



**BioConstruct NewEnergy Ltd  
Blaise Anaerobic Digestion Facility  
Blaise Farm Quarry  
West Malling  
Kent  
ME19 4PN**

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<b>REVISION NOTES AND HOLDS</b>	
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## 1 **OBJECTIVE**

The objective of this procedure is to ensure that any waste, product or byproduct subjected to the AD process is compliant with the site specific:

- Environmental Permit issued by the Environment Agency
- ABPR Approval issued by APHA
- End of waste criteria for the production and use of quality outputs from anaerobic digestion of source-segregated biodegradable waste (**AD Quality Protocol 2014**)
- Process suitability as per **Feedstock Supply Agreement between Blaise Biogas Limited and Blaise Renewables Limited**

## 2 **SCOPE**

The scope of this procedure extends to all feedstock accepted at Blaise Biogas AD Facility.

## 3 **RESPONSIBILITY**

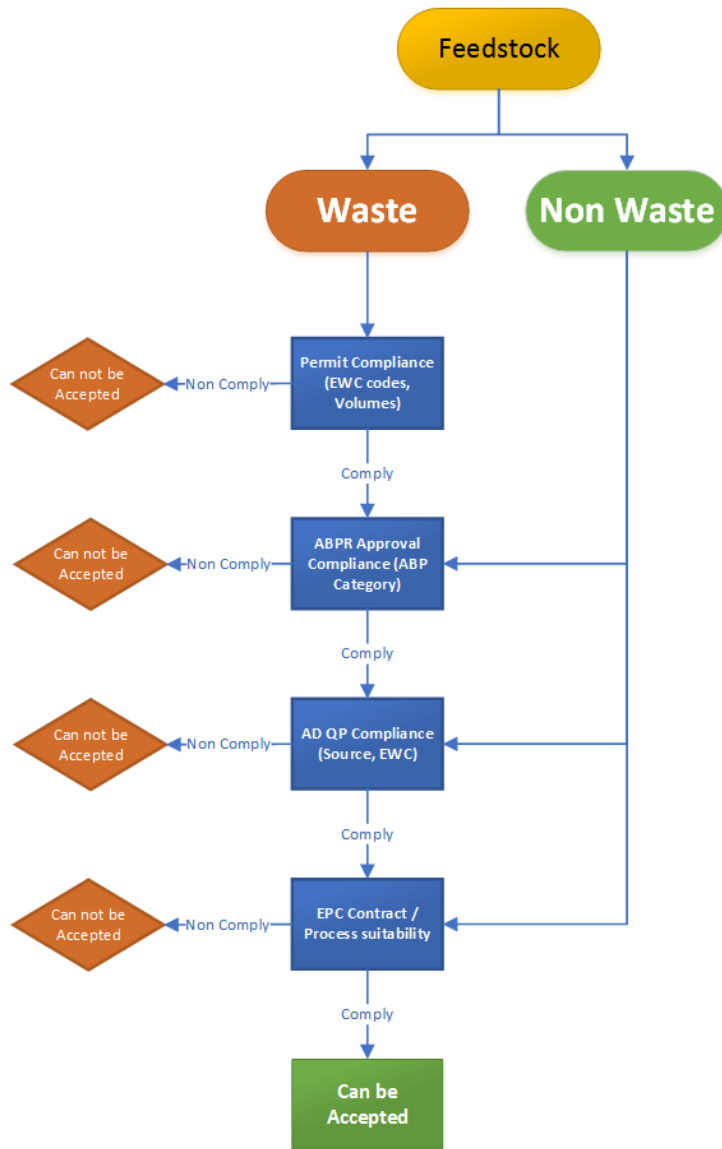
It is the responsibility of the Plant Manager to ensure that all personnel or companies adhere to this procedure.

## 4 **DESCRIPTION**

All waste/ feedstock must be subjected to this Waste Acceptance Criteria (WAC). Only wastes compliant with these criteria can be accepted on site.

The decision-making process of whether new waste is acceptable on site is summarized in Figure 1 below:

Figure 1: Waste Acceptance Decision Process



## **5 ACCEPTANCE CRITERIA BY PERMIT**

The site is only authorised to accept waste as per Schedule 2 of the site permit.

The Environmental Permit specifies the types of wastes allowed to be accepted on site, based on their European Waste Catalogue (EWC) chapters and by annual volume. Please see Appendix II for comprehensive list of acceptable wastes on site.

Table S2.2 of the permit states the annual tonnages permitted at the site.

