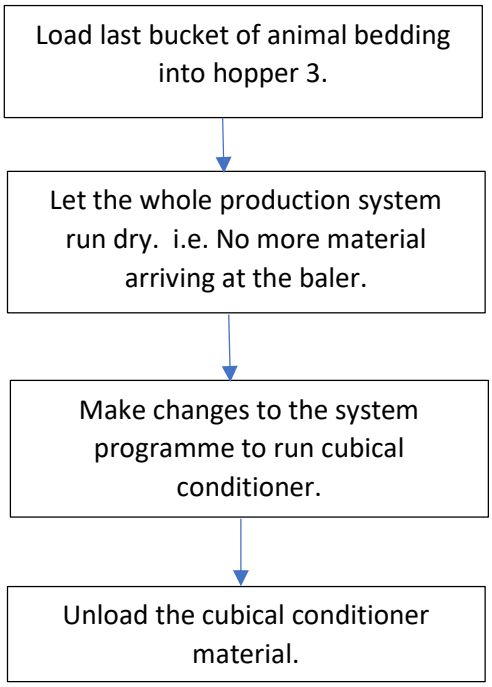
Drawing Number	Rev
PLAT.01.02-01	1

APPENDIX II
FLOW CHART SCHEMATIC

Changing production between Cubical Conditioner to Animal Bedding



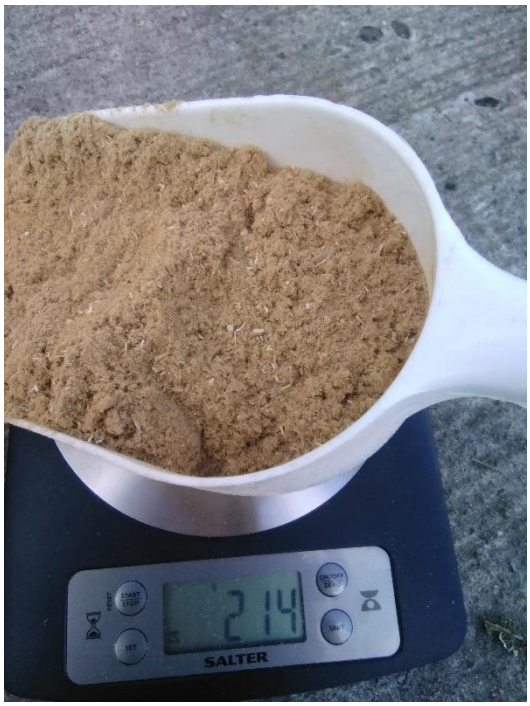
Changing production between Animal Bedding and Cubical Conditioner



APPENDIX III
WEIGHED SCOOPS OF CUBICLE CONDITIONER

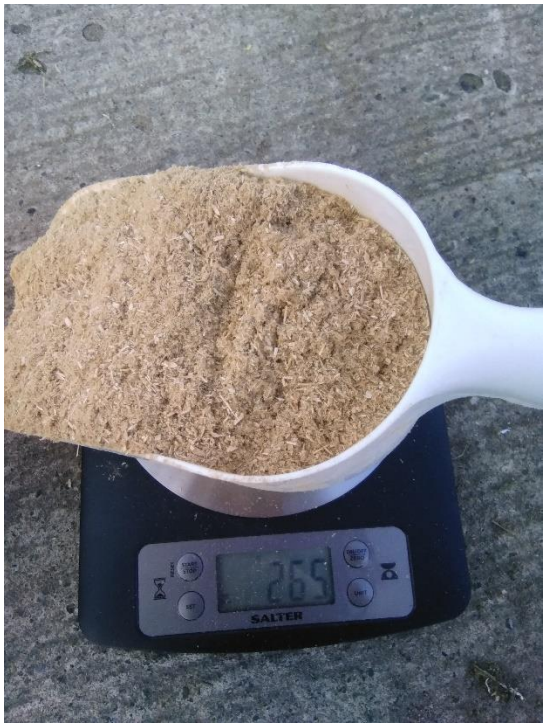
FINEBED WEIGHTS

Pallet number	Date	Time	Baler No.	1st Weight Grams	2nd weight grams
80	5/9/22	7.46	3	214	239
117	7/9/22	2.05	2	265	260
146	1/6/22	22.05	3	257	279



