1.0 Objective

This procedure has been developed to detail the activities and data required to manage CELSA Manufacturing (UK) Ltd (CELSA) waste streams to meet the requirements of the Environmental Management System (EMS).

2.0 Scope

This procedure covers all activities associate with the management, handling, recycling and disposal of CELSA waste. This procedure is applicable to all CELSA staff and contractors' staff who may generate or be responsible for the disposal of waste. This procedure is applicable to all CELSA Controlled Wastes including Hazardous waste.

3.0 Legal Requirements

3.1 Duty of Care

3.1.1 What is the Duty of Care?

The Environmental Protection (Duty of Care) Regulations 1991 (as amended) is the relevant legislation

As a business, Celsa has a duty to ensure that any waste produced is handled safely and in accordance with the law (see below). This is the 'Duty of Care' and it applies to anyone who produces, imports, carries, keeps, treats or disposes of controlled waste from business or industry or acts as a waste broker in this respect.

CELSA are responsible for ensuring the safe and proper disposal or recovery of waste that you produce, even after you have passed it on to another party such as a waste contractor, scrap metal merchant, recycler, local council or skip hire company.

The Duty of Care has no time limit, and extends until the waste has either been finally and properly disposed of or fully recovered (cradle to cradle).

3.1.2 What does it mean for me?

CELSA have a 'duty' to take all reasonable measures to:

1. Prevent anyone keeping, depositing, disposing of or recovering 'controlled waste' without a waste management licence or an exemption from the need for a licence.
2. Ensure that their waste management licence has not been suspended or partially revoked and that they are not in breach of the conditions of that licence or exemption.

3. Stop materials escaping control or the control of anyone else by packaging it appropriately and robustly.
4. Ensure that waste is only transferred to an authorised person. Make sure that a person and/or business is authorised to deal with your particular type of waste.
5. Ensure that the waste being transferred is accompanied by a written description that will enable anyone receiving it to dispose of it or handle it in accordance with his or her own Duty of Care.

In basic terms, CELSA must ensure that:

- All waste is stored and disposed of responsibly.
- Waste is only handled or dealt with by individuals or businesses that are authorised to deal with it.
- A record is kept of all waste received or transferred through a system of signed Waste Transfer Notes (WTN).

Original records should be maintained and retained for two years (for non-hazardous waste).

3.1.3 Waste Hierarchy

CELSA strive to ensure that the Waste Hierarchy is applied as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.

Waste Hierarchy:

Prevention, which offers the best outcomes for the environment, is at the top of the priority order, followed by preparing for re-use, recycling, other recovery and disposal, in descending order of environmental preference.

Prevention:	Using less material in design and manufacture. Keeping products for longer; re-use. Using less hazardous materials
Preparing for re-use:	Checking, cleaning, repairing, refurbishing, whole items or spare parts
Recycling:	Turning waste into a new substance or product. Includes composting if it meets quality protocols
Other recovery:	Includes anaerobic digestion, incineration with energy recovery, gasification and pyrolysis which produce energy (fuels, heat and power) and materials from waste; some backfilling
Disposal:	Landfill and incineration without energy recovery

Table 1 – Application of Waste Hierarchy

3.1.4 Waste Carrier

All waste carriers used by CELSA must hold a waste carrier licence. CELSA should be able to produce a certificate of registration or a certified copy when requested.

Be aware that a photocopy does not provide evidence of registration – you should ask to see the original or a duplicate. A photocopy can be taken for audit records (date it and write on it that you have seen the original).
Remember that registrations and authorisations can expire or be revoked. CELSA should repeat these checks to ensure that you are properly discharging the Duty of Care.
Waste carriers certificate of registration can be checked on the Natural Resources Wales website at: www.naturalresources.wales.

3.1.5 Hazardous Waste Requirements

As a producer of waste that has certain hazardous properties, CELSA have to comply with the requirements of the Hazardous/Special Waste Regulations. Hazardous Waste (Wales) Regulations 2005 (as amended), replace the Special Waste Regulations 1996 that were revoked on 16th July 2005. All businesses in England and Wales that produce hazardous waste must register with the Environment Agency/Natural Resources Wales (NRW) before they consign their hazardous waste. The Environment Agency/NRW will issue a unique registration code to the person making the notification. Any business producing hazardous waste has a legal duty to register premises where hazardous waste is produced. Hazardous Waste producer registrations are valid for twelve months from the date of registration and after the initial twelve month period the registration must be renewed. This can be done up to one month in advance of the expiry date. Each premises that is registered will be given a unique registration number or 'premises code'. CELSA hold 2 registrations, one for Castle Works (CAB311) and one for Tremorfa (NXM032).
The Environment Agency/NRW tracks the movement of hazardous waste through a consignment note system. This ensures that waste is managed responsibly from its point of origin until it reaches a suitably licensed or exempt recovery or disposal facility. The waste producer must keep consignment notes for **three years**.

