PAPERBACK

Environmental Permit Variation Application

FIRE PREVENTION PLAN

Version 1.1
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Revision Schedule

Paperback Collection and Recycling Ltd

Deeside – Fire Prevention Plan

Rev	Date	Details	Prepared by	Approved by
Version 1.0	3/09/2015	Draft	Ceri Environmental Consulting Ltd	Drafted by Clare Walters
Version 1.1	14/9/2015	Final	Ceri Environmental Consulting Ltd	Approved by Gordon Anderson

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1.0 Introduction and Background

Paperback Collection & Recycling Ltd has operated a permitted waste facility at Units 1, 1A & 2 Parkway, Deeside since 17 October 2015. The company is now seeking a variation of the permit.

The variation does not seek to change the specified waste management operations which are to be undertaken at the facility. These are :

- storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where the waste is produced) (R13)
- recycling or reclamation of organic substances which are not used as solvents, (R3)
- recycling or reclamation of other inorganic materials (R5)
- recycling/reclamation of metals and metal compounds (R4)
- storage pending any of the operations numbered D1 to D14 (D15)
- repackaging prior to submission to any of the operations numbers D1 to D13 (D14)
- physico-chemical treatment not specified elsewhere in Annex IIA which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D8 and D10 to D12 (D9).

Physical waste treatment will consist of both manual and mechanical, chipping, sorting, baling, shredding screening, crushing, compaction and separation of waste into separate components for recovery or recycling.

The variation will allow the facility to operate as a clean dry mixed paper, plastic and metals recovery facility and also as a producer of biomass and RDF/SRF. The facility is not a traditional waste transfer and treatment facility as it does not take in putrescible or highly degradable waste. It has a very limited list of waste materials which it accepts most of which originate from other waste material handling facilities, as follows :

Inclusive waste types

- All types of Paper and Board.
- Shredded wood of all types – virgin, treated, processed (30 -250 mm particle size accepted).
- All mixed polymers – films, carrier bags, ldpe, pet, pp.
- Textiles, Rags, clothing, bedding.
- All Shredded plastics excluding upvc (30-100mm particle size accepted).
- Aluminium
- Ferrous/Non Ferrous metals
- Blown “lights” from sorting operations
- Fines screenings 25-60mm by arrangement
- Non hazardous wood

Excluded waste types

- WEEE. (Waste Electrical Equipment) of any description
- Oil and Petroleum based liquids, gels, oils or compounds.
- UPVC of any description.
- Large Glass and Silica of any description.
- Aggregate/Cement/Gypsum products.
- Organic or putrescibles of any description including all foodstuffs.
- Batteries of any description.
- Large mixed rigid plastics.
- Food Waste/Catering Waste

The production plant incorporates automated and manual sorting and cleaning lines, with comprehensive automatic baling, wrapping, container loading and weighbridge operations. After all possible recyclates are recovered; the remaining materials are used to produce waste derived fuel for supply to combined heat and power plants in the UK & Europe.

It is proposed that the production of biomass fuel from waste wood is increasingly going to become a part of operations at the facility. Operations will, therefore subject to

permitting, include the screening, chipping and shredding of wood waste using appropriate equipment and the storage of biomass.

It is proposed that the total quantity of waste stored at the site will be :

- 12,000 tonnes of processed RDF/SRF and wood (unprocessed and processed) in external yard area
- 3000 tonnes of unprocessed and process material within the building.

The total quantity of waste accepted at the site per year will be less than 49,999 tonnes.

The site is located at National Grid Reference SJ32079 70310 see Fig. No 1.

Ceri Environmental Consulting Ltd has been appointed by Paperback to prepare a Fire Prevention Plan for the Deeside facility.

The Fire Prevention Plan serves two main purposes :

1. it will form part of the Environmental Management System which is required by the permit for the facility;

2. it addresses Natural Resources Wales' document TGN 7.01 'Reducing fire risk at sites storing combustible materials' and so will help to protect the environment in the event of a fire.

It does not address health and safety issues and it will not replace any statutory requirements under the Regulatory Reform (Fire Safety) Order 2005 or any other applicable legislation.

This is a live document and as such will be reviewed and revised on an ongoing basis. The facility at Deeside is currently in use and a Fire Risk Assessment, in accordance with the Regulatory Reform (Fire Safety) Order 2005, has been undertaken by Pinnacle Safety Systems to ensure that a suitable assessment has taken place. The risk assessment document is included in Appendix 1.

It is good practice to discuss fire fighting strategy with the local Fire and Rescue Service and it is suggested that Paperback discuss this document with them at the earliest opportunity.

2.0 Roles and Responsibilities

Paperback management will ensure that there are sufficient resources and competent personnel available to implement this fire prevention plan. Paperback will designate managers who have the authority and responsibility for implementing this plan. Designated managers are responsible for ensuring that all relevant staff have had suitable training and have been instructed in their duties in accordance with this plan. The duties will include monitoring, recording and reporting and also taking appropriate action under the instruction of the appointed manager.

3.0 Description of Site and Site Processes

3.1 Surrounding Area and Sensitive Receptors

The facility is located within an industrial estate and there are other businesses located adjacent to the Paperback site (see Figure 1).

The site is not within a groundwater source protection zone.

The River Dee and Bala Lake SAC and the River Dee SSSI are over 1km to the south west of the facility.

There is a surface water feature adjacent to the site and there are public rights of way along the south eastern and south western boundaries of the facility.

The potential emissions from a fire would be smoke and particulates, toxic emissions to air and fire water run off. Contaminated materials could be left after a fire which would need to be disposed of.

The prevailing wind direction at Deeside is from the southwest.

Taking distance and wind direction into account the most significant potential receptors in relation to fire are likely to be :

1) local surface water features which could be affected by fire water run off (see Figure 1) ;

2) nearby businesses on the Deeside Industrial Estate due to smoke and particulates (see Fig 1);

3.2 Description of Site Activities

The site provides a facility to receive a limited range of waste types delivered to the site from commercial customers.

Site operations will be conducted in accordance with the in house EMS.

Site operations involve various recycling activities including :

General recycling

The site is primarily a mechanical waste treatment facility which separates waste in order to recover recyclables. The way this is done varies depending upon the waste. The residual waste may be sent to landfill or may be baled for use as a fuel. The process does at times include shredding. The site does not dry waste in any sort of heated or passive system.

The initial treatment of waste is therefore simply for recovery and most of the waste which arrives at the facility goes through this system. (There are some minor exceptions such as high quality confidential waste paper which is simply shredded on a small scale, stored within the building and then sent on for recycling). Waste which had gone through the treatment process may then be baled or shredded and baled and, possibly in the future, may be made into briquettes for onward transportation purposes.