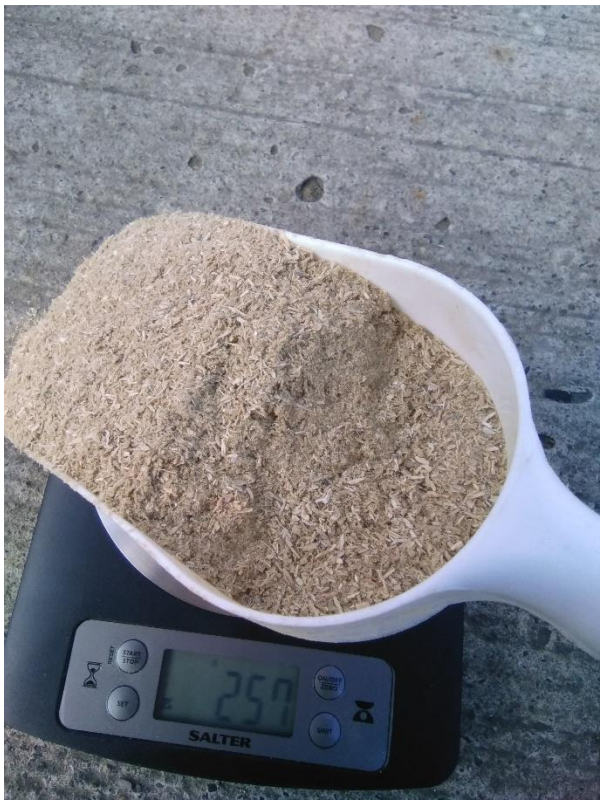
Pallet 80

Date 5/9/22



Pallet 117

Date 7/9/22



Pallet 146

Date 1/6/22

APPENDIX IV
FARMER TESTIMONIALS

Account Number	Feedback on impact on cow health, welfare, usage of product or milk yields etc.	Call Recording or Evidence	Type of Evidence
	Improved cell count, reduced hock rubbing, kinder to teats than alternative bedding, cows appear cleaner.		Answers from customer survey
	Improved somatic cell count, improved slurry handling, lower cell count helps milk price- clean cows are happy cows.		Customer Survey
	Improved somatic cell count, Increased lying time, reduced hock rubbing, kinder to teats than alternative bedding, cows appear cleaner		Answers from customer survey
	Took a load of oat husks, as price of Finebed increased, had terrible problems with mastitis - never had issues when using the Finebed, desperate to go back…		Call Recording
	Improved somatic cell count, Increased lying time, reduced hock rubbing, kinder to teats than alternative bedding, cows appear cleaner		Answers from customer survey
	Since moving to Finebed from line, udders and teats in better condition, no disinfectant required, and SSC around 110.		Twitter Review
	Kinder to teats than alternative bedding, cows appear cleaner		Answers from customer survey
	Sawdust is ideal for the cows		Twitter Review
	Kinder to teats than alternative bedding, cows appear cleaner		Answers from customer survey
	Had been using oat husk - not as good but was available but wanted sawdust to make it better.		Call Recording
	Improved somatic cell count, Increased lying time, reduced hock rubbing		Answers from customer survey
	Kinder to teats than alternative bedding, cows appear cleaner		Answers from customer survey
	"It's a good product"		Call Recording
	Improved somatic cell count, increased lying time, cows appear cleaner		Answers from customer survey
	Improved somatic cell count, increaesd lying time, reduced hock rubbing, kinder to teats than alternative bedding, cows appear cleaner		Answers from customer survey
	Increased lying time		Answers from customer survey
	Improved somatic cell count		Answers from customer survey