3.1.6 Types of Hazardous Waste Movements

There are two types of consignment notes available for hazardous waste movements:

Standard procedure (single movements) consignment note – used where waste is moved from one premises to a consignee in a single journey, and
A multiple collection consignment note – may be used where waste is collected from a number of premises and taken to the same consignee.

3.1.7 Keeping Records of Hazardous Waste

CELSA must maintain a register of any hazardous waste movements or any hazardous waste received.

This means the movement of hazardous waste including:

- its removal from CELSA;
- transport;
- intermediate storage;
- disposal or recovery
- CELSA must maintain records in a register, of each waste involved.

CELSA must also maintain records where hazardous waste is disposed or recovered at the same site as its production or storage.

As a producer, consignor, holder, carrier or consignee CELSA needs to:

- keep records in a register of hazardous waste movements.
- supply specified information to the EA or the emergency services, when required to do so.

Original records should be maintained for hazardous waste movements.

4.0 Responsibilities

4.1 Management Representative

The Management Representative and/or delegate are responsible for ensuring that:-

- Legislation is met
- Records for the following are maintained:-
    - Controlled Waste Transfer notes
    - Hazardous Waste Consignment notes
    - Recycle volume/type
- Contractors – subcontractors are briefed
- Review of opportunities to recycle
- Promote waste minimisation/recycling

4.1.1 General Waste Management

All general waste is handled by authorised contractors who are responsible for the following:

- Supply and identification of skips;
- Emptying and replacing skips;
- On request, supplying waste categorisation/identification services;
- Issuing and maintaining Controlled Waste Transfer notes;
- Maintaining, and supplying the Environmental Management System Meetings with recycle/disposal data;

- Ensuring that waste removed off site is correctly recovered-recycled-disposed by category and type at authorised/permitted facilities;
- Maintain waste data and documentation as required by the regulations on behalf of CELSA and make available on request;
- Provide CELSA with the relevant data for all required returns to Natural Resources Wales e.g Pollutant Release and Transfer Register (PRTR), quarterly and annual returns.

4.1.2 Hazardous Waste Management

All hazardous waste is handled by authorised contractors who are responsible for the following:-

- Supply and identification of receptacles for hazardous waste;
- Emptying and replacing hazardous waste receptacles;
- On request, supplying hazardous waste categorisation/identification services;
- Issuing and maintaining Hazardous Waste Consignment notes;
- Maintaining, and supplying the Environmental Management System (EMS) meetings with recycle/disposal data;
- Ensuring that waste is correctly disposed of by category and type;
- Maintain waste data and documentation as required by the regulations on behalf of CELSA and make available on request;
- Provide CELSA with the relevant data for all required returns to Natural Resources Wales e.g Pollutant Release and Transfer Register (PRTR), quarterly and annual returns.

4.1.3 Solvent Waste Management

All solvents are dealt with by authorised contractors who provide a total service including supply and disposal of the solvents used and are responsible for:

- Supply and identification of receptacles for hazardous waste;
- Emptying and replacing hazardous waste receptacles;
- On request, supplying hazardous waste categorisation/identification services;
- Issuing and maintaining Hazardous Waste Consignment notes;
- Ensuring that waste is correctly disposed of by category and type;
- Maintain waste data and documentation as required by the regulations on behalf of CELSA and make available on request;
- Provide CELSA with the relevant data for all required returns to Natural Resources Wales e.g Pollutant Release and Transfer Register (PRTR), quarterly and annual returns.

4.1.4 Electric Arc Furnace (EAF) Baghouse Dust

EAF extraction system dust is collected in the baghouse. This activity is managed by CELSA. The dust is bagged and stored for collection for exporting and reprocessing at authorised facilities outside the UK. The process is detailed in Figure 4.

4.1.5 EAF Slag Management

Slag from the EAF is tipped to flow beneath the furnace onto the slag bed within the main melt shop and any emissions arising are captured by the air collection and abatement system. The slag is moved by a specially adapted bulldozer by HARSCO to an outside intermediate staging area, where the material is bladed out and allows cooling water to be sprayed onto the slag. The slag once cooled sufficiently is transported to the mineral site where it is then further cooled and weathered before use as aggregate. The process is detailed in Figure 5.

4.1.6 Special Case

HARSCO Metals and Minerals services currently supply a number of services including transport and as a result use garage facilities on the Tremorfa site. These garage facilities and waste disposal are wholly under the management of HARSCO and consequently will work to the requirements of this procedure but using a HARSCO local procedure. They are to ensure that their staff are fully trained and conversant with the requirements of current environmental legislation and ISO 14001. Their environmental records will be available for audit internally and available to CELSA on request.

4.1.7 Departmental Managers

Individual departmental managers are responsible for ensuring that their staff are aware of the waste disposal and recycling processes associate with the business. They are additionally responsible for ensuring that contractors, having been briefed by their sponsor, comply with the requirements of this procedure.