RDF/SRF production

Dry Mixed waste and Blown “lights” from sorting operations are accepted at the site for RDF/SRF production. Sorting and processing will be carried out by a variety of methods

including rotary or vibratory screens, air classifiers, eddy current and magnetic separators, shredders, granulators and balers etc.

Due to the nature and control over the waste inputs to this plant this RDF/SRF produced at this facility will be of an almost entirely non biodegradable nature and so will be non putrescible although it may contain some material which would degrade over a long time such as textiles. The RDF/SRF material is baled and wrapped in six multi layers of plastic film. The resulting bales are ultimately sent off site to be utilised for heat and energy production in suitable power plants.

Biomass Fuel Production

Wood waste will be delivered to the site and may be simply bulked up for onward reprocessing into biomass fuel or may be processed into biomass fuel. Any wood processing will take place within the building. Wood will be screened for contaminants in the warehouse using the process line. Wood will be positively selected by size through a combination of machine and labour processing. The contaminants in the biomass are recyclables including recoverable plastic, films and metals. The processed biomass will be bulk stored and shipped for end use to a power station. There will be no processing external to the building.

4.0 Potential Causes of Fire and Fire Prevention Measures

The potential causes of fire on the Deeside site and the measure taken to prevent fires include :

1) Arson or vandalism. The site has security fencing and gates which control the perimeter of the site. These are locked outside operational hours. The waste treatment building within the perimeter is provided with lockable doors which are closed and locked outside operational hours. The site is fitted with CCTV and intruder alarms. Outside normal working hours security patrols visit the site.

2) Self combustion. Self combustion is not likely at this site due to the waste types accepted ie non putrescible and low in biodegradability, except for wood waste. However

the area where the fines are stored could potentially overheat and self combust. To prevent this the quantity of fines kept inside the building is kept to a minimum and storage times are low (maximum storage time is 5 days). Sources of heat are kept away from the fines storage area. A thermal probe check of the fines is made on a daily basis to check for temperature. If it is over 65 degrees the material is pulled out from the bay and cooled within the building.

There is a low risk of the outside bales of waste derived fuels self combusting as they are mainly made up of plastics. Nevertheless a thermal probe check of a sample of the bales is made on a daily basis to check for temperature.

When wood is stored at the facility a procedure will be developed for thermal probe check of the wood stock pile and any processed biomass fuel. This will form part of the EMS for the facility.

3) Hot spots in incoming loads. The operators enforce a monitoring system for wastes entering the site. Paperback assess all incoming waste from external companies. Each load will be probe tested and readings recorded. If the waste is reading in excess of :

- fines - 65 degrees
- biomass - 75 degrees
- dry mixed recyclable – 85 degrees

the load will be reloaded and rejected.

4) Plant and equipment failure. Plant and equipment is maintained in accordance with a strict maintenance schedule. This helps to prevent plant breakdown. In addition, all site vehicles are fitted with fire extinguishers and dust filters.

5) Electrical faults and damaged cables. All equipment is regularly PAT tested to ensure that faults are identified and repaired.

6) Fuel storage and refuelling. Site plant is refuelled in the outside yard area. All fuel is stored in a designated area of the yard. Plant is only refuelled by competent persons. Vehicles are switched off when refuelling. All sources of ignition are kept away from the immediate area.

7) Discarded smoking materials. The operational areas of the site are designated as no smoking. A smoking hut is located in the front car park area away from any waste activities.

8) Hot works such as welding and grinding in the workshop. Any such works will be controlled by work procedures including :
- only competent persons will use welding equipment or grinders
- all combustible/flammable materials are kept well away from the work area when hot work is conducted
- operators wear flame proof overalls to prevent clothing catching fire
- a hot work permit system is in place if welding outside the workshop
- welding cylinders are secured to trolleys using chains and trolleys are kept in well ventilated areas
- no spare cylinders are kept on site
- equipment is visually checked for leaks before and after use.

9) Industrial heaters. Any such heaters will only be used with the approval of management and will be used in accordance with manufactures' instructions. They will only be used in office areas away from combustible materials or flammable materials. Heaters are switched off at the end of the shift and at night.

10) Hot exhausts. Plant and equipment will be regularly cleaned to prevent the build up of material which could ignite. There will be shielding of hot surfaces when needed. There will be fire watch at the end of each working day.

11) Reactions with incompatible materials/wastes. None of the waste types accepted will be incompatible.

12) Neighbouring site activities. There is unlikely to be any significant risk from neighbouring activities.

13) Flammable substances. Several products used occasionally within the workshop including aerosols are flammable. If ignited fire could result. To prevent fire :
- the products are used in small quantities away from sources of heat and ignition

- a small quantity of aerosols are used
- all flammables/aerosols are to be kept in a metal cabinet.

5.0 Stack Management

5.1 External Yard

In the external area waste derived fuel will be stored within wrapped bales. Wood for biomass will be stored within a concrete bunker. Paper will be stacked in bales.

The site has been operating for a number of years and has a stockpile of waste derived fuel waiting for export from the site. The introduction of TGN7.01 has caused the operator to begin a destocking programme in order to achieve compliance with this guidance.

The operator is proposing to move to compliance with TGN7.01 by December 2016 with a controlled reduction in stock and the creation of fire breaks within the external yard area as detailed in (Appendix 3) . It is suggested that this proposal could be included as an Improvement condition within the varied permit.
Under the improvement programme there will be a 15 m stand off of waste storage from the building and each stack would be separated by 6m from the next stack. The max height of any one stack will be 5 m unless it consists of wood in which case it may be up to 10m in height. In any event the overall dimensions of the stacks will be kept in accordance with the NRW guidance document TGN7.01 which states that maximum pile sizes and minimum separation distance should be :

Table 2. Maximum stack sizes and minimum separation distances

Material	Max height (m)	Length/width (m)	Max vol (m^3)	Max area (m^2)	Min separation (m)
Paper, cardboard and rags	5	20	750	235	6
Plastic rubber and other materials	5	20	450	235	6
Fridges, computers and electrical equipment	5	20	300	235	15
RDF (use as for plastics above)	5	20	450	235	6
Wood	10	20	1370	235	6

There will be access at all times for fire fighting tenders should this be necessary.

5.2 Internal building

The building is used for the storage and treatment of waste and the movement of plant equipment and vehicles.

Bays and containers are used within the building to ensure that separate storage areas are provided for various waste treatment inputs and for dry recyclables

Storage stacks will be within the guidelines of TGN7.01.

It is proposed that the total quantity of waste stored at the site will be :

- 12,000 tonnes of processed RDF/SRF and wood (unprocessed and processed) in external yard area
- 3000 tonnes of unprocessed and process material within the building.

6.0 Fire Detection and Suppression

Although the risk of a fire starting will be reduced as far as is reasonably possible the nature of the site will mean that there is some residue risk.