This is the total of all feedstocks processed on site including wastes and non-wastes

## **6 ACCEPTANCE CRITERIA BY ANIMAL BY-PRODUCTS APPROVAL**

Under Regulation (EC) 1069/2009 and the Animal By-Products (Enforcement) (England) Regulations 2013 the ABP category of the waste acceptable on site is restricted to:

### **Category 3 Animal By-Products and**

**Some specific Category 2 materials** under Authorization D2, including **manure, digestive tract and its content, milk, milk-based products, colostrum, eggs, and egg products**

For full definition of Category 3 Animal By-Products please see Appendix I

## **7 ACCEPTANCE CRITERIA BY AD QUALITY PROTOCOL**

Acceptance criteria by AD Quality Protocol is defined by Appendix B of the Protocol as detailed below:

Waste input materials may only be accepted if:

- have been source-segregated (kept separate from any other wastes)
- have not been mixed, combined or contaminated with other potentially polluting wastes, products or materials.
- Biodegradable plastic packaging that is independently certified to BS EN 13432 or either of the similar standards DIN V 54900 or ASTM D6400 that is used to collect food waste shall be permitted. It must, however, be removed either prior to or after the digestion process to meet the physical contaminant limit in BSI PAS 110 or other approved standard.
- Only untreated wood is allowed. Wood and wood-derived wastes impregnated with preservatives, painted, or with any non-biodegradable layer shall not be permitted.

Please see a list of acceptable wastes by EWC codes in Appendix II including restrictions by the protocol.

## 8 ACCEPTANCE CRITERIA BY FEEDSTOCK SUPPLY AGREEMENT

Schedule 2 of the Feedstock Supply Agreement between Blaise Biogas Limited and Blaise Renewables Limited outlines the EWC codes for wastes that can be accepted at the site, requirements for overall feedstock composition, proportionate quantities, biological characteristics and quality.

The agreement states that the Off taker will provide a Monthly Delivery Schedule to the supplier. This will not result in an exceedance of the maximum annual tonnage delivered of 75,000 tonnes a year or result in less than the annual minimum tonnage of 54,000 tonnes. The minimum monthly feedstock supply is 4,500 tonnes.

The annual minimum biomethane yield shall be 5,600,000m<sup>3</sup> biomethane, and the monthly minimum biomethane yield shall be 450,000m<sup>3</sup>.

While composition percentages and quantity requirements may change, biological characteristics and quality requirements are binding. Below please see a summary of quality acceptance criteria by the contract.

Table 8-1: Quality requirements by the Feedstock Supply Agreement

Parameter	Acceptance Threshold
pH	3-9
Contaminants in liquid pumpable wastes, including but not limited to:  Paper/cardboard Plastic (including plastic bags) Textiles Metals Glass Nappies Soil/Rubble Woody garden waste Other foreign objects	<1% of volume or weight of total tonnage derived
Contaminants in packaged unprocessed wastes including but not limited to:  Paper/cardboard Plastic (including plastic bags) Textiles Metals Glass Nappies Soil/Rubble Woody garden waste	<20% of volume or weight of total tonnage derived

Other foreign objects	
Catering cutlery or utensils with a third dimension larger than 2mm	None
Stones or other solid un-processable matter	< 60mm
Netting, string, twine or similar	None
Biocides or antibiotics or any material containing such substances	None
Material that cannot be processed at the site	None
Dry Matter Content	<18% of the volume of the sample
Biogas Content	Between 140m <sup>3</sup> /t and 170m <sup>3</sup> /t

All feedstocks will be assessed for suitability for the AD process, and compliance with this Waste Acceptance Criteria prior to being accepted as a suitable feedstock at the site.

Details of a new feedstock stream identified by Blaise Renewables Limited (the supplier) will be sent to the operator prior to a final agreement to receive it at the site. The operator will then assess the suitability of the material according to the process laid out in the 'Blaise Biogas Facility New Supplier Assessment Form', and a record of this assessment will be made on this form and retained in the operator's EMS records.

The operator will request sample analysis data of the waste stream to support this assessment. Analysis will be carried out pre-acceptance for all the variables indicated in table 8.1 above. The number of samples to be tested to gain a representative view of the waste will be decided by the plant manager and biologist dependent on the apparent variability of the waste.

The operator will assess whether a more extended suite of analysis is required before it can be accepted at the site. Any extended suite of analysis to be undertaken to characterise the waste will be decided based on the risks identified in the qualitative assessment of the producing site, and the availability of valid reference data from similar product types handled by the operator at their portfolio of sites. The suite to be tested for and the rationale for this will be recorded on the New Supplier Assessment Form.