4.1.8 Individual Responsibilities

All members of staff and contractors are responsible for the following:-

- Disposing of waste in the correct receptacle
- Ensuring that waste when disposed is secure and cannot spill out or be driven by the wind
- Ensure that they leave areas around skips or disposal boxes tidy
- Advise Line management if they observe abuse of the waste processes i.e. mixed waste
- Where doubt exists to the correct route for disposal contact relevant waste disposal contractor for advice

5. Implementation

5.1 General

The main drivers for identifying the disposal routes for differing types of waste are the Waste Streams attached as figures 1 to 4 of this procedure. The table in the following section is designed to supplement the waste streams by detailing the Products identified as Hazardous waste. If you have a specific support contact the relevant waste contractor for the waste that requires disposal.

5.2 Hazardous Waste

As per Hazardous Waste (England and Wales) Regulation 9, hazardous waste is defined as;
(a) listed as a hazardous waste in the List of Wastes(b);

(b) listed in regulations made under section 62A(1) of the 1990 Act; or
(c) a specific batch of waste which is determined pursuant to regulation 8 to be a hazardous waste.

5.3 CELSA Identified Hazardous Waste

The following materials, identified in table 1, are treated as hazardous waste under the terms of this procedure and consequently an approved waste management company shall be contacted to arrange removal from site. The skips identified for either, Wood, Scrap Metal, Scale, General Waste or Slag will not be used for the disposal of Hazardous Waste.

Where waste has a specific waste stream (Figures 1-5) it is not repeated in table 2.

WASTE	AREA	COMMENTS
Silica Gel	Filter Cleaning Room	Contractor-Industrial Air Power
Ceramic Fibre Blankets	Furnaces	All Sites-contact SiteServ
Silica Gel	HV Transformers	All Sites (Oil Contamination) -contact SiteServ
Oil + Filters/Grease	Oil Store	MS and SM Richard O'Neil RBM SiteServ
Waste Oil	Unifloc + Interceptors	MS and SM Richard O'Neil RBM SiteServ
Used Solvents	Stores	Contact authorised company
Chemicals bulk	Stores	MS and SM Richard O'Neil RBM SiteServ
Empty Metal plastic containers	General	MS and SM Richard O'Neil RBM SiteServ
Spent Acid	General	MS and SM Richard O'Neil RBM SiteServ
Hazardous Waste	General	MS and SM Richard O'Neil RBM SiteServ
Waste batteries	General	Disposal of used batteries in correct boxes. Alkali - Special disposal boxes will be located in the offices and stores areas. . Ni-cad - Many rechargeable batteries contain nickel and cadmium, place in special boxes as above or contact: Richard O'Neil (MS and SM) and SiteServ for RBM Lead acid use battery boxes or contact: Richard O'Neil (MS and SM) and SiteServ for RBM.
Fluorescent Tubes	General	Use coffin boxes – contact SiteServ
Bonded asbestos	General	All sites – contact ENVIRONTEC
Fibrous asbestos	General	All sites – contact ENVIRONTEC

Table 2: Hazardous Waste

5.4 Mixed Waste

The generation of mixed waste is wasteful of limited land fill resource and expensive to the company. If

when disposing of waste a skip appears to contain mixed waste advise SiteServ immediately and do not add waste until the contents have been checked and if necessary the skip replaced. The term mixed waste relates to the mixing of different types of hazardous waste i.e. solvents and oils as well as the mixing of Hazardous and Controlled waste. **If in doubt ask!**

5.5 Feedback

To enable the business to determine the level of compliance, with waste segregation, the EMS team carries out walkabouts on a monthly basis, followed by meetings where any corrective or preventive actions are discussed and actioned. The waste management company, when uplifting a skip or other receptacle which contains either incorrect or mixed waste, will raise an NCR against the related business area and forward it to the appropriate Environmental co-ordinator and the purchasing department for progressing and action agreement.
It is the responsibility of the relevant waste management contractor to feedback any issues to the EMS and KPI team meetings.

6. Documentation

The following records are maintained:-

- Transfer Notes for all controlled waste;
- Consignment Notes for all Hazardous waste;
- Volumes recycled;
- Volumes disposed;
- Hazardous waste registration;
- Waste carriers licence;
- Environmental Permit;
- NRW returns;
- PRTR

7. Container Identification

7.1 Bins

In all production areas we have blue General Waste bins, yellow Hazardous Waste bins (used spill kits, gloves and oily rags) and yellow bins with a blue stripe for cardboard recycling.

7.2 Skips

Skips or containers for general waste are supplied on request by the waste managers (SiteServ), skips for controlled waste are positioned as shown on the individual plant maps and identified as below

SCRAP **RED**

GENERAL WASTE	**BLUE**
WOOD	**BROWN**
CARDBOARD & MIXED RECYLING	**YELLOW**
SCALE	**BLACK**
ELECTRICAL EQUIPMENT	**PURPLE**
[redacted]	
SEALED CONTAINERS	**GREEN**

7.3 Other

Batteries - are collected separately in boxes.