Therefore, automatic fire detection units are fitted in the office and corridor areas of the site and there are heat sensors fitted in the waste treatment building roof. The automatic fire detection units are linked to the main fire alarm system. The fire alarm is tested on a weekly basis. The fire alarm system is monitored by a call centre and when activated the emergency services are automatically called.

Fire fighting equipment is located at various points throughout the site including within vehicle cabs.

There is a fire hydrant located at the site as shown on the Deeside Proposed Site Layout plan in Appendix 3.

Paperback has a Fire Fighting Procedure (Appendix 2) which would be implemented in the event of a fire.

A small scale fire would be dealt with without the production of large volumes of water or small quantities from a fire inside the building would be contained within the building itself.

However, in the event of a larger scale fire fighting response being needed fire fighting water would need to be used and contained.

There are two types of surfacing on the outside yard area. The area between the building and the RDF/SRF storage is laid with 'impermeable' concrete and the area where the outside RDF/SRF storage takes place is permeable hardstanding. The hardstanding at the Paperback site is very well compacted so this will reduce the level of permeability and aid run off

Fire water used in the external yard area would be contained by a perimeter soil bund, which is in place at the site, and the slope of the yard would direct the run off towards the concreted part of the site. Here it would be contained within the drainage system (see Appendix 3) which can be sealed (prevented from discharging to drainage system) in a fire event. This will allow the run off to be contained within the drainage system and interceptor tank and recirculated if appropriate or it can be tankered off site to maintain capacity.

There is a dedicated emergency area and quarantine area big enough to cope with a major incident and located so as to provide a 10m clear buffer around the perimeter for emergency services to operate. This is identified on the plan in Appendix 3.

7.0 Pollution Clean up

In the event of a fire any burnt and contaminated materials would be removed off site for disposal at an appropriately permitted facility. Fire fighting water would be tankered off site for treatment at an appropriately permitted water treatment plant.

8.0 Routine monitoring, recording and reporting

There will be routine monitoring of the site which will include a fire watch when any hot working is being undertaken. A monthly inspection of the site is conducted to check fire exits, fire hazards and extinguishers etc. Fire fighting equipment is tested/inspected by an external company every 12 months.

9.0 Routine Maintenance

Routine maintenance such as clearing waste storage areas will be undertaken on an on going basis at the site. This will help to prevent the accumulation of waste which can add to any fire problem and increase the risk of fire spread.

10.0 Abnormal events

If any abnormal events occur such as the need to store waste materials in excess of the quantities outlined in this document the operator with discuss this with NRW and obtain their approval before such storage takes place. In the event of an emergency, approval will be sought as soon as is reasonably practicable.

11.0 Training and Competence

All staff undergo relevant training, covering all relevant aspects of Health & Safety, Fire, Manual Handling, Environmental policy and awareness etc.

All staff also undergo New Starter training by the supervisor of the work area, this includes, specific Health & Safety and plant or machine familiarisation, environmental issues associated with their job, emergency procedures etc.

Toolbox talks at various periods include environmental sessions including dust management, monitoring and control.

In addition to the above, Managers and Senior Managers have various associated environmental training as part of existing courses & qualifications i.e. National

Examination Board of Safety & Health General Certificate, Operators Competence Certificate, etc.

Refresher training is given on an annual basis.

Any staff undertaking monitoring, recording and reporting for the purposes of fire control will be suitably trained and instructed as to their duties.

Fire marshals have been nominated and trained.

Regular fire drills are conducted.

APPENDIX 1

Pinnacle Safety Services

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Email: info@pinnaclesafety.co.uk
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Fire Risk Assessment

Address:
Paperback Collection & Recycling Ltd
Units 1, 1A & 2
Parkway, Zone 2
Deeside Industrial Estate
Deeside
Flintshire CH5 2NS

Date: 8th May 2014

Requested by: Tony Whittaker – H&S Rep and Supervisor.

Conducted by: Steve Mason – CMIOSH (Chartered Member of IOSH).

QSHCR Registered Consultant

iosh Chartered Safety and Health Practitioner

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Section 1.0
Fire Legislation - Summary

The latest fire legislation is called the Regulatory Reform (Fire Safety) Order and it came into force in October 2006. The new regulations replace previous fire safety legislation. Any fire certificate issued under the Fire Precautions Act 1971 will now cease to have any effect.

The order applies to virtually all premises and covers nearly every type of building, structure and open space, which includes;

- Offices and shops;
- Premises that provide care, including care homes and hospitals;
- Community halls, places of worship and other community premises;
- The shared areas of properties several households live in (housing laws may also apply);
- Pubs, clubs and restaurants;
- Schools and sports centers;
- Tents and marquees;
- Hotels and hostels; and
- Factories and warehouses.

Note; it does not apply to: people's private homes, including individual flats in a block or house.

The main duties under the order include:

- Carry out a fire-risk assessment identifying any possible dangers and risks;
- Consider who may be especially at risk;
- Eliminate or reduce the risk from fire as far as is reasonably possible and provide general fire precautions to deal with any possible risk left;
- Take other measures to make sure there is protection if flammable or explosive materials are used or stored;
- Create a plan to deal with any emergency and;
- Keep a record of your findings; and review your findings when necessary.

What is a fire risk assessment?

A fire risk assessment is an organised and methodical look at your premises, the activities carried on there and the likelihood that a fire could start and cause harm to those in and around the premises. The aims of the fire risk assessment are:

- To identify the fire hazards.
- To reduce the risk of those hazards causing harm to as low as reasonably practicable.

- To decide what physical fire precautions and management arrangements are necessary to ensure the safety of people in your premises if a fire does start.

Section 2.0
A description of the premises and its use

The workplace consists of a large open detached factory unit. The building is used to recycle plastic products. The outer structure of the building is constructed from metal insulated panels. The floor is constructed from concrete.

An office, canteen and administration area is located on a mezzanine floor area within the factory unit (see photo No7 below). A link connects the factory to an octagon shaped 2 floor office area (see photo No5 and No6). However, this office area is not in use.

The rear of the factory has a large yard that is used mainly as a storage area for finished product (plastic bales). The outer perimeter backs onto a footpath (see photo No9).

A maximum of approx 18 persons work on site at any one time. Visitors to the site are normally escorted by a member of staff. Contractors also occasionally attend site to conduct servicing and maintenance tasks. All contractors report to reception when they arrive on site.

