

**SSOW 19 – Safe Systems of Work – Cardboard, Paper, Cans & Plastic Sorting
and Baling Operations**

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| REVIEW DUE: | October 2016 |

1. Activity

This Safe System of Work provides information on the safe method for material sorting and use of the Cardboard and Paper Baler at the Midland Road depot and should be read in conjunction with the Baler Operator Instructions, SSOW 01 – General Requirements Waste Collection, SSOW 04 – Personal Protective Equipment, SSOW 14 – Electrical Equipment, SSOW 17 – Lifting Operations and Lifting Equipment and SSOW 18 – Management of Contractors.

2. Persons at Risk

Loaders
Drivers
Contractors and Visitors

3. Hazards

Contact with moving vehicles, machinery and plant
Contact with Lifting, Tipping and Compaction Equipment
Entanglement, entrapment, drawing in, crushing
Fire, Electric Shock or Electrocutation
Manual Handling
Medication, alcohol and drugs
Cuts and abrasions
Slips, Trips and Falls
Contaminated materials eg chemicals
Dust

4. Operation

The baler currently processes cardboard and paper.

Incoming materials are unloaded onto the floor of the bay and loaded into the baler chamber by loading shovel/forklift. Only trained authorised persons are allowed to enter the bay.

The baler is an automatic baler that will compress the cardboard in to a 'mill' size bale. Once there is sufficient material in the baler to make a bale, the baler will automatically stop.

Cardboard bales will be tied up automatically using steel wire.

Once the bales are ejected they are then transferred to a designated storage area by a forklift truck with a bale clamp attachment.

5. General Procedures

Only trained employees and agency staff are permitted to use the baler equipment. Operators must understand the operation of the compaction controls including the location of the emergency stop buttons. Records of training are held on the Training Database.

Incorrect use of the baling equipment could cause serious injury and must be treated with care. Always adhere to the operating instructions

The operator must carry out pre-start visual inspection on the baler and plant. These inspections must be recorded on check sheets provided. This means that before the machine is operated a full visual inspection must be completed.

Any defects found must be reported to a supervisor or manager and recorded on the defect sheet. The supervisor or manager will decide if a defect will affect the safety of the operator, or others.

In the materials bay, forklift and vehicle movements are a high potential for accidents.

Barriers must be erected around the working space to prevent people from entering the area (Fig. 4). No one should be in the bay when vehicles and/or plant are tipping.

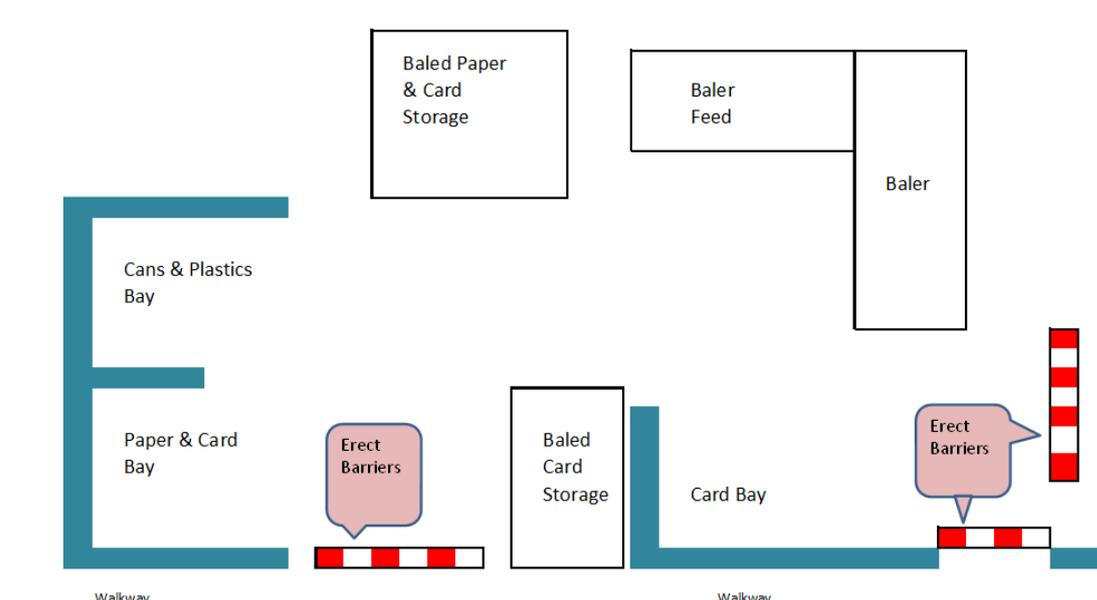


Fig. 4

The baler control station must remain locked with the power turned off and keys removed when not in use. Once turned on and in automatic mode, the baler MUST NOT be left unattended.

Do not use or attempt to use the machinery if: unwell; or on medication which may affect driving or the use of machinery; or under the influence of alcohol or drugs. The baling shed is a designated No Smoking area.

Only fully trained competent operators with appropriate certification are permitted to use the forklift trucks and/or loading shovel.

Under normal operating conditions NEVER enter the baler chamber. Should the need arise to enter the chamber due to a blockage, cleaning or maintenance the **Isolation Procedure** (section 7) must be followed.

The Baler must be locked off and isolated when there is any maintenance and or cleaning.

Great care is to be taken around the bale discharge area, specifically in the bale tie area and the bale tie feed area. Only trained operators are allowed in this area.

Bales should be stored in the areas shown on Fig.4 no more than 4 in height and stored away from emergency exits, fire routes etc.

Ensure that the extraction fans are turned on during baling operations.

6. Housekeeping

When baling operations are completed ensure that the operating area and area adjacent to the baler are swept and tidy of discarded material to minimise the risk of fire.

Good housekeeping is key to a safe operation.

7. Isolation procedure

This procedure has been formulated to prevent the un-intentional operation of the baling equipment during maintenance, cleaning or the removal of a blockage.

With the exception of clearing a blockage detailed in section 8, this isolation procedure must be controlled under the Permit to Work system. The Permit-to-work will be issued by the Site Manager or Supervisor (Example at Appendix 1)

The un-intentional starting of the equipment during maintenance, cleaning or clearing a blockage has the potential for a severe injury to persons working on the machine or causing extensive damage to the machine.

The baler MUST be isolated from the mains electrical supply by removing the control voltage key (Fig. 1) and then turning 'OFF' the main isolator switch on the control panel (Fig.2). The isolator must then be 'locked off' using the safety hasp and locks (Fig. 3) located on the 'lockout' board fitted to the

conveyor gantry. Each person operating in or around the baler must use a separate lock to isolate the power supply to ensure that reactivation cannot happen until all operatives are clear of the baler and safe.



Fig. 1



Fig. 2



Fig. 3

Once the equipment is isolated the operative(s) may then access the baler chamber to clear blockage, carry out maintenance, etc.

Operations under isolation will be will be under the supervision of the person holding the control voltage key.

The baler **MUST** be isolated:

- If a defect is found during the start-up inspection
- Prior to any maintenance / repair being performed on the machine
- Prior to the opening / removal of any guards
- Prior to any internal inspection of the machine
- To clear a blockage

8. Removal of a Blockage

The most common blockage on the Averman Baler is when wet or oversize material gets jammed into the feed chute.

In order the clear this blockage the equipment must be isolated as detailed in section 7. The interlocked door at the bottom of the chute can then be opened. Using the equipment provide (long handled rake and shovel) the blockage can be freed from the outside of the baler at ground level. **DO NOT** climb into the baler.

If unable to clear the blockage in this way, a permit to work should be gained and agreement with the supervisor made how to clear in a safe and controlled manner.

9. Receiving Material into Waste Bays

The driver must make his intentions clear to the baler operator before entering the Recycling Shed, he can then manoeuvre into the tipping position

- All reversing must be supervised by a reversing assistant. If the vehicle is single manned the baler operator will act as the reversing assistant.
- The driver will position the truck in readiness for reversing
- The baling operator will confirm where the load is to be deposited
- The reversing assistant must not walk or stand behind a moving vehicle
- If the driver loses sight of the reversing assistant or they cannot reverse safely, they must stop immediately

IF ANYONE APPROACHES A REVERSING OR TIPPING VEHICLE OPERATIONS WILL STOP IMMEDIATELY.

Tipping operations

- After the driver has positioned the vehicle in readiness for tipping the driver can prepare the truck for Tipping
- The driver will then open and secure the rear doors or raise the hopper whilst following their training
- The reversing assistant will now act as a banksman to reduce any risks during tipping. They will stand in a position where they can be clearly seen by the driver and where they cannot be affected by the load
- The driver must follow the directions of the Banksman. If the driver is unclear about any signal he must stop the operation.
- Before leaving the baling shed the hopper / body must be fully lowered and the doors secured.

Fork lift trucks and other mobile plant in the baling shed must remain stationary during tipping operations

The reversing assistant and baler operator must not stand behind a reversing vehicle or within 4 meters of the load discharge.

10. Sorting Operations

There is a requirement to 'debag' cans and plastic and remove items of contamination. Once the material has been pushed up into the bay by the loading shovel the follow system must be followed;

- Cut 5 gloves must be worn. Kevlar sleeves and dust masks re available if required.
- Erect a barrier across the bay entrance
- Manually pull the bags out to split and tip out the contents. Do not walk on top of material to pull out bags, use rake if needed. Dispose of bag in waste container along with any contaminated discovered.

11. Personal Protective Equipment

Some clothing is issued as uniform however the following is PPE and must

be worn:

- Protective footwear (with steel cap toes)
 - Ballistic Trousers
 - Hi-Viz top
 - Gloves ('Cut 5' for sorting operations)
- Eye protection, knitted kevlar sleeves, leather gauntlets, dusk masks and hearing defenders are available if required by the operator

12. Accidents

All accidents, near misses, hazardous conditions and incidents of violence or abuse are to be reported to the Supervisor or Manager as soon as possible.

First Aid boxes are situated at the Depot Offices. The First Aid boxes are labelled with a white cross on a green background

13. Training

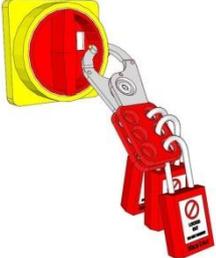
Training includes:

- Safe Systems of Work at Induction
- Manual Handling
- Vehicle Reversing
- Controls and use of baler
- First Aid
- In house training on safe working practices repeated at least 2 yearly

| Related Documents | |
|-----------------------------|-------------------|
| | Reference: |
| Risk Assessments | |
| | |
| Safe Systems of Work | SSOW 01 |
| | SSOW 04 |
| | SSOW 14 |
| | SSOW 17 |
| | SSOW 18 |
| | |
| Procedures | P18 |

Appendix 1.

PERMIT TO WORK – AVERMAN BALER & CONVEYOR EQUIPMENT

| | | |
|---|---|----------------|
| Issued to: <i>An Operator</i> | | Permit No. 001 |
| VALID ONLY ON DATE OF ISSUE | | |
| REMEMBER! LOCK OFF! | Reason for Permit Issue: | |
|  | Detail work activity (eg blockage, maintenance, fault. Etc) | |
| Control Methods Required for Issue of Permit to Work | | |
| <p>Before this Permit is issued, the issuer MUST be satisfied that the following control methods have been implemented.</p> <ol style="list-style-type: none"> 1. The person issued with this permit-to-work is competent to perform the required task allocated to them and has read and understands the isolation procedures 2. The person issued with this permit has their own personal isolation padlock and key / hasp 3. A managers / supervisors padlock is also attached to a multi-clasp for all work to be carried out and the main isolator is LOCKED in the OFF position | | |

| | | |
|--|------------------------------|---|
| Authorisation (Issued by RBK site supervisor / manager to the competent person carrying out the work) | | |
| Authorised Person issuing this permit: <i>A Supervisor</i> | | Position: <i>Site Supervisor</i> |
| Signature: <i>A Supervisor</i> | Date: <i>01/05/14</i> | Time: <i>15:30</i> |

| | |
|---|---|
| Receipt of Permit to Work (Competent person carrying out the work) | |
| I hereby declare that I am a competent person, authorised to undertake the work described above and that no other work will be undertaken under the terms of this permit. All precautionary measures will be adhered to at all times. | |
| Name: <i>An Operator</i> | Signature: <i>An Operator</i> |
| Date Permit to Work received: <i>01/10/2016</i> | Time Permit to Work received: <i>15:30</i> |

| | |
|--|---|
| Hand-back of Permit to Work (Competent person carrying out the work circle as appropriate) | |
| I hereby declare that the work stated above: <u>has</u> / has not been completed. All guards: <u>have</u> / have not been attached correctly. The equipment: <u>has</u> / has not been tested I declare that it : <u>is</u> / is not safe to use. | |
| Name: <i>An Operator</i> | Signature: <i>An Operator</i> |
| Date Permit to Work returned: <i>01/10/2016</i> | Time Permit to Work returned: <i>16:30</i> |

| | | |
|---|--------------------------------|---|
| Closure of Permit to Work (manager / supervisor) | | |
| I hereby declare that the work stated above has been completed and this Permit to Work is now closed. | | |
| Authorised Person issuing this permit: <i>A Supervisor</i> | | Position: <i>Site Supervisor</i> |
| Signature: <i>A Supervisor</i> | Date: <i>01/10/2016</i> | Time: <i>16:35</i> |
| ENSURE ALL PADLOCKS / TAGS / KEYS ARE RETRIEVED ON COMPLETION | | |