All waste streams will be tested for ongoing compliance with the Waste Acceptance Criteria on receipt at the site for every load via visual assessment, and via sample analysis on at least a weekly basis in the case of pH and Dry Matter Content, and on a monthly basis in terms of Biogas Content. If a load received at the site is found to be non-conforming, then monitoring will be increased to daily in the case of pH and Dry Matter Content, and Weekly in the case of Biogas Content. If a feedstock is persistently found to be non-confirming, then it will be excluded from the site.

Supplier assessment will be reviewed on at least a six-monthly basis for the first year of supply, and thereafter on at least an annual basis or as needed.

## **9 RECORDS**

The pre-acceptance characterisation and assessment process will be recorded on the 'Blaise Biogas Facility New Supplier Assessment Form'. Records of the process and accompanying sample analysis results data will be kept within the EMS for a minimum of 6 years or as required by the permit. Records will be kept of waste streams considered and rejected as suitable for acceptance at the site.

## **10 ASSOCIATED DOCUMENTATION**

*Blaise Biogas Facility New Supplier Assessment Form*  
*Feedstock Acceptance Procedure*  
*Waste Transfer Note*  
*Feedstock Rejection Procedure*  
*Feedstock Sampling Procedure*



# Appendix I

**Category 3 ABP material** as defined by Article 10 of the Regulations 1069/2009:

Category 3 material shall comprise the following animal by-products:

- a) carcasses and parts of animals slaughtered or, in the case of game, bodies or parts of animals killed, and which are fit for human consumption in accordance with Community legislation, but are not intended for human consumption for commercial reasons;
- b) carcasses and the following parts originating either from animals that have been slaughtered in a slaughterhouse and were considered fit for slaughter for human consumption following an ante-mortem inspection or bodies and the following parts of animals from game killed for human consumption in accordance with Community legislation:
  - (i) carcasses or bodies and parts of animals which are rejected as unfit for human consumption in accordance with Community legislation, but which did not show any signs of disease communicable to humans or animals;
  - (ii) heads of poultry;
  - (iii) hides and skins, including trimmings and splitting thereof, horns and feet, including the phalanges and the carpus and metacarpus bones, tarsus and metatarsus bones, of:
    - animals, other than ruminants requiring TSE testing, and —
    - ruminants which have been tested with a negative result in accordance with Article 6(1) of Regulation (EC) No 999/2001;
  - (iv) pig bristles;
  - (v) feathers;
- c) animal by-products from poultry and lagomorphs slaughtered on the farm as referred to in Article 1(3)(d) of Regulation (EC) No 853/2004, which did not show any signs of disease communicable to humans or animals;
- (d) blood of animals which did not show any signs of disease communicable through blood to humans or animals obtained from the following animals that have been slaughtered in a slaughterhouse after having been considered fit for slaughter for human consumption following an ante-mortem inspection in accordance with Community legislation:
  - (i) animals other than ruminants requiring TSE testing; and
  - (ii) ruminants which have been tested with a negative result in accordance with Article 6(1) of Regulation (EC) No 999/2001;
- (e) animal by-products arising from the production of products intended for human consumption, including degreased bones, greaves and centrifuge or separator sludge from milk processing;
- (f) products of animal origin, or foodstuffs containing products of animal origin, which are no longer intended for human consumption for commercial reasons or due to problems of manufacturing or packaging defects or other defects from which no risk to public or animal health arise;
- (g) pet food and feeding stuffs of animal origin, or feeding stuffs containing animal by-products or derived products, which are no longer intended for feeding for commercial reasons or due to problems of manufacturing or packaging defects or other defects from which no risk to public or animal health arises;

- (h) blood, placenta, wool, feathers, hair, horns, hoof cuts and raw milk originating from live animals that did not show any signs of disease communicable through that product to humans or animals;
- (i) aquatic animals, and parts of such animals, except sea mammals, which did not show any signs of disease communicable to humans or animals;
- (j) animal by-products from aquatic animals originating from establishments or plants manufacturing products for human consumption;
- (k) the following material originating from animals which did not show any signs of disease communicable through that material to humans or animals:
  - (i) shells from shellfish with soft tissue or flesh;
  - (ii) the following originating from terrestrial animals:
    - hatchery by-products, —
    - eggs, —
    - egg by-products, including egg shells,
  - (iii) day-old chicks killed for commercial reasons;
- (l) aquatic and terrestrial invertebrates other than species pathogenic to humans or animals;
- (m) animals and parts thereof of the zoological orders of Rodentia and Lagomorpha, except Category 1 material as referred to in Article 8(a)(iii), (iv) and (v) and Category 2 material as referred to in Article 9(a) to (g);
- (n) hides and skins, hooves, feathers, wool, horns, hair and fur originating from dead animals that did not show any signs of disease communicable through that product to humans or animals, other than those referred to in point (b) of this Article;
- (o) adipose tissue from animals which did not show any signs of disease communicable through that material to humans or animals, which were slaughtered in a slaughterhouse and which were considered fit for slaughter for human consumption following an ante-mortem inspection in accordance with Community legislation;
- (p) catering waste other than as referred to in Article 8(f).