- Alkali - Special disposal boxes will be located in the offices and stores areas.
- Ni-cad - Many rechargeable batteries contain nickel and cadmium, place in special boxes as above or contact Richard O'Neil (MS and SM) and SiteServ for RBM.
- Lead acid use battery boxes or Richard O'Neil (MS and SM) and SiteServ for RBM.

Fluorescent tubes – durapipe boxes are provided and are available at the RBM, SM and MS.

Refractories- magnesium based refractories are separated out at source and returned to the suppliers. The other refractories are added to the slag waste stream – refer to section 4.1.5.

Asbestos –

- Bonded asbestos – as and when required contact for a designated closed skip/container and for the necessary loading and disposal arrangements.
- Fibrous asbestos – not to be handled or removed except those **suitably qualified with an Asbestos Licence which satisfies the requirements of the Control of Asbestos Regulations**.

8. Waste storage

8.1 Bin Locations

Blue General Waste bins, yellow Hazardous Waste bin and yellow with a blue stripe are located in the necessary production areas.

8.2 Skip Locations

Skips locations are defined in each of the operational Skip Maps.

9. Waste Removal

9.1 Bin Emptying

Blue General Waste bins, yellow Hazardous Waste bin and yellow with a blue stripe will be emptied by designated facilities management contractor on a regular basis. General waste will be transferred to the general waste skips and Hazardous waste will be transferred to clip-top bins.

9.2 Hazardous Waste

Hazardous waste will be collected from the Hazardous Waste Bins by the designated facilities management contractor. The hazardous waste is then transported to dedicated hazardous waste intermediate storage areas for bulking-up prior to collection by O'Neil / SiteServ.
The areas are located as follows:

- Melt Shop – green storage container (opposite main offices)
- RBM – hazardous waste area (opposite main offices)
- Sections Mill – hazardous waste area at the Water Treatment Plant.

9.3 Waste Disposal

All waste management contractors will remove all site waste in accordance with the current relevant legislative requirements.

Figure 1

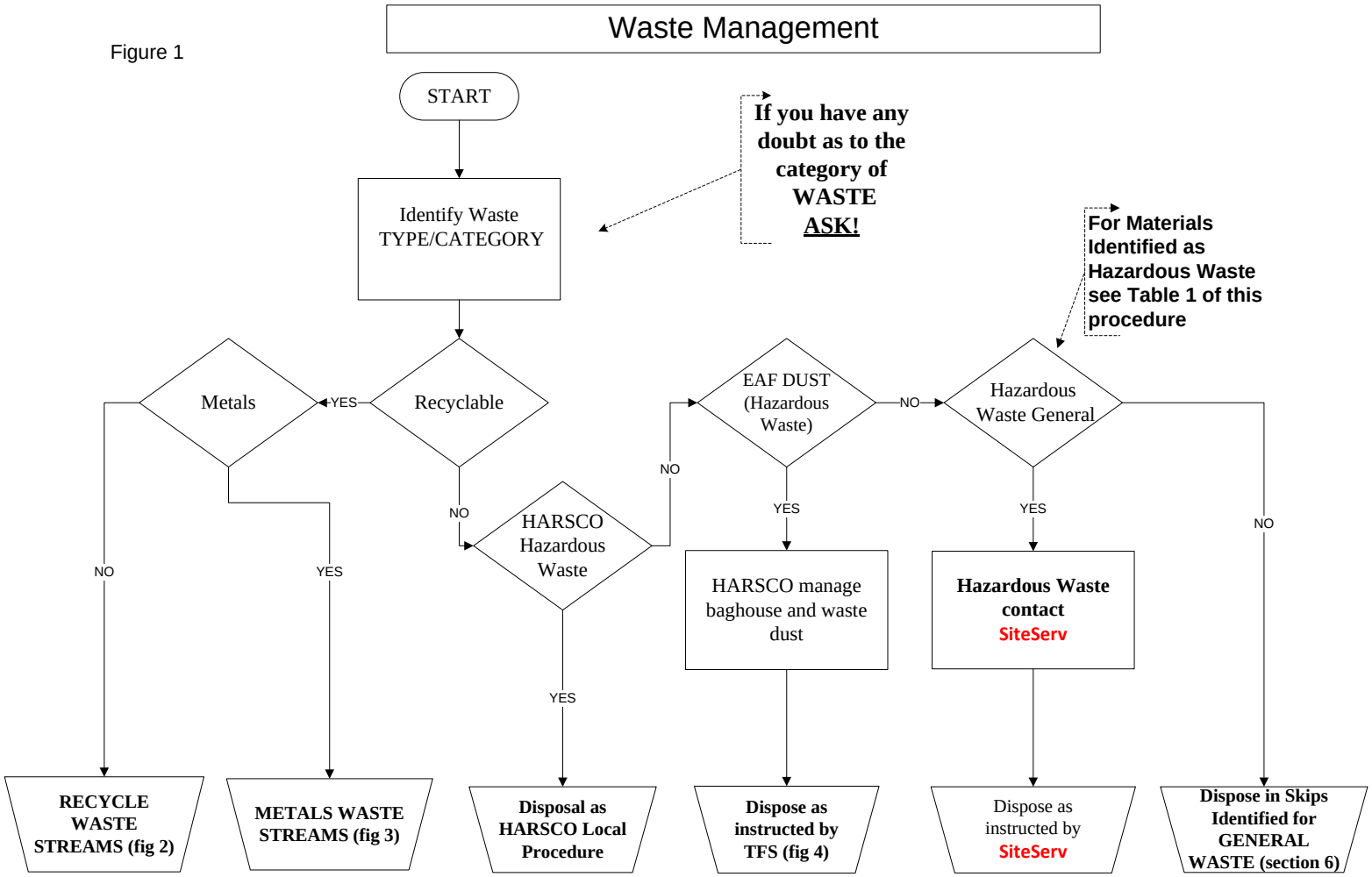

Waste Management
START
Identify Waste TYPE/CATEGORY
If you have any doubt as to the category of WASTE ASK!
For Materials Identified as Hazardous Waste see Table 1 of this procedure
Metals
YES
Recyclable
NO
HARSCO Hazardous Waste
NO
EAF DUST (Hazardous Waste)
NO
Hazardous Waste General
NO
YES
YES
YES
NO
YES
YES
NO
RECYCLE WASTE STREAMS (fig 2)
METALS WASTE STREAMS (fig 3)
Disposal as HARSCO Local Procedure
HARSCO manage baghouse and waste dust
Hazardous Waste contact SiteServ
Dispose in Skips Identified for GENERAL WASTE (section 6)
Dispose as instructed by TFS (fig 4)
Dispose as instructed by SiteServ