Photo No1 Front of factory

Photo No2 Front of factory

Photo No3 Front car park

Photo No4 Inside the factory

Photo No5 Link to Octagon office

Photo No6 Octagon office not in use

Photo No7 office / canteen area

Photo No8 Rear yard area

Photo No9 outer perimeter fence / footpath

Section 3.0
Fire risk assessment

Means of Escape	Yes	No	Comments
Are exits free from obstruction?	✔		
Are adequate signs in place for each exit?		✔	See section 6
Are the exits easily opened at all times and unlocked?		✔	See section 6
Is emergency lighting provided where necessary?	✔		
Is the emergency lighting regularly tested?		✔	See section 6
Do the doors on exit routes open in the direction of travel?	✔		
Are evacuation times and/or length of escape routes satisfactory?	✔		
Are outside escape routes clear of debris and provided with directional signs & lighting?	✔		

Fire Fighting Equipment	Yes	No	Comments
Are there adequate extinguishers in the workplace?		✔	See section 6
Are the extinguishers of the correct type?	✔		
Are the extinguishers placed in a prominent position?		✔	See section 6
Are adequate signs in place above extinguishers?		✔	See section 6
Are the extinguishers fully charged?	✔		
Are the extinguishers in test?	✔		

Evacuation Procedures	Yes	No	Comments
Is an evacuation procedure in place?	✔		See policy
Is the evacuation procedure displayed in the workplace?	✔		See section 6
Do all employees understand the procedure?	✔		
Is there a designated fire assembly point?	✔		Car park area

Means of Raising the Alarm	Yes	No	Comments
Is there an adequate way to raise the alarm?	✔		
Can persons in all areas of the workplace hear the alarm?	✔		
Does the building have a fire bell / alarm?	✔		
Is the fire alarm tested on a weekly basis?	✔		Done by Richard
Is the whole fire alarm system tested by a competent person/company on a regular basis?	✔		Done every 6mths by an external Co
Is the fire control panel suitably labelled to identify all zones within the building?		✔	See section 6
Does the building have heat sensors/flame detectors?	✔		

Have staff been trained to call the emergency services?	✔		Monitored system

Training	**Yes**	**No**	**Comments**
Have a suitable number of fire marshals been appointed?	✔		
Have the fire marshals been trained?	✔		Done May 2014
Training	**Yes**	**No**	**Comments**
Are registers kept to for all areas to identify who may still be inside the building?	✔		Done by Richard
Is there a regular fire drill?	✔		
Are records kept of all fire drills?	✔		
Are all persons aware of all fire evacuation procedures?	✔		
Are all persons aware of which fire extinguisher to use on what type of fire?	✔		
Are employees given adequate information/instruction concerning fire extinguishers?	✔		Training and induction pack

Shut down procedure	**Yes**	**No**	**Comments**
Does any machinery require shutting down safely before the building is evacuated?		✔	Stopped using e/stops
Is there a shutdown procedure in place?	n/a		

Hazards	**Yes**	**No**	**Comments**
Does any work involve hot processes – welding, flame cutting, cooking or use of ovens?	✔		Workshop area
Are there light bulbs and fittings near combustible materials?		✔	
Are portable heaters used?	✔		In office areas
Are there multi-point adapters in electrical sockets?	✔		Low risk
Are extension leads plugged into other extension leads?		✔	
Are any portable appliances faulty or damaged?		✔	
Are all electrical appliances tested?		✔	See section 6
Are there any faults with the electrical installation?		✔	
Has the electrical wiring been tested in last 5 years?		✔	See section 6
Are there any faults with the electrical installation?		✔	
Is smoking permitted?		✔	Hut in car park
Is arson a potential problem?	✔		See section 6

Combustible materials	**Yes**	**No**	**Comments**

Do work processes use combustible materials – paper, card or plastics?	✔		
Are bulk quantities of combustible materials kept in the workplace?	✔		
Are large quantities of textiles or furniture (with large amounts of foam padding) displayed or stored in the workplace?		✔	
Are items of furniture damaged with padding exposed?		✔	
Are more than 20% of walls covered with combustible linings such as hardboard, chipboard, plastic tiles or flock wallpaper?		✔	
Combustible materials	**Yes**	**No**	**Comments**
Is there any area of the walls covered with wall tiles?		✔	
Is the ceiling covered with polystyrene tiles?		✔	
Are combustible artificial foliage used to decorate the workplace?		✔	
Are paper or similar decorations hung in the building at Christmas time?		✔	
Are there any other combustibles in the workplace?		✔	

Flammable liquids and gasses	**Yes**	**No**	**Comments**
Are stocks of flammable liquids kept in the workplace?	✔		See section 6
Are containers of flammable liquids left open?		✔	
Are flammable materials used by cleaners or maintenance staff?		✔	
Is natural gas used in the manufacturing process?		✔	
Are cylinders of flammable gas used or stored in the workplace?		✔	
Are other cylinders of oxygen or compressed gas used or stored in the workplace?		✔	
Are there any other forms of compressed gas used or stored on the premises?	✔		Workshop area Argon Gas only

Identifying structural features that could lead to the spread of fire	**Yes**	**No**	**Comments**
Are stocks of raw materials or finished goods separated from the workplace by a fire resistant structure?		✔	

Are the compartments enclosed by a fire-resisting structure?		✔	
All holes in compartment walls, ceilings and floors around services and cables fire stopped?		✔	
Have dampers been installed in ductwork where it passes through compartment walls, floors and ceilings?	n/a		
Are holes in the floor and ceilings of vertical service ducts or cupboards fire stopped?	n/a		
Are all openings in compartment boundaries protected in case of fire?	✔		
Are there undivided voids beneath floors?		✔	
Are there undivided voids above the ceilings?		✔	
Are there voids behind panelling or other features that could lead to a spread of fire to the floor above?	✔		See section 6
Are all fire doors provided with adequate seals and self closing mechanisms?		✔	
Are there any other features that could lead to the spread of flames or smoke in the event of fire?	✔		See section 6

Identifying people who could be at risk	**Yes**	**No**	**Comments**
Do people sleep in the workplace?		✔	
Is there a large number of staff in the workplace?		✔	
Do large number of the general public visit the site?		✔	
Will people be unfamiliar with the building layout and escape routes?		✔	
Is the workplace used or visited by people who mobility is impaired?		✔	
Is there any young persons in the building who may at risk?		✔	
Do people work in remote areas of the premises?		✔	
Are contractors and maintenance workers unaware of the dangers posed by fire?		✔	
Do any staff work in areas where there is a high risk of fire occurring?		✔	

Additional controls &compensating features	**Yes**	**No**	**Comments**
In small workplaces, can the work activity be arranged so that any outbreak of fire can be immediately seen by persons in the workplace?	n/a		

Can automatic fire detection (AFD) and alarm systems be provided?	✔		See section 6
Can an automatic sprinkler be installed?		✔	
Can the source of ignition be contained by providing fire-resisting walls, doors or shutters?	✔		See section 6
Can a smoke control system be provided?		✔	

