Food Surplus and Waste Measurement and Reporting Guidelines: Meat Processing - September 2018

WRAP and UK food businesses have agreed some common guidelines for measuring and reporting on food surplus and waste, consistent with the global Food Loss and Waste Accounting and Reporting Standard (FLW Standard). These have been produced in support of the UK Food Waste Reduction Roadmap – to help the UK meet the Sustainable Development Goal (SDG) 12.3 target to halve food waste by 2030.

The UK Guidelines, a common Reporting Template & Data Capture Sheet are available here.

This document should be used in conjunction with the wider UK Guidelines. It provides additional recommendations for meat processing businesses (abattoirs & cutting plant), based on the specific operational considerations and challenges relevant to this sector.
These recommendations will be reviewed annually to ensure that they remain fit-for-purpose. For example, as understanding of meat processing wastes and measurement approaches improve.

Figure 1 outlines the recommended scope for measuring and reporting food surplus and waste from meat processing operations (*specifically abattoirs and cutting plant that are subject to Animal By-Products (ABP) regulations).* This structure forms a core part of the common Reporting Template for UK food businesses.

Figure 1 – Recommended Scope of Food Surplus and Waste Inventory for Meat Processing Operations
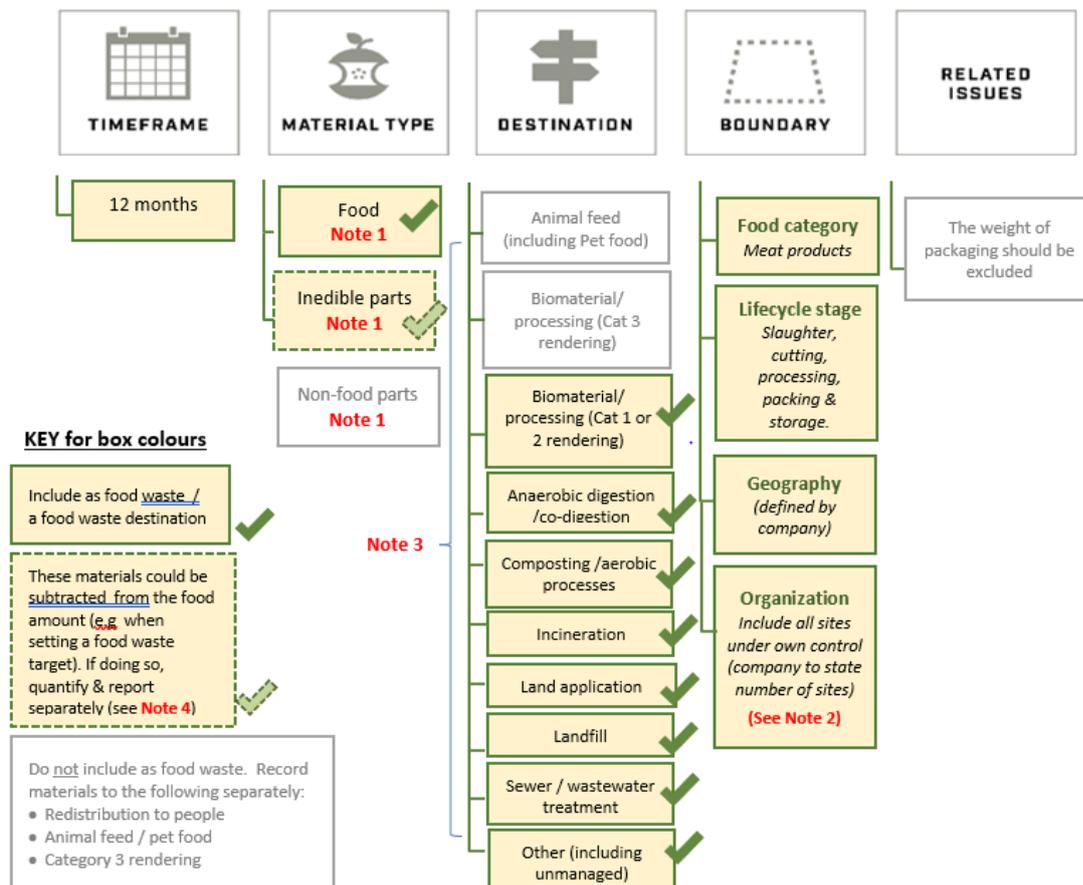
Recommendations for external reporting and internal KPIs for tracking efficiency are outlined in Note 4 and Note 5 overleaf. For a list of destination definitions, please see the UK Guidelines.

Material Types to be included in a food waste inventory

Note 1:

In the first instance, to be aligned with wider food industry practice, account for material arising from all parts of the animal – including those that might be considered 'inedible parts' (e.g. specified risk material – see Table 1). **Try to <u>exclude</u> non-food material that is <u>not</u> part of the animal (e.g. manure, stomach contents – see Table 1).**

For some businesses, it may be helpful to separately quantify the 'inedible parts' from 'food' material which could potentially have remained in the food chain. This may be useful, for example, when developing a food waste reduction target for the business. The reason for separate quantification is that, in most instances, these inedible parts can neither be feasibly prevented, nor used for any other purpose due to legal restrictions.

Guidance on separately quantifying inedible parts is as follows:

- Inedible parts are parts of the animal that are not intended for human consumption in your supply chain. What one company considers "intended for human consumption" may differ from another.

- For consistent comparisons (e.g. where data are being shared externally), businesses should use the list in Table 1 for classifying which materials are 'food' (material that could potentially have remained in the human food chain if differently managed) versus 'inedible parts'.

- **A mass balance approach is recommended when estimating the quantity of food separate from inedible parts.** This approach can be helpful in also identifying and estimating 'non-food parts' (such as stomach contents), and any mis-classified material (e.g. Cat 3 material misclassified as Cat 1 or 2 through errors, management process, or other commercial reasons). With respect to the latter case, if a site, for example, is sending a higher proportion of material to Cat 1 or 2 than the benchmark % shown in Table 2, this could be an indication that there is material being unnecessarily downgraded and misclassified as Cat 1 or 2 material.

Note 2:

Include any materials that are under <u>your business's direct 'ownership'</u>. For example:

- **Include** product returns/depot rejects that you 'own', but are handled by customers. These might, for example, be quantified through credit notes.

- **Do not include** animals that are dead on arrival (DOA), or are rejected prior to processing. For waste accounting purposes, approval by the FSA inspector could be taken as the point at which 'ownership' is transferred from farm to processor. Quantifying DOA/rejections/condemnation's is useful for other purposes – e.g. to inform targeted management with suppliers – but this should be separate to the food waste inventory for your business.

- NB – if your business owns farms as well as processing operations, it is recommended that you develop a separate food surplus and waste inventory for each of these (and other) different Business Units.

Destinations to be included as 'Food Waste'

Note 3:
If category 3 material, or any of the 'food' materials listed in Table 1, are sent to any of the waste destinations listed in Figure 1 (e.g. to anaerobic digestion, incineration, composting, sewer, etc.), they **should** be quantified and accounted as food waste. *NB - WRAP is developing further guidance on quantifying food waste to sewer or wastewater treatment. This will be added once be complete.*

Materials that are diverted to redistribution organisations, sold directly for pet food or sent for further processing into products used by other industries **should not** be accounted as food waste. These are defined as 'food surplus' and should be separately quantified.

The following is specific clarification on material sent to rendering (which is included under the destination of "biomaterial/processing"):

■ **Category 3 rendering** is a 'high valorisation' / 'biomaterial/processing' destination that predominantly yields industrial products, or products suitable for other markets (e.g. cosmetics or pet food markets). As such, it is **not** considered a waste destination based on the interpretation of 'food waste' for SDG Target 12.3 (see Figure 3). If material is sent to this destination:

    i.   It should be accounted for as 'surplus', rather than 'food waste.

    ii.   Businesses should undertake due diligence with the recipient of the material to ensure that valorisation into other industrial products occurs as intended (e.g. producing saleable products for pet food, chemicals, etc.). If reporting externally, include a summary of this due diligence and findings in your Reporting Template / Food Waste Report (see note 4).

■ **Cat 1 and 2 rendering** is a lower valorisation / 'biomaterial/processing' destination that predominantly yields biodiesel, fuel and lower value products (see Figure 2). As such, it **is** considered a **waste** destination based on the interpretation of "food waste" for SDG Target 12.3 (see Figure 3).

Table 1 - Food and inedible parts – recommended designations

'Food' (material that could potentially have remained in the human food chain if differently managed)	Inedible parts (never intended for human consumption)	Non-food parts (never part of human food chain)
Carcase meat – including product disposed of due to no longer being fit for consumption (e.g. past its Use By date/been spoiled or contaminated)	Materials classified as Category 1 or Category 2 ABPs and legally required to be removed from the food chain* (e.g. Specified Risk Material) https://www.gov.uk/guidance/animal-by-product-categories-site-approval-hygiene-and-disposal)	Stomach contents
Offals (e.g. hooves, chicken feet, lungs, liver, kidneys, cheek meat, tendons) and other 5th quarter co-products for further processing (e.g. stomachs, bladders, intestines and fats)		Manure
Blood/drip loss		
Bones		
Floor waste comprising any materials above		
Sludges from drain traps containing any materials above		
Any other residual material classified as Category 3 ABPs	Feathers / hides / hair / tails	

* In some cases, the Cat 1 or 2 stream may contain product that could have been eligible to be classified as Cat 3 material or could have been saleable (e.g. if Cat 3 material is placed in the wrong collection container; if separate Cat 3 collections aren't possible; or in instances of avoidable floor waste). Businesses should try and quantify mis-classified material, e.g. using a mass balance approach and the benchmarks in Table 2.

Recommendations for external data reporting

If sharing data externally for any purposes (e.g. public or anonymous reporting), businesses should use the common Reporting Template.

The reporting template is intended for common use by UK food businesses, in order to generate a consistent and transparent Food Waste Report. It is accompanied by an Excel-based Data Capture Sheet – which can automatically generate the information required to populate the template. The Data Capture Sheet can also help you keep track of historical data and assumptions as you progress.

Other Recommendations

Note 5:
Recommended KPIs for <u>internal monitoring</u> purposes (e.g. benchmarking within or between sites) are:

■ Total yield of saleable product and proportion of Cat 1 / Cat 2 / Cat 3 ABPs as a % of carcase throughput (i.e. quantity of saleable product, quantity of Cat 1 or 2 material and quantity of Cat 3 material each divided by carcase weight processed in the same period).

■ Example benchmarks for dead weight KPIs are shown in Table 2. Deviation from these benchmarks (or own internal benchmarks) could be used internally as an estimate of 'waste' or utilisation efficiency.

Compositional analysis of Cat 1 / 2 / 3 streams and waste mapping is highly recommended, to identify opportunities for upgrading and food waste reduction. **Examples of actions that would contribute to any food waste reduction target include:**

■ Reducing the amount of Cat 3 material mistakenly discarded as Cat 1 or 2.

■ Increasing the proportion of Cat 1 or 2 materials that are upgraded through targeted management – e.g. floor waste, material in drain traps.

■ Future processing innovations – e.g. valorisation opportunities for fats & proteins in wastewater treatment sludges.

Table 2 – Example benchmark for dead weight KPIs

KPI	Beef [1]	Sheep [1]	Pork [2]	Poultry [2]
% saleable product / throughput	71%	90%	85%	79%
% Cat 1 or 2 / throughput	10%	<1%	7%	15%
% Cat 3 / throughput	20%	10%	8%	6%

<u>**Sources:**</u>

1. MLC Services http://www.angiestuff.com/ADNet/index_htm_files/3a.%20Walsh%20MLC%20Adnet.pdf. Saleable product includes meat, offal, fat, ECOP, casing.

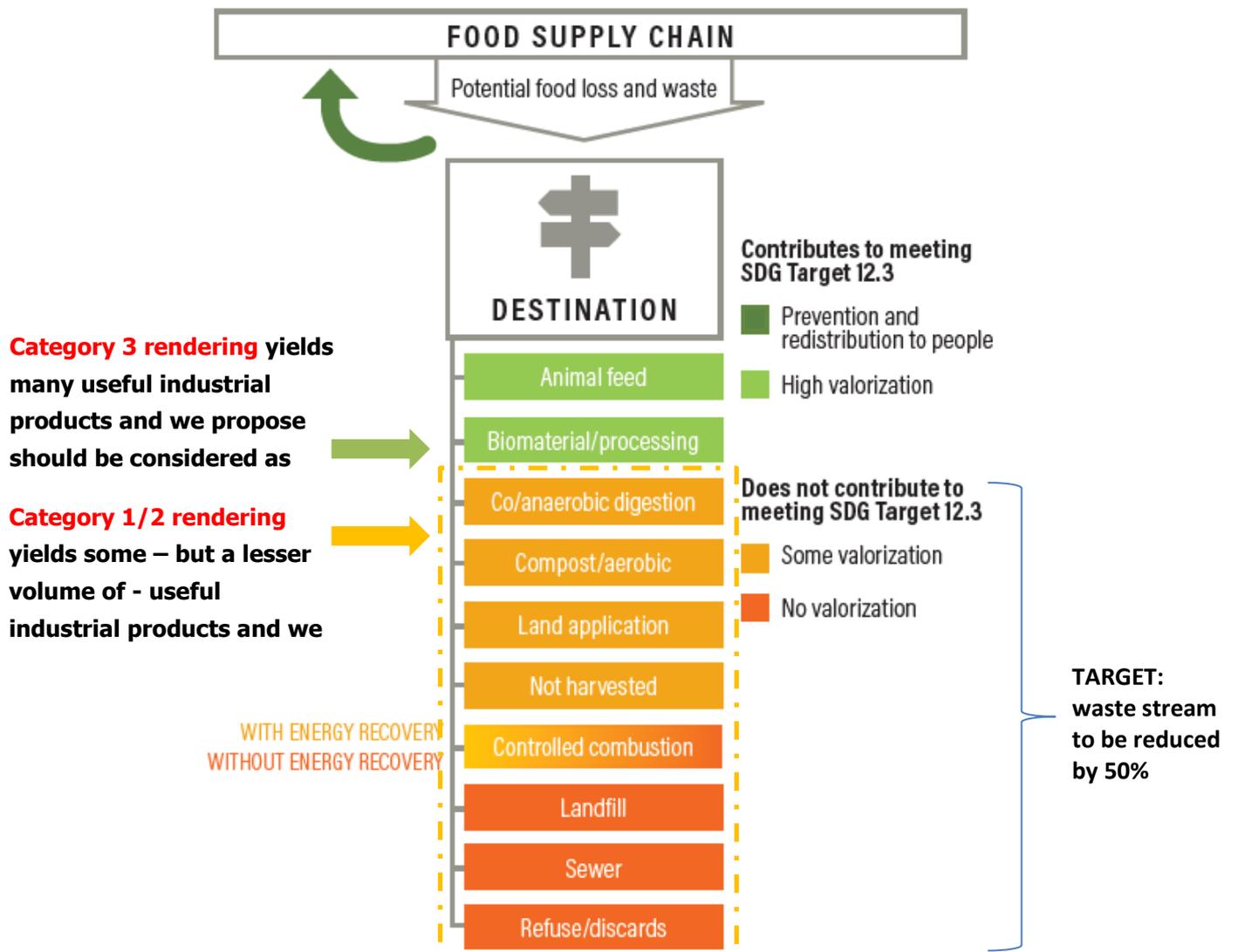2.WRAP (2010). Resource Maps for Fresh Meat across Retail and Wholesale Supply Chains. Skin/feathers/blood discounted. http://www.wrap.org.uk/sites/files/wrap/RSC009-002_-_Meat_Resource_Map.pdf

Figure 2 – Products from rendering
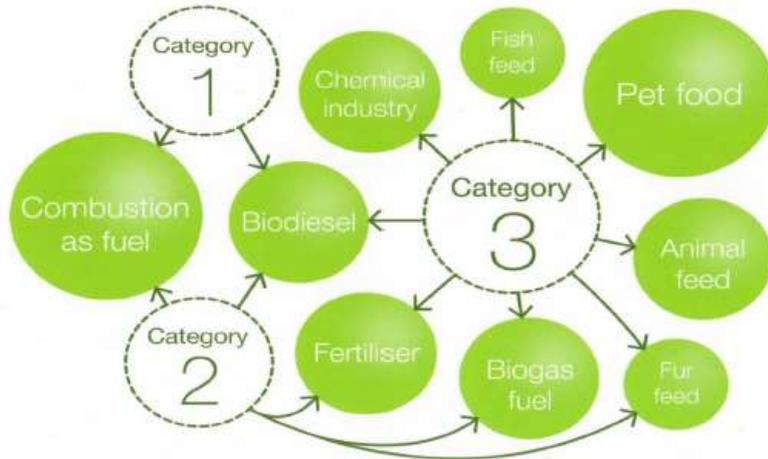
Figure 3 - Hierarchy of destinations for achieving the SDG 12.3 food waste target

Category 3 rendering yields many useful industrial products and we propose should be considered as

Category 1/2 rendering yields some – but a lesser volume of - useful industrial products and we