In addition, under “authorisation D2” the facility can accept **some specific Category 2 materials** based on the following conditions of the Regulation:

*In accordance with Article 13(e)(ii) of Regulation (EC) No 1069/2009 and Annex V of Commission Regulation (EU) No 142/2011 the Scottish Ministers authorise that the following category 2 animal by-products may be composted or transformed into biogas following or without prior processing:*

- manure, digestive tract and its content, milk, milk based products, colostrum, eggs, and egg products.

# Appendix II

Acceptable waste types by EWC and specific restrictions

<b>Maximum quantity</b> <b>Annual throughput shall not exceed 75,000 tonnes</b>		
Waste code	Description	Specific Restriction by ADQP
<b>02</b>	<b>Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing</b>	
<b>02 01</b>	<b>wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing</b>	
02 01 01	sludges from washing and cleaning – vegetables, fruit and other crops	<u>Restriction</u> : food processing waste and food washing waste only
02 01 02	animal tissue waste	
02 01 03	plant tissue waste	
02 01 06	animal feces, urine and manure (including spoiled straw) only	
02 01 99	residues from commercial mushroom cultivation	<u>Restriction</u> : spent mushroom compost or discarded mushrooms from commercial mushroom cultivation only
<b>02 02</b>	<b>wastes from the preparation and processing of meat, fish and other foods of animal origin</b>	
02 02 01	sludges from washing and cleaning	<u>Restriction</u> : process water and food washing waste only
02 02 02	animal tissue waste	Including blood, animal flesh, fish processing waste, fish carcasses and poultry waste
02 02 03	materials unsuitable for consumption or processing	
02 02 04	sludges from on-site effluent treatment	

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02 02 99	sludges from gelatin production, animal gut contents	<u>Restriction</u> : sludges from gelatin production and animal gut contents only
<b>02 03</b>	<b>wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation</b>	
02 03 01	sludges from washing, cleaning, peeling, centrifuging and separation	
02 03 04	materials unsuitable for consumption or processing	
02 03 05	sludges from on-site effluent treatment	
02 03 99	sludge from production of edible fats and oils to include seasoning residues, molasses residues, residues from production of potato, corn or rice starch	<u>Restriction</u> , only: sludge from production of edible fats and oils; seasoning residues; molasses residues; residues from production of potato, corn or rice starch
<b>02 04</b>	<b>wastes from sugar processing</b>	
02 04 03	sludges from on-site effluent treatment	<u>Restriction</u> : biological sludge only
02 04 99	other biodegradable wastes	
<b>02 05</b>	<b>wastes from the dairy products industry</b>	
02 05 01	materials unsuitable for consumption or processing	Including solid and liquid dairy products, milk, food processing wastes, yoghurt, and whey
02 05 02	sludges from on-site effluent treatment	<u>Restriction</u> : biological sludge only
<b>02 06</b>	<b>wastes from the baking and confectionery industry</b>	
02 06 01	materials unsuitable for consumption or processing	Including condemned food, food processing wastes, biscuits, chocolate, yeast, bread, bakery wastes

02 06 03	sludges from on-site effluent treatment	<u>Restriction:</u> biological sludge only
<b>02 07</b>	<b>wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)</b>	
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials	Including brewing waste, food processing waste, fermentation waste
02 07 02	wastes from spirits distillation	<u>Restriction,</u> only: Spent grains, fruit and potato pulp; Sludge from distilleries
02 07 04	materials unsuitable for consumption or processing	Including brewing waste, food processing waste, fermentation waste, beer, alcoholic drinks and fruit juice
02 07 99	spent grains, hops and whisky filter sheets/cloths, yeast and yeast-like residues, sludge from production process	<u>Restriction,</u> only: Malt husks, malt sprouts, malt dust; spent grains; hops; yeast and yeast like residues; sludges from the production process
<b>04</b>	<b>Wastes from the leather, fur and textile industries</b>	
<b>04 01</b>	<b>wastes from the leather and fur industry</b>	
04 01 01	fleshings and lime split wastes	Fleshing's may also be described as leather shavings. Only allowed if hides and skins, or parts of them, originating from animals that did not show signs of any disease communicable through that product to animals of humans are digested in accordance with the EU ABPR* at a facility subject to approval under ABPR and the UK legislation
<b>04 02</b>	<b>wastes from the textile industry</b>	
04 02 10	organic matter from natural products, e.g. grease, wax	
<b>07</b>	<b>Wastes from organic chemical processing</b>	
<b>07 01</b>	<b>Wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals</b>	
07 01 08*	Other still bottoms and reaction residues	<u>Restriction:</u> Glycerol residue from biodiesel manufacture from nonwaste vegetable oils only

<b>16</b>	<b>Wastes not otherwise specified in the list</b>	
<b>16 10</b>	<b>aqueous liquid wastes destined for off-site treatment</b>	
16 10 02	liquor/leachate from a composting process that accepts waste input types listed in this table only	Restriction: Allowed only if digestate from an aerobic digestion process that accepts only the waste input types allowed by this Quality Protocol
<b>19</b>	<b>Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use</b>	
<b>19 02</b>	<b>wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralization)</b>	
19 02 03	waste types listed within this table, Table S2.2, that have been mixed together only	Restriction: acceptable only if derived solely from wastes accepted by ADQP
19 02 06	Sludges from physico/chemical treatment other than those mentioned in 19 02 05	Restriction: Acceptable only if derived solely from physical treatment and/or pH adjustment of input types allowed by this Quality Protocol and remains segregated from, and uncontaminated by, any other waste type.
19 02 10	glycerol not designated as hazardous i.e. excludes EWC code 19 02 08	Restriction: glycerol only
<b>19 06</b>	<b>wastes from anaerobic treatment of waste</b>	
19 06 03	liquor from anaerobic treatment of municipal waste (from a process that treats wastes which are listed in this table only)	Restriction: acceptable only if derived solely from wastes accepted by ADQP
19 06 04	digestate from anaerobic treatment of source segregated biodegradable waste (from a process that treats wastes which are listed in this table only)	Restriction: acceptable only if derived solely from wastes accepted by ADQP
19 06 05	liquor from anaerobic treatment of animal and vegetable waste (from a process that treats wastes which are listed in this table only)	Restriction: acceptable only if derived solely from wastes accepted by ADQP
19 06 06	digestate from anaerobic treatment of animal and vegetable waste (from a process that treats wastes which are listed in this table only)	Restriction: acceptable only if derived solely from wastes accepted by ADQP

<b>19 08</b>	<b>wastes from waste water treatment plants not otherwise specified</b>	
19 08 09	grease and oil mixture from oil/water separation containing only edible oil and fats	<u>Restriction:</u> grease and oil mixture containing only edible oils and fats
19 08 12	sludges from biological treatment of industrial waste water	<u>Restriction:</u> allowed only if uncontaminated by potentially polluting materials or substances harmful to bacteria
<b>19 12</b>		
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	<u>Restriction:</u> Acceptable only if derived solely from input types allowed by this Quality Protocol and remains segregated from, and uncontaminated by, any other waste type.
<b>20</b>	<b>Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions</b>	
<b>20 01</b>	<b>separately collected fractions (except 15 01)</b>	
20 01 08	biodegradable kitchen and canteen waste	
20 01 25	edible oil and fat	
<b>20 02</b>	<b>garden and park wastes (including cemetery waste)</b>	
20 02 01	biodegradable waste	Including animal faeces, manure, garden waste, green waste, horticulture waste, plant tissue, parks and garden waste, hedge and tree trimmings, grass cuttings and leafy materials
<b>20 03</b>	<b>other municipal wastes</b>	
20 03 01	mixed municipal waste – only separately collected biodegradable wastes of types listed within this table, Table S2.2 of Environmental Permit	<u>Restriction:</u> allowed only if separately collected biodegradable wastes on this list (e.g. mixed household kitchen and garden wastes)
20 03 02	waste from markets – allowed only if source segregated biodegradable fractions e.g. plant material, fruit and vegetables	<u>Restriction:</u> allowed only if source segregated biodegradable fractions (e.g. plant material, fruit and vegetables). Packaging waste from markets would have to meet restrictions on packaging described elsewhere on this list

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Page 16 of 16

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