Designated persons and routine safety checks	**Yes**	**No**	**Comments**
Is there a designated person to co-ordinate all issues including safety checks for the site?	✔		Tony Whittaker Richard Cooper
Are safety features checked on a daily, weekly and monthly basis?		✔	See section 6

Section 4.0
Significant hazards identified by the assessment and the controls in place to reduce the risk:

The risk category is based on a matrix method that illustrates the measurement of hazard and risk as follows:

Fire Hazard		**Fire Risk**	
Description	*Value*	*Description*	*Value*
Negligible	1	Unlikely	1
Slight	2	Possible	2
Moderate	3	Quite Possible	3
Severe	4	Likely	4
Very Severe	5	Very Likely	5

Risk is the product of hazard and risk and can be illustrated as shown below:

Hazard Value

Risk Value	**5**	**4**	**3**	**2**	**1**
5	25	20	15	10	5
4	20	16	12	8	4
3	15	12	9	6	3
2	10	8	6	4	2
1	5	4	3	2	1

Risk Category

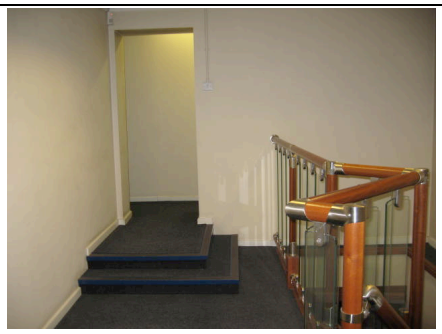
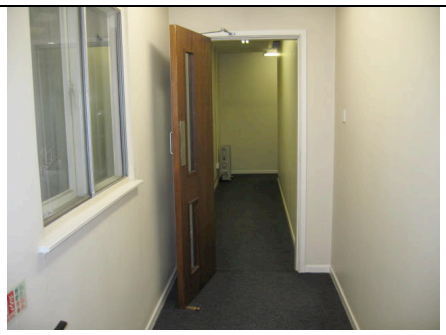
	H - High
	M - Medium
	L - Low

Risk Category = Hazard Value × Risk Value

Significant Hazards	Risk Rating
Electrical fires could be caused by equipment overheating or becoming faulty. *The control measures in place to prevent fire include;* • *Operators visually inspect portable electrical equipment before use.* • *All electrical equipment is to be PAT tested – see recommendation in section No6*	**Low Risk** **All heaters have now been PAT tested.**
Using portable heaters in the winter months could result in fire.  *The control measures in place to prevent fire include;* • *Space heaters are only used in office areas away from combustible or flammable materials.* • *Heaters are switched off at the end of the shift and at night.*	**Low Risk**
Conducting hot work such as welding and grinding in the workshop can result in fire. *The control measures in place to prevent fire include;* • *Only competent persons use welding equipment or grinders.* • *All combustible and flammable materials are kept well away from the work area when hot work is conducted.* • *Operators wear flame proof overalls to prevent clothing*	**Medium Risk** **Personnel have flame proof overalls provide and hot work permits are required**

catching fire. • *A hot work permit system is in place if welding outside the workshop.*	**for each job.**
Significant Hazards	**Risk Rating**
Combustible materials are stored directly under the canteen / office area. The underside of the floor is not fire protected and fire detectors are not fitted**.**   *The control measures in place to prevent fire include;* • *Sources of heat / ignition are kept away from the bales.* • ***See recommendations in section No6.***	**High Risk** **All materials have been removed. Do not store any combustible materials under the canteen area**
If a fire occurs in the small canteen located in the office area smoke / flames would quickly spread into the corridor area as there is a break in the top of the wall were a loft hatch is fitted**.**   *The control measures in place to prevent fire include;* • *The corridor areas have automatic fire detection units fitted.* • **Also see recommendations in section No6.**	**Medium Risk** **The gap between the small canteen and the corridor were the loft hatch is has now been filled in.**
Several products used occasionally within the workshop including aerosols are flammable. If ignited a fire could result.	**Low Risk**

The control measures in place to prevent fire include; • *The products are used in small quantities away from sources of heat and ignition.* • *A small quantity of aerosols are used.* • *All flammables / aerosols are to be kept in a metal cabinet – **see recommendation in section No6**.*	**Flammable cabernet is now in place**
Significant Hazards	**Risk Rating**
Welding equipment is used in the workshop area. In the event of a fire a gas cylinder could explode.  *The control measures in place to prevent fire include;* • *Only competent persons use the equipment.* • *Cylinders are secured to trolleys using chains. Trolleys are kept in well ventilated areas.* • *No spare cylinders are kept on site.* • *Equipment is visually checked for leaks before / after use.* • *Operators wear flame proof overalls when using cutting equipment, to prevent clothing catching fire.* • *A hot work permit system is used if welding outside the workshop area.*	**Low to Medium Risk** **Argon Gas only 5% C 0 2** **Workshop welding bay has now got a safety welding carton**
The stairwell area is not fully fire protected. A fire door is not fitted at the top of the stairs that leads to the canteen. If a fire occurs in the small canteen area smoke / flames could spread into the corridor and stairwell area. The fire doors are also sometimes wedged open.	**Medium Risk** **A new fire exit route has put in place' it is at**

  *The control measures in place to prevent fire include;* • *The corridor / office areas have automatic fire detection units fitted.* • **See recommendations in section No6.**	**the far end of the corridor from the boardroom**

Significant Hazards	Risk Rating
Large quantities of plastic combustible materials are stored in the yard area. The bales are not segregated into smaller stacks to contain a fire and there are only a few small isles between the bales for access, which would not be wide enough for a vehicle such as a fire tender. In the event of a fire caused by arson or self combustion the whole storage area would soon catch fire and cause a major incident.  	**High Risk** **Material has now strated to move off the yard.** **We have inplace two 3 meter fire**

  *The control measures in place to prevent fire include;* • *Sources of heat / ignition are kept away from the bales.* • *Richard conducts a thermal inspection of the bales on a daily basis, to check the temperature and to check for hot spots.* • ***See recommendations in section No6.***	**braks**

Significant Hazards	Risk Rating
Several of the fire doors located at the rear of the building have been closed off and bolted / welded closed**.**  *The control measures in place to prevent fire include;*	**Medium Risk** **We have reopened one of the fire doors at the top of the warehouse**

• *The roller shutter doors are kept open at all times when the building is occupied.* • *Other alternative exits are available.* • ***Also see recommendations in section No6.***	
The area where the fine materials (fines) are stored can overheat and self combust.  *The control measures in place to prevent fire include;* • *The quantity of fines held inside the building is kept to a minimum.* • *Sources of heat / ignition are kept away from the storage area.* • *Richard conducts a thermal inspection / check of the fines on a daily basis, to check the temperature and keeps a written record.*	**Medium Risk** **All bays are now made out of concrete blocks**

Significant Hazards	Risk Rating
Site plant is refuelled in the yard area**.** All fuel is stored in a designated area in the yard.	**Low Risk**

 *The control measures in place to prevent fire include;* • *Plant is refuelled by competent persons only.* • *Vehicles are switched off when refuelling.* • *All sources of ignition are kept away from the immediate area.*	**Full shed has been cleaned up and is checked' all trip hazards have been removed.**

Section 5.0

Additional Control Measures in place to reduce the risk

The following control measures are in place to reduce the risk of fire and ensure the safe evacuation of the building;

- An evacuation plan is in place and all persons are made aware of it through the induction pack.
- A contractor control system is in place.
- The building has a fire alarm fitted. The fire alarm system is tested on a weekly basis.
- A monthly inspection is conducted for the site to check fire exits, fire hazards and extinguishers etc.
- The fire alarm system is monitored by a call centre. When activated the emergency services are automatically called.
- Regular fire drills are conducted.
- Fire marshals have been nominated and trained.
- Automatic fire detection units (AFD) are fitted in office / corridor areas of the site. These are linked to the main alarm system.
- Fire fighting equipment is located at various points throughout the site. This equipment is tested / inspected by an external company every 12 months.
- Smoking is prohibited in all areas of the site. A smoking hut is located in the front car park area.
- Visitors to the site are normally escorted by a member of staff. All contractors / visitors report to reception when they arrive on site.

1.	Emergency lighting	**All emergency lighting units on site should be tested by a nominated person on a monthly basis and written records kept. These lighting units should also be tested for a duration of one hour (or a 1/3 of their rated value) every six months and the batteries fully discharged annually or at a frequency recommended by the manufacturer.**	All written records are kept up to date w Richard. D&K Electrical Contactors Ltd have no conducted a survey on the buildings.
2.	Electrical testing	All portable electrical equipment requires to be retested (PAT tested) by a competent person. All portable electrical appliances on site should also be placed on a site register. **The electrical wiring and installations for the building should be tested every 5 years, to comply with current guidance.**	Some PAT testing has been started' this will continue until all portable electrical equipment is completed. Work has started on the electrical stripp of all installations and cable.
3.	Fire extinguishers	**The fire extinguishers located on the picking lines and in the weighbridge office require to be placed on brackets and signs displayed above them.** **Several of the fire extinguisher located outside the mains electrical cupboards / rooms are obstructed and require to be re-positioned.**	(Completed) (Completed)
4.	Fire alarm system	The fire zones on the main control panel require to be labelled up. I would recommend that a site plan that indicates the fire zones is displayed adjacent to the main panel.	
5.	Training	**Fire marshals have now received training relating to their duties / responsibilities. Ensure that all fire marshals are made aware of their individual areas of responsibility.** **I would recommend that the workplace is spit into 4 areas (Office areas and canteen, L/H side of the factory, R/H side and workshop, Yard and**	(Completed) (Completed)

		weighbridge). Display a sign to indicate who is responsible for each area.	
6.	Office, boardroom and canteen areas	Combustible materials are stored directly under the canteen area. The first option would be to keep this area clear at all times. Alternatively the underside of the canteen, boardroom and office areas should be fire protected and fire detection units fitted so that the fire alarm is activated in the event of a fire. **Ensure fire doors in the corridors are kept closed at all times.** **The stairwell area is not fully fire protected. A fire door is not fitted at the top of the stairs that leads to the canteen. If a fire occurs in the small canteen area smoke / flames could spread into the corridor and stairwell area.**	(Have been removed from this area) (Completed) A new fire exit route has put in place the far end of the corridor from the boardroom.
7.	Office, boardroom and canteen areas	**If a fire occurs in the small canteen located in the office area smoke / flames would quickly spread into the corridor area as there is a break in the top of the wall where a loft hatch is fitted. This area should be fire stopped.**	Fire board has now been fitted over the hatch in the corridor. (Completed)
8.	Signage	**Display fire action signs adjacent to all final fire exit points, to clarify the evacuation procedures for the site.** Ensure that warning signs are displayed on the outer side of all fire exits "Fire door – keep clear". Replace the faded fire assembly sign.	(Completed) (Completed) (Completed)

9.	Fire exits	**Several of the fire doors located at the rear of the building have been closed off and bolted / welded closed. I would recommend that these fire doors are re-opened.**	One of the fire doors at the top end of th warehouse has now been reopened.
10.	Stairs to the canteen area	**Ensure that the area directly below the stairs that lead up to the canteen area are kept clear of all combustible / flammable materials. When the assessment was conducted a wooden pallet / materials were stored in this area.** I would recommend that this risk is added to the monthly fire check for the site.	Wood pallets have been removed. (Completed)
11.	Yard area	Large quantities of plastic combustible materials are stored in the yard area. In the event of a fire caused by arson or self combustion the whole storage area would soon catch fire and cause a major incident. I would recommend; • As a first measure consider reducing the quantities of combustible materials stored on site. • Ensure that bales are segregated into smaller stacks – see technical guide note (TGN7.01) for minimum separation distances. • Ensure that the isles between the bales allow suitable access for a plant / vehicles and fire tenders. • Ensure that all plant / vehicles are parked at least 6 metres away from the bales, to prevent fire. • Compile an emergency plan to deal with a major fire in the yard area. • Consider providing additional fire fighting equipment for the yard area. • I would recommend inviting the fire services to visit site to discuss the risks and emergency plan to deal with a major incident.	Bails will start to be removed off the ya some time in November.

12.	Information for the fire service	**Compile a site plan with the location of gas cylinders and flammables and ensure it is displayed outside the building so that this information can be used by the fire service in the event of a fire.**	(Completed) Located in the fire information pack.
13.	Octagon office	The octagon office is not in use. However, if this area is to be reused a fire risk assessment will need to be completed before the area is occupied**.**	Observation only
14.	Void behind office walls	**Check that the wooden panelling located in the outer walls and window cills of the office areas is fire protected. Consider installing automatic fire detection in this void to detect smoke / fire.**	All repairs have been completed to the window sills and fire route.
15.	Workshop area	Provide a designated metal cabinet to store all flammables such as aerosols. **Consider fitting automatic fire detection (AFD) in the workshop area so that the main alarm is activated in the event of a fire in this area.**	Metal cabinet now on site.
16.	Evacuation	Agree a safe area for plant to park in the event of a fire so that it could help the emergency services if requested. Include this in the evacuation plan for the site.	(Completed)

APPENDIX 2

Fire Emergency Action Plan

Paperback Collection & Recycling Ltd

Fire Action Plan

Emergency Instructions

1	**The action employees should take if they discover a fire** *Immediately operate the nearest alarm call-point and shout fire, fire, fire.* *Attack the fire if possible, with appliances available, without taking personal risks.*
2	**How will people be warned in there is a fire** *The electrical fire alarm system will sound on operation of the manually or automatically operated alarm call-point or system.*
3.	**How the evacuation of the building will be carried out** *Everyone in the building should leave the building by the nearest exit and report to the assembly point at the front of the building.*
4.	**Identification of escape routes** *All exit doors can be used as escape routes.* *The staircase and routes leading to the front door are protected routes.*

5.	**Fire fighting equipment provided** *Fire extinguishers are located in strategic and circulation areas and near fire exit doors.*
6.	**Duties and identity of employees with specific responsibilities in the event of fire.** ***On hearing the alarm**:* *All staff will usher visitors out of the building and assemble at the muster point.* *Fire wardens will ensure:* • *Their areas are cleared of people* • *Registers are collected on the way out* • *The Fire Brigade is called.* • *A roll call is made to ensure everyone is out.* • *Neighbouring facilities are to be notified if smoke is impacting/drifting.*
7.	Arrangements for the safe evacuation of people identified as being especially at risk, such as contractors, those with disabilities, members of the public and visitors. • ***Visitors:** The host / employee must take responsibility for any visitor they may have and ensure they leave the building by the nearest exit.* • ***Contractors:** must be given information about fire procedures and leave the building at the*

	nearest exit. • ***People with disabilities:*** *Specific arrangements may need to be made for those with disabilities. These arrangements may be made with the assistance of the Health and Safety Adviser.*
8.	**How will the Fire Brigade and any necessary emergency services be called and who will be responsible for doing this.** • *On hearing the alarm office staff will Dial 999 and ask for the Fire Brigade or other emergency service as appropriate.* • *Fire Wardens will call the Fire Brigade in the absence of office staff (this may be best achieved using a mobile phone)*
9.	**Procedures for liasing with the Fire Brigade on arrival and notifying them of any specific risks, e.g. the location of highly flammable materials.** • *Gordon Anderson, Tony Whittaker, Richard Cooper or other member of the Fire Wardens will liase with the Fire Brigade on their arrival. A Fire File has been compiled which is specifically for the FRS and is to be handed over to the Senior Fire Officer on arrival.*
10.	**The following arrangements and training is given to staff at the centre:** • *All staff: Fire Drills three times a year* • *All staff: Fire briefing once a year (may be in conjunction with fire drill.* • *Fire Warden training: for designated fire wardens* • *Record of training to be kept within Fire Manual.* • *Training to reviewed on a yearly basis and planned into budget.*

14.11.2014

PAPERBACK FIRE DRILL REPORT FORM – Date

Alarm activated	11.00am	Action required
Evacuation completed		
Everyone aware of correct assembly points		
Warden/ Richard Cooper Tony Whittaker		
Visitor book		
Any other points		

Completed by: Fire Warden
Name
Signature

Fire evacuation drills to be completed every month

In case of a fire

If a trailer, hook lift vehicle or any plant catchers fire, the driver and operator are to leave the yard or warehouse and make their way to the fire control zone, however only **if it** is safe to do so! The fire control zone is situated in the car park of the main heavy goods vehicle entrance to the site.

Trailer & hook lift

Move the trailer into the fire control zone area, open the back door of the trailer slightly to allow the water to run off. Uncouple the unit from trailer move to safe area, Hook lift vehicles drop the bin on the floor move to safe area.

Forklift Trucks & JCB

Move the Forklift Trucks or JCB into the fire control zone, if the fire is small enough to tackle by fire extinguishers do so, but only if it is safe to do so? If a situation arises where it is unsafe to tackle a fire, the emergency services should be called immediately.

Do not block the way of the emergency services.

Fire fighting equipment should only be used when safe to do so i.e.where there is a minimal risk to the individual. Use the fire tender or fixed water browser to contain fire until the fire services arrival. This task is be untaken by trained personnel only.

Block drains with fire water booms and drain cover to stop pollution getting into the water system.

Take into account the weather conditions i.e. Consider wind dirction.

Watch for hot embers that could be blow on to other materials.

Do not put yourself between the fire and your means of escape.

Trained Fire Marshals to check yard area for hot embers, which may have been blow in by the wind.

Plant operators are to make their way to the small car park, opposite the fire control zone, which is situated in the car park of the main heavy goods entrance to the site. If requested you may be asked to assist the emergency services.

Clean up

Clean up all loose debris from the area, place debris into container or a designated bay. Do not allow contaminated water to enter the water system cover drains with drain mate and place fire water boon in position.

Road sweeper to be called in to clean and jet wash the area if appropriate.

Managing Incoming Materials and Storage Procedure

Heat Probe Testing

Hook Lift Wagons and Walking Floors:

This control has been put into places to protect Paperback Recycling from any possible sources of ignition from the waste.

Vehicle operator will be inform of the procedure and will follow instructions from the Paperback employee.

A 3 way probe test will be conducted on the load. This will take into account the tailboard reading, the mid-section reading and bulkhead reading. The tailboard will be opened slightly by vehicle operator to allow Paperback employee to take a reading.