Figure 2

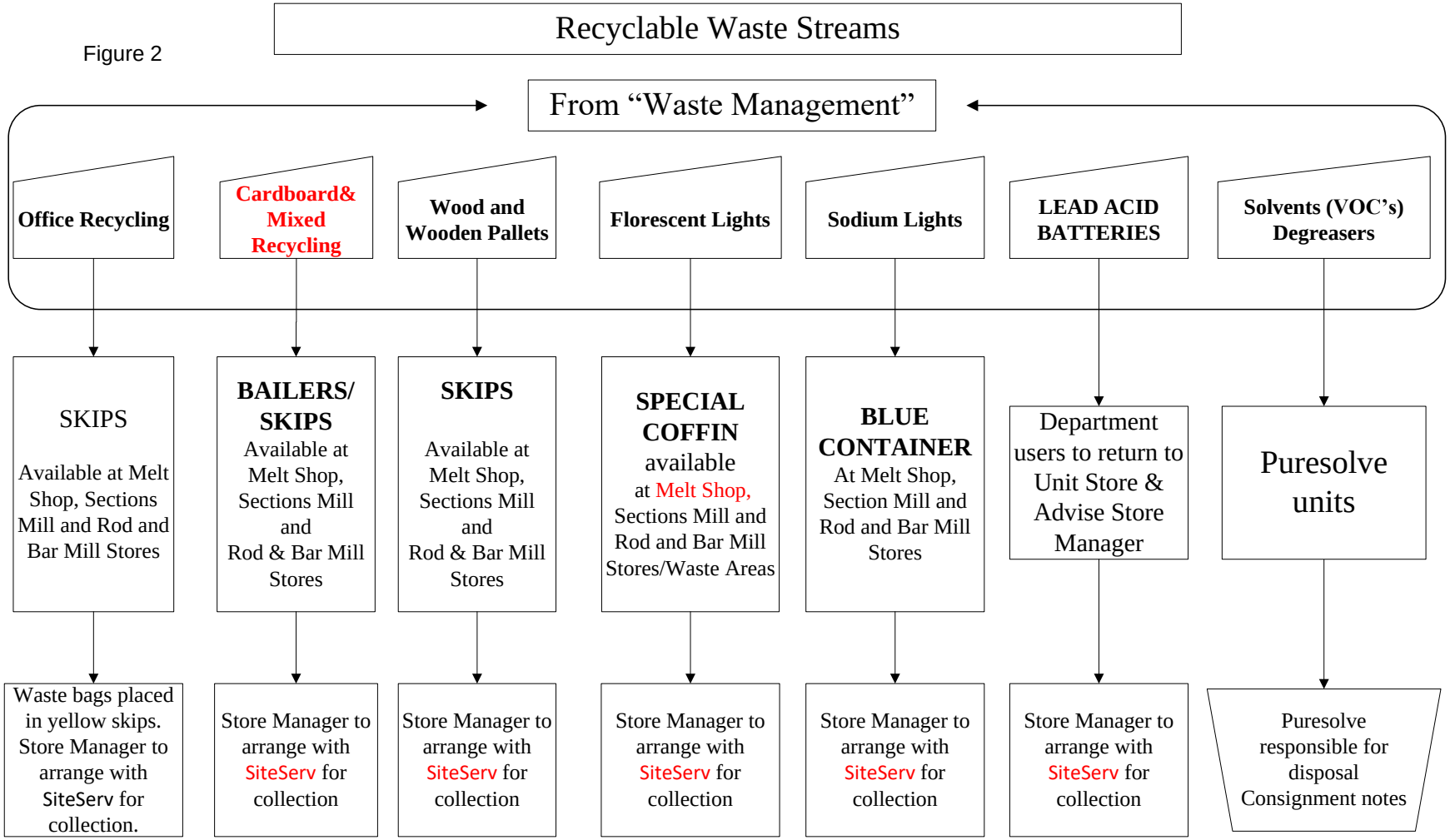

Recyclable Waste Streams
From "Waste Management"
Office Recycling
Cardboard& Mixed Recycling
Wood and Wooden Pallets
Florescent Lights
Sodium Lights
LEAD ACID BATTERIES
Solvents (VOC's) Degreasers
SKIPS
Available at Melt Shop, Sections Mill and Rod and Bar Mill Stores
BAILERS/ SKIPS
Available at Melt Shop, Sections Mill and Rod & Bar Mill Stores
SKIPS
Available at Melt Shop, Sections Mill and Rod & Bar Mill Stores
SPECIAL COFFIN
available at Melt Shop, Sections Mill and Rod and Bar Mill Stores/Waste Areas
BLUE CONTAINER
At Melt Shop, Section Mill and Rod and Bar Mill Stores
Department users to return to Unit Store & Advise Store Manager
Puresolve units
Waste bags placed in yellow skips. Store Manager to arrange with SiteServ for collection.
Store Manager to arrange with SiteServ for collection
Store Manager to arrange with SiteServ for collection
Store Manager to arrange with SiteServ for collection
Store Manager to arrange with SiteServ for collection
Store Manager to arrange with SiteServ for collection
Puresolve responsible for disposal Consignment notes

Figure 3

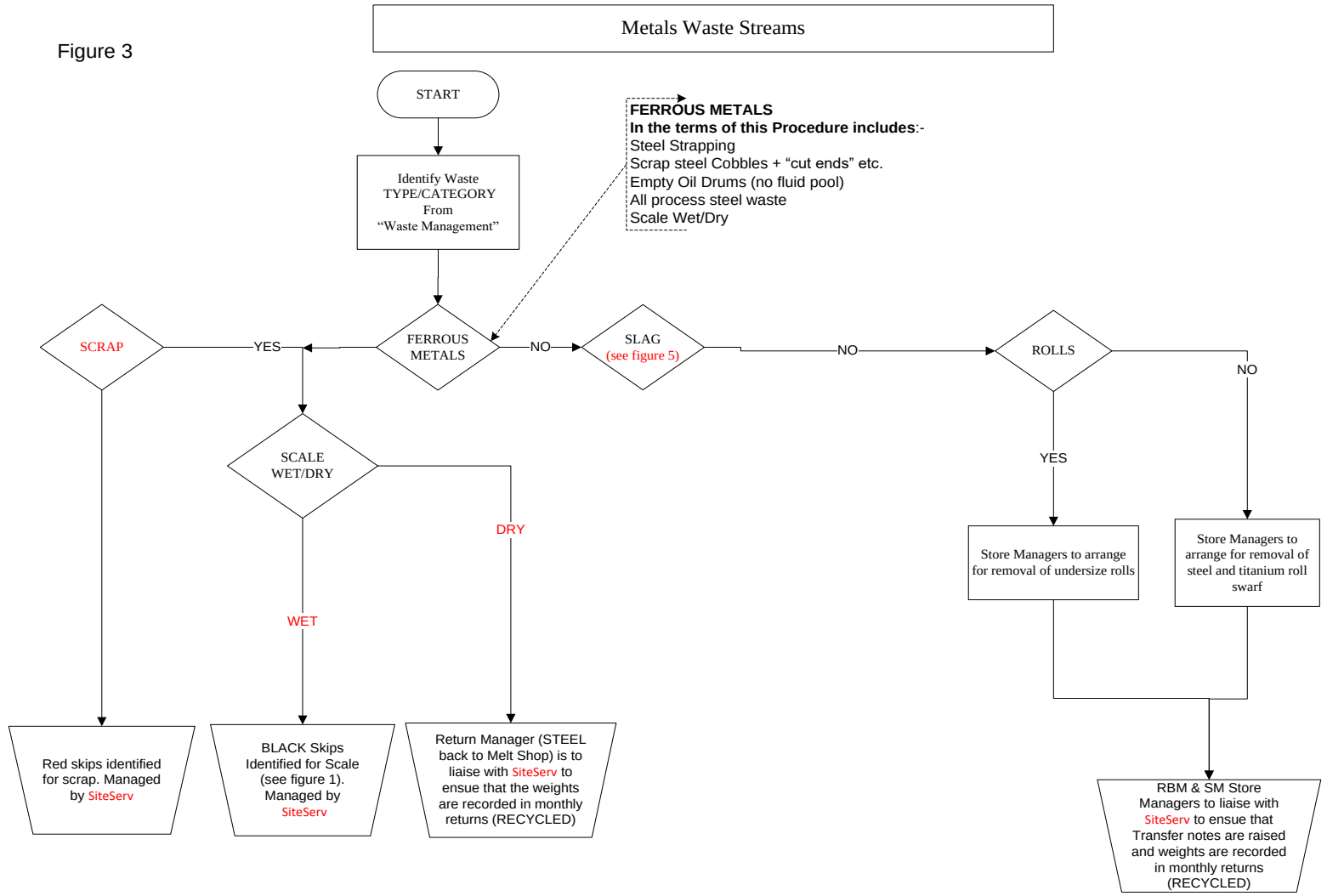

Metals Waste Streams
START
Identify Waste TYPE/CATEGORY From "Waste Management"
FERROUS METALS
In the terms of this Procedure includes:-
Steel Strapping
Scrap steel Cobbles + "cut ends" etc.
Empty Oil Drums (no fluid pool)
All process steel waste
Scale Wet/Dry
FERROUS METALS
YES
SCRAP
NO
SLAG (see figure 5)
NO
ROLLS
NO
YES
SCALE WET/DRY
WET
DRY
Red skips identified for scrap. Managed by SiteServ
BLACK Skips Identified for Scale (see figure 1). Managed by SiteServ
Return Manager (STEEL back to Melt Shop) is to liaise with SiteServ to ensure that the weights are recorded in monthly returns (RECYCLED)
Store Managers to arrange for removal of undersize rolls
Store Managers to arrange for removal of steel and titanium roll swarf
RBM & SM Store Managers to liaise with SiteServ to ensure that Transfer notes are raised and weights are recorded in monthly returns (RECYCLED)

Figure 4

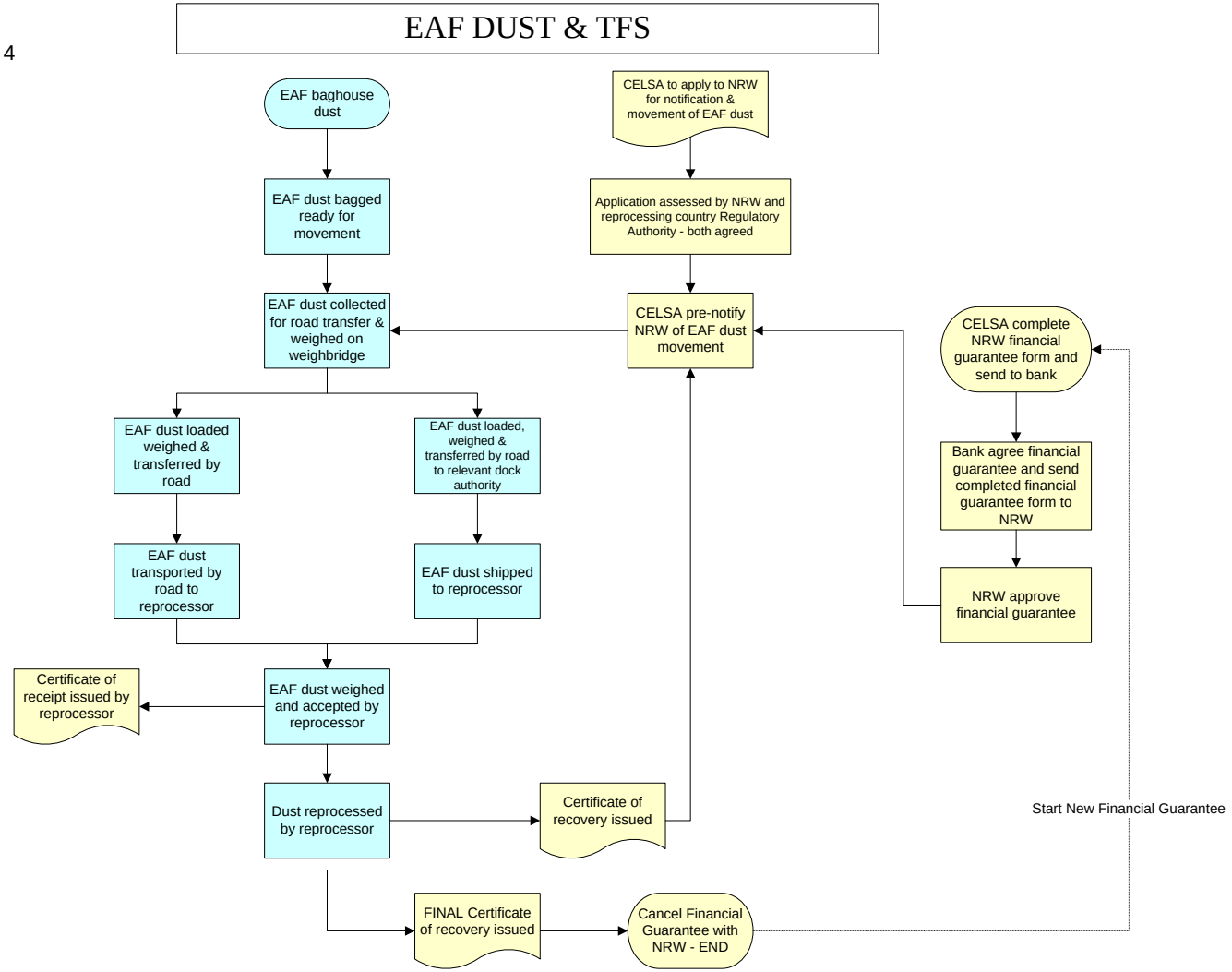
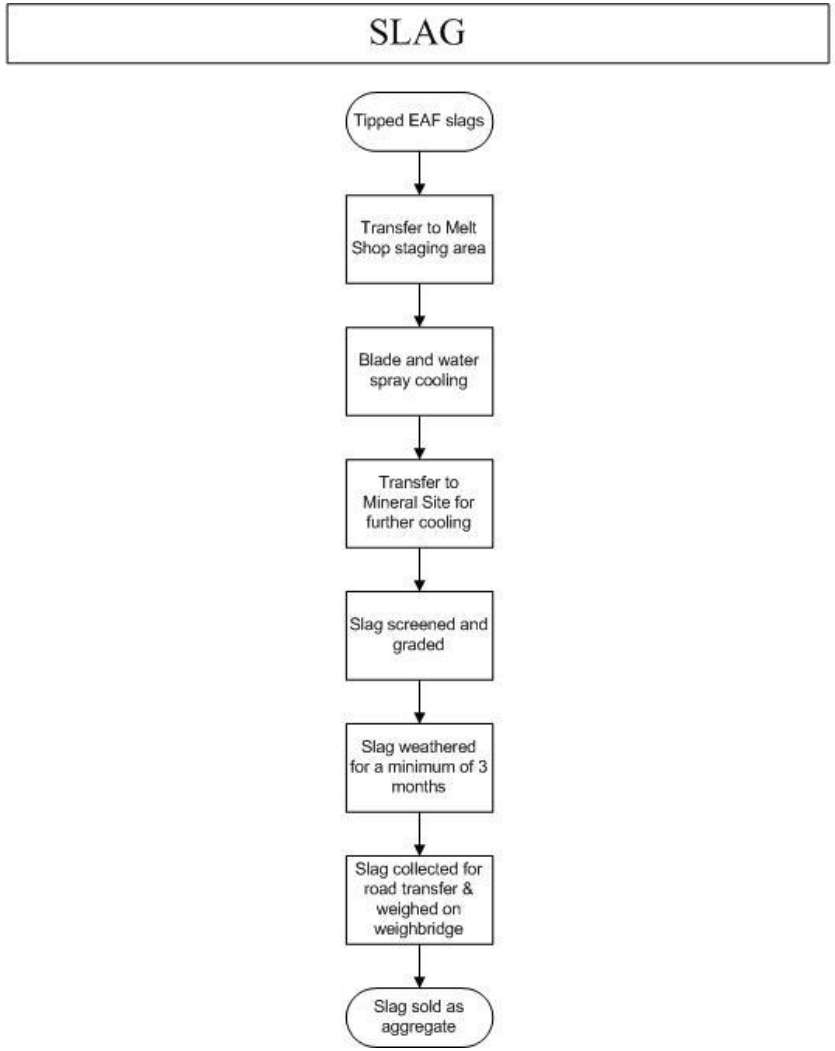

EAF DUST & TFS
EAF baghouse dust
CELSA to apply to NRW for notification & movement of EAF dust
EAF dust bagged ready for movement
Application assessed by NRW and reprocessing country Regulatory Authority - both agreed
EAF dust collected for road transfer & weighed on weighbridge
CELSA pre-notify NRW of EAF dust movement
CELSA complete NRW financial guarantee form and send to bank
EAF dust loaded weighed & transferred by road
EAF dust loaded, weighed & transferred by road to relevant dock authority
Bank agree financial guarantee and send completed financial guarantee form to NRW
EAF dust transported by road to reprocessor
EAF dust shipped to reprocessor
NRW approve financial guarantee
Certificate of receipt issued by reprocessor
EAF dust weighed and accepted by reprocessor
Dust reprocessed by reprocessor
Certificate of recovery issued
Start New Financial Guarantee
FINAL Certificate of recovery issued
Cancel Financial Guarantee with NRW - END

Figure 5


SLAG
Tipped EAF slags
Transfer to Melt Shop staging area
Blade and water spray cooling
Transfer to Mineral Site for further cooling
Slag screened and graded
Slag weathered for a minimum of 3 months
Slag collected for road transfer & weighed on weighbridge
Slag sold as aggregate