	Cow comfort, less mastitis, less lameness, easier slurry handling, improved somatic cell count, kinder to teats than alternative bedding		Customer Survey
	Improved somatic cell count, Kinder to teats than alternative bedding		Answers from customer survey
	Improved somatic cell count		Answers from customer survey
	Increased lying time, kinder to teats than alternative bedding		Answers from customer survey
	SCC dropped since using product- economic to use, no lime required on the beds at all		
	Improved somatic cell count, cows appear cleaner		Answers from customer survey
	Improved somatic cell count, cows appear cleaner		Answers from customer survey
	Looking to switch from paper crumb - not as dry as It could be and has mats for comfort- looking for Finebed		Call Recording
	Improved somatic cell count, Reduced hock rubbing		Answers from customer survey
	"Very dry and absrobent material- therefore no issues with mastitis." "good consistency and fineness, with no issues with the dust sticking to the slats, or mixing with the slurry"		Newspaper Article
	Reduced hock rubbing		Answers from customer survey
	Improved somatic cell count, Increased lying time, reduced hock rubbing, kinder to teats than alternative bedding, cows appear cleaner		Answers from customer survey
	Controls his cell counts well - doesn’t want to scrimp on the product because it's so effective for him. Cows housed all year around.		Call Recording
	Switching from sand to paper, used a consultant who's pleased for them to use our Finebed		Call Recording
	Reduced hock rubbing, kinder to teats than alternative bedding products		Answers from customer survey
	Consistently keeps cows clean and with low bactoscan, keeps mastitis rates very low.		Answers from customer survey, Twitter Review
	Feedback to driver: tried paper when we were short of sawdust. Didn’t go through the spreader and wasn’t absorbent, very dusty though, but a horrible dust that got on their chest. Recording- tried sand, paper, sawdust from local mill, wants to get back to FB		Call Recording
	So good they don’t use very much of it -a little goes a long way		Call Recording

APPENDIX V
COLLATED RESULTS

End of Waste Summary Table

Source (No of samples)	Combined Maximum (%)	Less Than Combined Maximum Limit? (0.1 %)	Less Than WM3 HP14 Individual Limit? (0.1 %)	Less Than Combined Maximum of Clean? (0.07 %)	Deemed End of Waste?
Clean (71)	*0.070*	*YES*	YES	-	YES
A (12)	0.031	YES	YES	YES	YES
AJ (10)	0.026	YES	YES	YES	YES
AP (18)	0.024	YES	YES	YES	YES
AT (18)	0.040	YES	YES	YES	YES
AZ (21)	0.020	YES	YES	YES	YES
B (99)	0.031	YES	YES	YES	YES
BC (11)	0.043	YES	YES	YES	YES
C (81)	0.078	YES	YES	NO	YES
D (73)	0.061	YES	YES	YES	YES
E (173)	0.046	YES	YES	YES	YES
F (92)	0.025	YES	YES	YES	YES
G (94)	0.053	YES	YES	YES	YES
H (72)	0.052	YES	YES	YES	YES
I (66)	0.053	YES	YES	YES	YES
J (55)	0.077	YES	YES	NO	YES
K (14)	0.035	YES	YES	YES	YES
L (30)	0.020	YES	YES	YES	YES
O (35)	0.015	YES	YES	YES	YES
P (18)	0.013	YES	YES	YES	YES
Q (14)	0.033	YES	YES	YES	YES
R (16)	0.049	YES	YES	YES	YES
V (10)	0.017	YES	YES	YES	YES
X (18)	0.022	YES	YES	YES	YES
Y (12)	0.023	YES	YES	YES	YES
Z (12)	0.018	YES	YES	YES	YES

APPENDIX VI
STATEMENT OF CONFORMITY

Document Ref: SOC.01 Version: Issue 1 Date: 10/08/2022

Statement of Conformity with End of Waste Criteria

1	**Source Supply Reference:** **Process Material Identification:**	
2	**Processing Site**	Address: Miners Rd, Llay Industrial Estate, Llay, Wrexham LL12 0PJ Telephone: 01978 854666 E-mail: sales@plattsagriculture.co.uk
3	**Material Category**	Conditioner
4	**Material Specification**	Wood dust
5	**Quantity in Tonnes**	
6	**The producer applies a Quality Management System and the material meets the following criteria:** • **the total concentration of all substances identified through analysis within a sample must be less than 0.1%.** • **the concentration of any individual substance identified through analysis within a sample must be less than 0.1%.**	
7	**Declaration –** ***"I certify that the above information is complete and correct to the my best knowledge."***	Name: Date: Signature: