



2BS Biomass Biofuels Sustainability scheme
**Production of biofuels, biogas and bioliquids
from wastes and residues - [Extension of requirements]**

Doc: **2BS-PRO-04**

Version: **2.0 (en)**

Approved on **27/08/16**
EC assessment v 5.2 (en)

2BS voluntary scheme

EXTENSION OF REQUIREMENTS FOR THE PRODUCTION OF BIOFUELS, BIOGAS & BIOLIQUIDS FROM WASTES & RESIDUES

Note on the status of this document

This reference document is an integral part of the 2BS voluntary scheme developed by the 2BS Association.

This update aims to comply with the current version of the EU Directive 2009/28/EC modified by the Directive 2015/1513 of the European Parliament and the Council of the 9th of September 2015.



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1. Introduction

The auditing principles applicable to biofuels made from wastes and residues are the same as those used for biofuels produced from other biomass.

However, this specific procedure supplements the general system principles and describes them in more detail, in order to trace the feedstock back to its origin, covering the whole chain of custody¹.

Basically:

- The whole chain of custody needs to be covered, starting from its origin, i.e., the economic operator where the wastes or residues arise.
- As a principle, all operators need to be audited individually. Only at the origin of the chain of custody can group-auditing approaches be considered.
- Frequency and intensity of the auditing procedures need to reflect the level of risk of fraudulent behaviour.
- Auditors should have the right to do on-site audits at the origin of the waste or residue (e.g. restaurants) if required.

EU Directive 2015/1513 modifying EU Directive 2009/28/EC, clarifies the definition² of « Waste », « Processing residues » and “agricultural, aquaculture, fisheries and forestry residues”. Additionally “ligno-cellulosic material” and “non-food cellulosic material” are also defined.

Processing residue means a substance that is not the end product(s) that a production process directly seeks to produce; it is not a primary aim of the production process and the process has not been deliberately modified to produce it.

Agricultural, aquaculture, fisheries and forestry residues means residues that are directly generated by agriculture, aquaculture, fisheries and forestry; they do not include residues from related industries or processing.

Waste means any substance or object, which the holder discards or intends or is required to discard. Definitions of waste key concepts and management plans are available in the Directive 2008/98/EC of 19 November 2008

Even if there is no EU-wide positive list new annex IX issued on EU Directive 2015/1513 modifying EU Directive 2009/28/EC and article 2 f) stipulates clearly the “list” of Feedstocks and fuels, the contribution of which towards the target referred to in the first subparagraph of Article 3(4) shall be considered to be twice their energy content. Hence in addition to this list the relevant specifications and requirements of respective Members States can be applied³.

¹ [BK/g/ener.c.1(2014)3648524, 10 Oct 2014]: note to the voluntary schemes from the EC

² Article 2 p), t), v), r), s) in EU Directive 2015/1513 modifying EU Directive 2009/28/EC

³ Article 3 e) in EU Directive 2015/1513 modifying EU Directive 2009/28/EC



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In this context, wastes additional to the ones in annex IX reported in EU Directive 2015/1513 modifying EU Directive 2009/28/EC, can be understood to be any substance or object, which the holder discards or intends to discard or is required to discard. Raw materials that have been intentionally modified to count as waste (e.g. by adding waste material to a material that was not waste) should not be considered as waste.

It is very important to take into consideration that any intentional modification of the industrial process or product itself, done with the aim of producing more “wastes” and “Processing residues”, cannot be considered as producing sustainable “wastes” and “Processing residues” according to EU Directive 2009/28/EC modified EU Directive 2015/1513.

2. Scope

The following section explains the requirements criteria and the documentation and describes the verification of the chain of custody of the wastes and residues value chains.

These system requirements apply to all economic actors in the wastes and residues sector regardless of whether the biofuel contribution towards the target referred to in the first subparagraph of Article 3 (4) EU Directive 2009/28 EC modified by the EU Directive 2015/1513 shall be considered to be twice their energy content or not.

Annex IX of Directive 2015/1513 Part A & B provide two lists of wastes or residues that shall be considered to be twice their energy content. In particular, the materials in points (p) and (q) cover a broad range of feedstock’s, which could be classified as products, residues (agricultural, forestry or processing) or wastes. It is producer responsibility to determine to which category the material belongs to and the auditor responsibility to confirm if the choice done is the right one.

The following definitions are important concerning the certification units

- **The ‘point of origin’** of wastes and residues: this is the physical site(s) (private household, farming/ forestry activity, restaurants, distilleries) where the wastes or residues arise. In case actual value is used, instead of usable default value for transportation etd, GHG calculation emissions shall be done from the “point of origin” and not only from the “Collection point”. The meaning is that all transport phase shall be taken into account since the original place in which the wastes and residues arise.

Check the current definitions with the flowchart on page 11, where the “points of origin” and “collecting sites” supply the “collection point” on a dedicated basis in-line.

- **The ‘collecting site(s)’** is/are storage, and collecting area(s) such as private or public recycling facilities where wastes and residues are rendered, sometimes brought voluntarily by private households, aggregated and transferred into a collection point, without the



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purpose of trading. The collecting Site(s) is/are under the direct control of the collection point(s) (= First gathering point).

In line with what it is written in the previous paragraph all transportation phase between the “point of origin” and the “collecting site” and after between the “collecting site” and the “collection point” shall be taken into account in case of actual value usage.

- **The ‘collection point’ (=first gathering point= first gathering entity) of the wastes and residues:** this is the economic operator who stores and later dispatches the wastes and residues generated by the points of origin, and eventually transferred from the ‘collecting site’(s) for further processing into biofuels, biogas and bioliquids. The ‘collection point’ is equivalent to a 1st gathering point. The Central Office of the 1st gathering entity is generally the site that collects and centralises all relevant information needed regarding the origin of the potentially sustainable biomass, the mass balance system, for each individual material, and all relevant GHG emission savings data. ‘Collection point(s)’ must therefore have access to documentary evidence of the origin of all their feedstock from the ‘point of origin’. The “collection point” (= 1st gathering point = 1st gathering entity), as group manager, must select and specify the collecting sites and waste and residues generators that are covered by the scope of the certificate.
- **The ‘processing unit’** is the facility where the wastes or residues are converted partially or completely into biofuels, bioliquids and biogas.
- **‘Trader(s)’** are economic operators that take legal ownership of the material in the buying and selling activity of wastes and residues.
- **The last part of the chain of custody (or last interface)** is the site where the biofuel is produced or sold under the technical specifications required by the market of the Member State [MS].

Economic operators that initially receive wastes or residues from the suppliers (e.g. restaurants, collecting sites, or traders are called ‘collection points’ (= 1st gathering points = 1st gathering entities). These operators sometimes combine collection, treatment and processing operations.

Economic operators which exclusively conduct mechanical processing (sedimentation, filtration) of wastes or residues, are considered as ‘collection points’, not as ‘processing units’. This is the case as long as both the raw material and the material after mechanical processing are classified and declared under the same waste code (according to national legislation).

Operators that process biomass made from wastes or residues to the technical standard needed for use as fuel, or as bioliquids to produce electricity, are called ‘(last) interfaces’. These can be biodiesel, biogas facilities, bioethanol or treatment facilities.



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‘Collection points’, interfaces and suppliers that are active before the ‘(last) interfaces’ above and are registered in the 2BS voluntary scheme need to be audited and certified according to the procedure [2BS-PRO-02]⁴.

The operations included in the scope of the audit must explicitly name and describe the raw material used verifying whether these substances are genuine wastes or residues tracing the feedstock back to its origin, covering the whole chain of custody.

In accordance with the EU Directive 2009/28 EC modified by the EU Directive 2015/1513:

- the sustainability criterion relating to greenhouse gas savings, also applies to biofuels/bioliquids from wastes and residues – in compliance with the GHG emissions threshold⁵
- wastes, agricultural crop residues, including straw, bagasse, husks, cobs and nut shells, and residues from processing, including crude glycerine (glycerine that is not refined), shall be considered to have zero GHG emissions up to the [point of collection = 1st gathering point = first gathering entity]⁶
- the land-related criteria are also applicable for residues that come from agriculture, aquaculture, fisheries and forestry⁷

The words ‘waste’ or ‘residue’ must not appear on the certificate, since the list of wastes and residues benefiting from specific incentives are decided by Member States [MS]. The certificate must indicate the exact nature⁸ of the material so as to prevent incorrect claims concerning the type of feedstock used.

3. General traceability (or chain of custody) and documentation requirements

Operators that supply wastes or residues to collection points, treatment or processing operators must declare to the recipient that the supplied waste or residue consists only of biomass as defined by the EU Directive 2009/28 EC modified by the EU Directive 2015/1513.

For wastes and residues, the traceability of the biomass must be ensured by means of a mass balance system. The general requirements of a mass balance system are described in detail in the 2BS standards, [2BS-STD-01]⁹ and [2BS-STD-02]¹⁰.

⁴ [2BS-PRO-02]: 2BS voluntary scheme procedure => “Requirements for the Verification Process” in its current version

⁵ Cf article 17(1) (2) & Section 4 of this procedure

⁶ Cf Annex V, Part C, 18

⁷ Cf article 17(1) (3) (4) (5)

⁸ Name, code related to the name of the waste and residue material, and when applicable relevant category for animal oils and fats

⁹ [2BS-STD-01] : 2BS voluntary scheme => Requirements for the Verification of Biomass Production (First gathering entity and biomass producers) – procedure in its current version

¹⁰ [2BS-STD-02] : 2BS voluntary scheme => Requirements for biofuel producers and traders - procedure in its current version



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The 2BS system stipulates that all economic actors need to have a document and information management system, which can be audited; the economic operators need to declare to auditors the name of all voluntary schemes they operate in and make available all relevant information – e.g. full mass balance records for the site(s). Proper documentation is required to comply with the legal provisions for sustainable bioliquids and biofuels. All of the documents in the document management system must be identified and accessible for at least 5 years regardless of any other legal requirements relating to a retention period.

Economic operators who exclusively conduct mechanical processing shall document the incoming amounts compared to the outgoing amounts (input/output ratio). This must be checked and verified by the auditor during the audit.

To this end, the information is included on the delivery notes between the point of origin and the collection point. These delivery notes can be part of the control system implemented by customs or regulatory controllers at the Member States [MS]’ level.

In the absence of such regulatory controls between the ‘point of origin’ and the ‘collection point’, the latter shall register the points of origin of the wastes or residues in a declaration document signed for each single delivery of wastes and residues.

The declaration document must include the following details for all collected wastes or residues:

- name, code related to the name of the waste and residue material, and when applicable relevant category for animal oils and fats
- quantity
- date of removal and place of origin

If a single declaration document is used for all deliveries related to an agreement or a contract, the contract number or agreement number must be indicated on the declaration document. It is also possible to include the text of the declaration in the contract between the collector and the wastes producer. The declaration record as such or as part of the contract is valid for a maximum of one year starting from the date of issue.

4. Requirements for (GHG) emissions savings and the calculation method

In case the economic operator needs to calculate the actual value for the produced biofuel, biogas, bioliquid, the procedure [2BS-PRO-03]¹¹ provides a GHG emissions calculation methodology for the economic operators using the 2BS voluntary scheme. Alternatively the economic operator may

In their current versions:

¹¹ [2BS-PRO-03]: 2BS Calculation methodology for greenhouse gas emissions from biofuels and bioliquids



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use default or disaggregated default values given by the EU Directive 20909/28/EC modified by the EU Directive 2015/1513.

GHG emission data shall only be included on documentation if actual values have been calculated. In case default values are used it is only necessary to transmit that the default value is used, in order to simplify the administrative burden and to avoid mistakes. Therefore, it is the responsibility of downstream operators to include information concerning the (disaggregated) default GHG emission values for the final biofuels when reporting to the Member States.

5. Mass balance / Credit account for sustainable wastes & residues

The applicable rules for calculating the Mass balance / Credit account and credit period are set out in the standards [2BS-STD 01]¹² & [2BS-STD 02]¹³.

6. Specific documentation requirements

The requirements for traceability and documentation described above as well as the GHG emission savings calculation rules apply to all economic actors dealing with wastes and residues and their derivatives: wastes or residues producers, collection points, processing units and last interfaces.

The requirements described in the standards [2BS-STD 01]¹¹ and [2BS-STD 02]¹² apply.

This procedure may be supplemented with user guidelines, placed in annexes whenever further interpretation is needed and based on experience.

7. Onsite Audits and certification

For all operators involved in waste/residue to biofuel production including ‘point of origin’ = the group of waste generators (e.g. restaurants), ‘collecting sites’, ‘collection points’ (= 1st gathering points = 1st gathering entities), ‘processing units’, and ‘trader operators’, auditors shall verify the requirements for traceability and mass balancing, the documentation requirements, the criteria related to the GHG emissions saving and the compliance with the calculation methodology.

A ‘point of origin’ (=site(s) where wastes and residues arise) producing more than 10 tons of material per month on average, **shall be** verified through onsite audits and certified within the scope of certification of a ‘collection point’ (=1st gathering point = 1st gathering entity).

¹² [2BS-STD-01] : 2BS voluntary scheme => Requirements for the Verification of Biomass Production (First gathering entity and biomass producers) - procedure in its current version

¹³ [2BS-STD-02] : 2BS voluntary scheme => Requirements for biofuel producers and traders - procedure in its current version



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A ‘point of origin’ (= site(s) where waste and residues arises) whose production is less than 10 tonnes of material per month on average does not need to be audited, but auditors will always have the right to do on-site audits (e.g. restaurants) within the scope of certification of a ‘collection point’ (=1st gathering point = 1st gathering entity).

‘Points of origin’ of a given ‘collection point’ can be checked as a group (e.g. restaurants), and the sampling shall be based on a documented and updated risk analysis (e.g. nature of material, intensity of non-conformities.)

A ‘collecting site’, which collects more than 10 tonnes of material per month on average, **shall be** verified through onsite audits within the scope of certification of a ‘collection point’.

A ‘collecting site’ which collects less than 10 tonnes of material per month on average does not need to be verified and certified through onsite audits, provided that the contractual basis on which they are operating avoids incentives to make false claims about the nature of the feedstock and the risk of fraudulent behaviour is low. Auditors will still have the right to do on-site audits (e.g. biological municipal waste centre) within the scope of certification of a ‘collection point’.

Collecting sites do not have to be certified as long as they collect material solely on behalf of a certified “collection point” (=1st gathering point = 1st gathering entity).

A ‘point of origin’ or ‘collecting site’, producing/collecting > 10 tonnes per month can only be included in a group auditing approach where the contractual basis on which they are operating avoids incentives to make false claims about the nature of the feedstock and the risk of fraudulent behaviour is low.

‘Collection points’ shall have supporting evidence back to the origin of the material, which should be available for auditors to verify. This could include, for example, evidence of collection from ‘specific restaurants’ or ‘collecting sites’. The name of the specific feedstock should be on all documentation.

If the ‘collection point’ of wastes or residues is the ‘processing unit’, then the ‘processing unit’ is the first and only certified economic operator of the chain of custody; the scope of certification encompasses the ‘processing unit’ and the ‘collection point’.

“Processing units’ that produce and incorporate biofuels derived from materials (wastes and residues) **shall be** verified through onsite audits within the scope of certification of a ‘processing unit’ independently of the quantity of biofuel produced. ‘Processing units’ must be certified.

‘Processing units’, can only be included in a group auditing approach where the contractual basis, on which they are operating, avoids incentives to make false claims about the nature of the feedstock and the risk of fraudulent behaviour is low.



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When all the wastes or residues are generated on the biofuel production site by an integrated economic operator, the ‘point of origin’ and the ‘collection point’ are the same (one certification unit), but the quantities that qualify as wastes or residues need to be verified.

An economic operator can be at the same time, if relevant, the ‘point of origin’, the ‘collecting site’, the ‘collection point’, the ‘processing unit’ and the ‘trader’, but will need to file different declarations depending on the activity that it performs.

User interpretation guidelines may be supplemented, whenever further interpretation is needed and based on experience.

For wastes or residues that do not come from agriculture, forestry, fisheries or aquaculture - the land-related criteria are not applicable, according to the EU Directive 2009/28 EC modified by the EU Directive 2015/1513.

8. Frequency, auditing intensity and sampling

The frequency and the intensity of the auditing process for waste & residues are based on the procedure 2BS-PRO-02.

The origin of the material must be verified during the onsite audit of the ‘collecting site(s)’ (if any exist), ‘collection point’ and the ‘processing unit’.

It needs to be ensured that auditors have the possibility to conduct on-site audits also in restaurants, or other sources of material where they consider this necessary, for instance to verify the claims made by ‘collection points’ and / or ‘processing units’.

Audit durations can be increased by the Verification Body whenever justified by a level of risk identified as higher than normal, e.g. by a significant level of non-conformities identified. Higher sampling rates must be justified in the onsite audit report.

Only at the origin of the chain of custody can group auditing approaches be considered, otherwise all operators need to be audited individually.

‘Points of origin’ generating more than 10 tonnes of material per month on average do not have to be certified, but they are in the scope of the certification of a ‘collection point’. Those producing > 10 tonnes per month on average must be verified through onsite audits, and those producing < 10 tonnes of material per month on average do not need to be audited, but auditors will always have the right to do onsite audits on the basis of objective evidence of potential non-conformities.



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Claims made by ‘collection points’ based on records issued from control systems implemented by custom’s or regulatory controllers at Member States [MS]’ are useful instruments of verification of the origin of the material.

The minimum number of group members (e.g., ‘waste producers’, ‘collecting sites’ of a ‘collection point’) to be audited during the initial certification audit and following annual surveillance audits by the verification body shall be the square root of the total number of sites in each group.

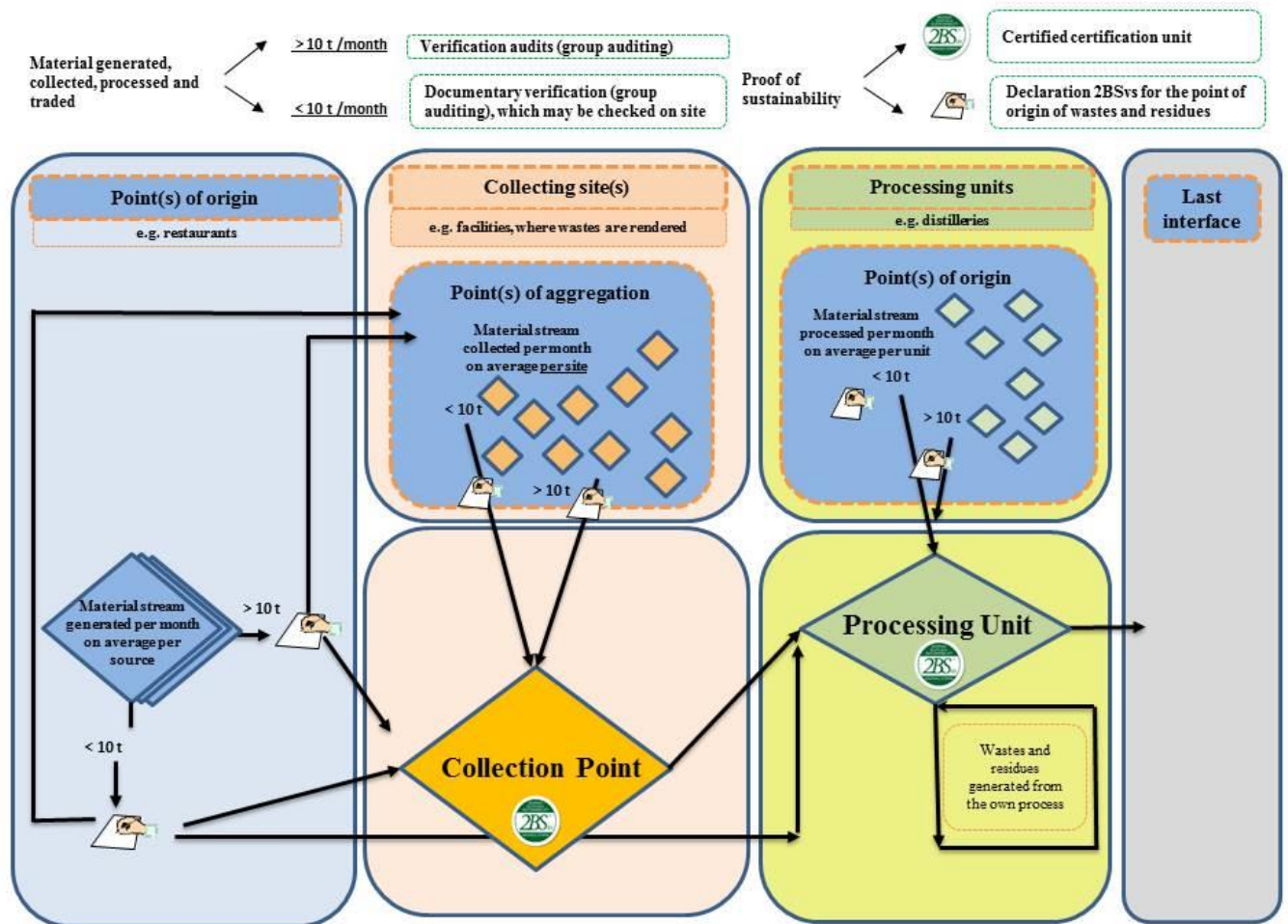
The sites to be audited per group shall be selected by the verification body and lead auditor in a way that represents the whole group as follows: 75% of group sites audited are selected following a risk analysis and 25% of group sites audited are selected at random.

The risk analysis shall also be performed based on records available at the central office of the ‘collection point’ to select the ‘collecting sites’ and/or ‘points of origin’ to be independently verified.

The risk analysis’ objective is to correctly assess the risk of fraudulent behaviour and therefore must be conducted by the auditor to prevent false claims concerning the type of material used and ensuring the integrity of the chain of custody of biofuels made from wastes and residues.

Flow Diagram for Certification of biofuels from wastes and non-agricultural residues

This flowchart refers to the situation where the “points of origin” and “collecting sites” supply the “collection point” on a dedicated basis in-line with the text in section 7.





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9. Annexes

Declaration 2BS for the point of origin of wastes or residues.

For the production of biofuels and bioliquids in accordance with the requirements of European Directive 2009/28/CE modified by European Directive 2015/1513
(Except for grape marcs and wine lees produced in Europe where the delivery note is equivalent to a declaration.)

I, the under-signed, initial producer of wastes or residues

Mr / Mrs.....
COMPANY.....
ADDRESS.....
POST CODE, TOWN.....
REGISTERED BUSINESS N°.....

Declare that:

In accordance with the latest user guidelines published by 2BS covering each category of waste / residue, the biomass I supply falls into the following category / denomination:

- Waste, under the name
- Residue, under the name

Please specify the type of waste or residue in accordance with the relevant national legislation :

- code related to the name of the waste material (see for example the list of wastes in Appendix II of article R.541-8 of the Environmental Code, France)
<http://www.legifrance.gouv.fr/affichCodeArticle.do?cidTexte=LEGITEXT000006074220&idArticle=LEGIARTI000006839995&dateTexte=20120928>)
- **Relevant** category (for animal oils and fats, please indicate the category to which the material belongs (C1, C2 or C3), according to the categories defined by the Regulation (EU) 1069/2009, articles 8, 9 and 10.



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And I declare that:

- None of the batch that has been sold was mixed with any other materials that are not considered waste or residues, and/or which are not included in the categories detailed above and/or whose origins are different.

- The regulations, which apply to the identity and transport of the waste, are respected, and the appropriate transfer documentation (sales documents, Customs documents) is provided for each delivery.

- The following information is included in the transfer documentation: type of waste, quantity, delivery date, country of origin of the waste / residue.

And I declare that I keep up to date records of all necessary information to demonstrate that this declaration is correct and reliable, that I make them available for any certification body approved by the 2BS association, on request of my customer, and as a result that the biomass I supply consists only of the wastes or residues declared in this document, in accordance with the sustainability criteria of the EU Directive 2009/28/CE modified by the EU Directive 2015/1513 and with the requirements of the 2BS voluntary scheme.

Place

Date

Signature

NB: This declaration is valid for one delivery. It should be provided with each delivery. In the case of a one-off delivery, it should be archived with the sales documentation. When an annual contract is in place it can be valid for up to a full year's deliveries. In that case, the contract reference number must be included in this document and a copy of this declaration must be issued and archived as soon as the first delivery is made.

.....