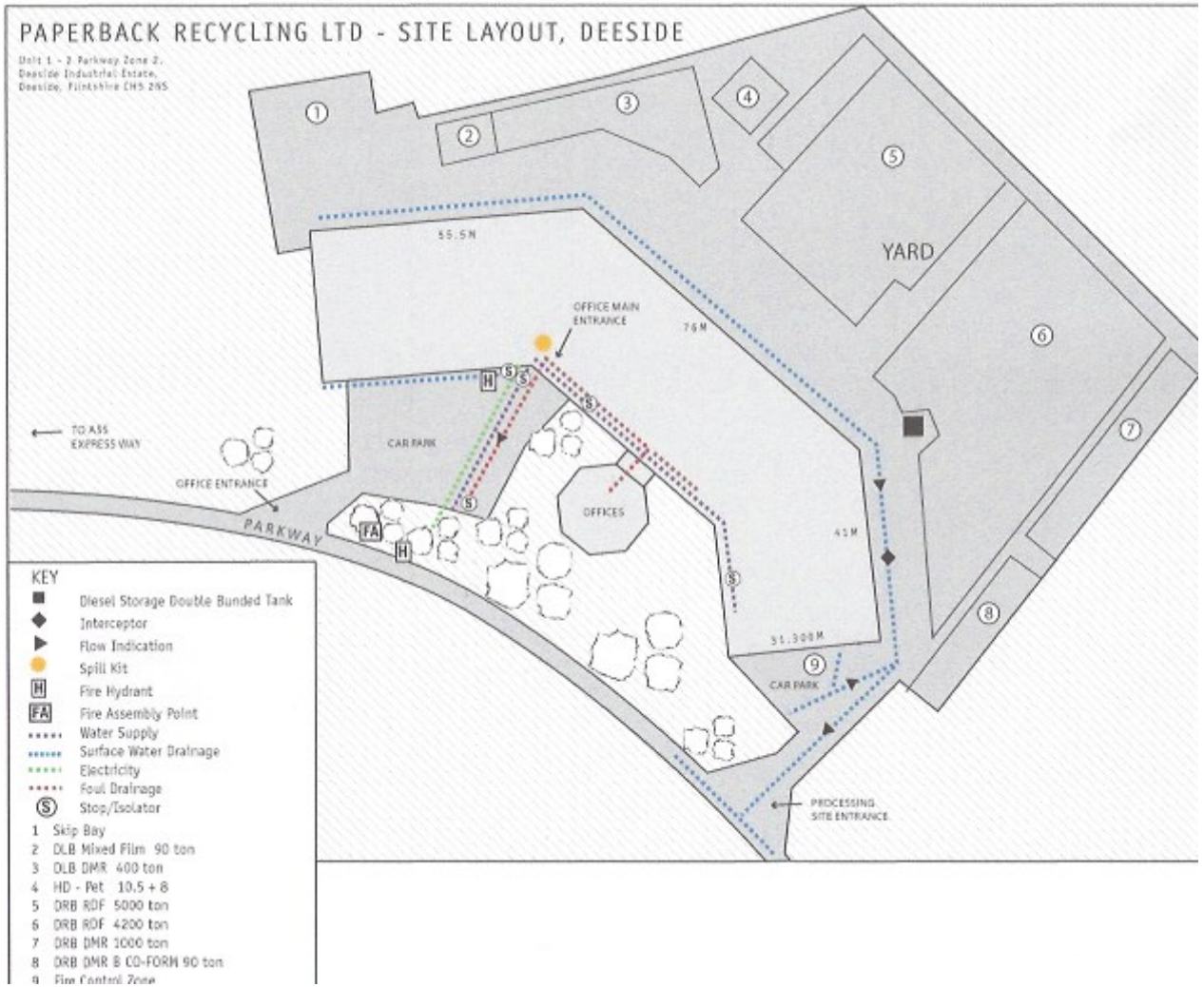
Paperback employee will stand to one side of the tailboard. This is to prevent any debris falling out on to them. Once the reading has been completed and is not exceeding the above limit the Paperback employee will move back to a safe area.

Driver operator will eject the mid-section and stop so that a reading can be completed by the Paperback employee. Once the reading has been completed and is not exceeding the above limit the Paperback employee will return back to the safe area.

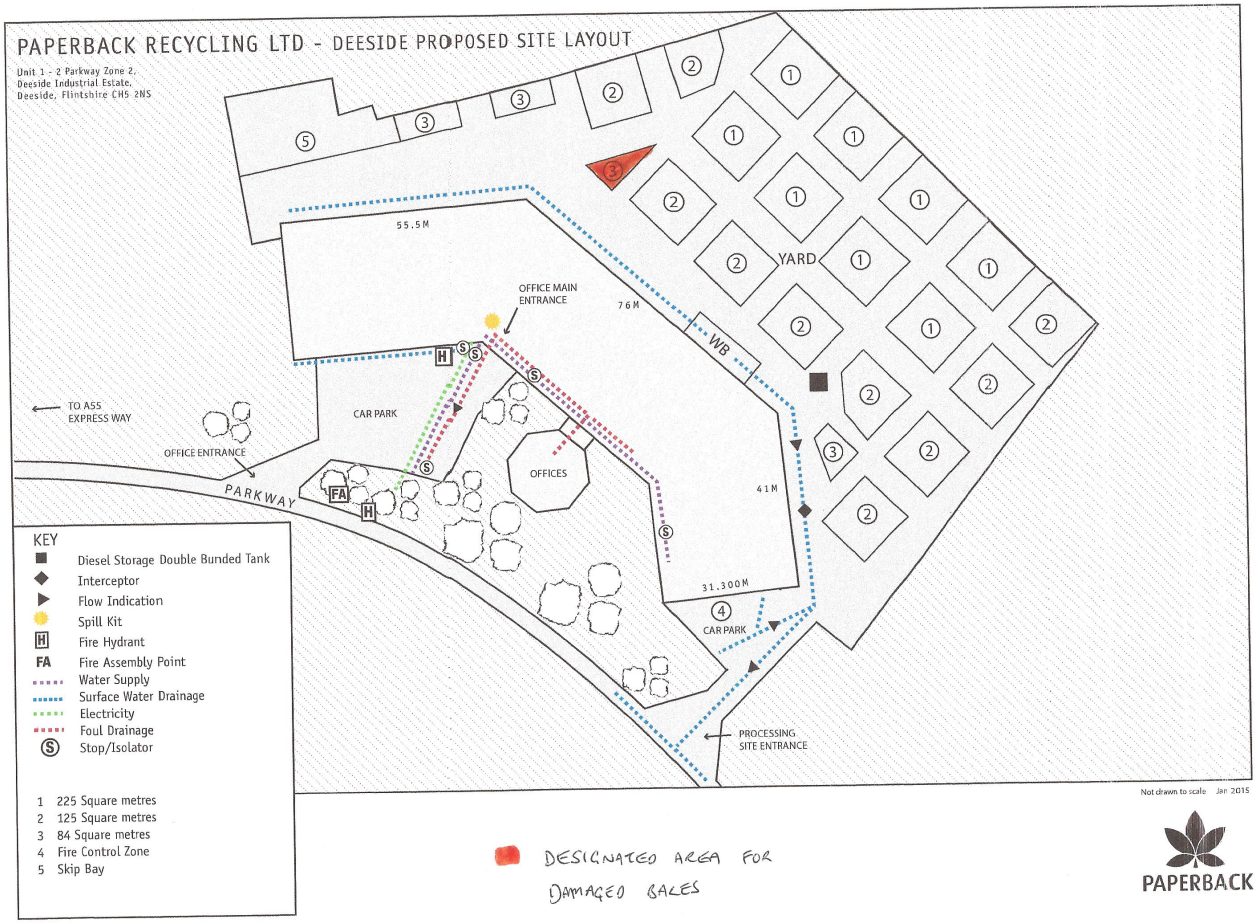
Vehicle operator will tip out the remainder of the fines and the bulkhead reading will be completed. If it does not exceeding the above limit the load will be accepted by Paperback.

APPENDIX 3

ORIGINAL STACK LAYOUT JANUARY 2015



PROPOSED LAYOUT BY DECEMBER 2016



DRAINAGE DETAIL FOR INTERCEPTOR

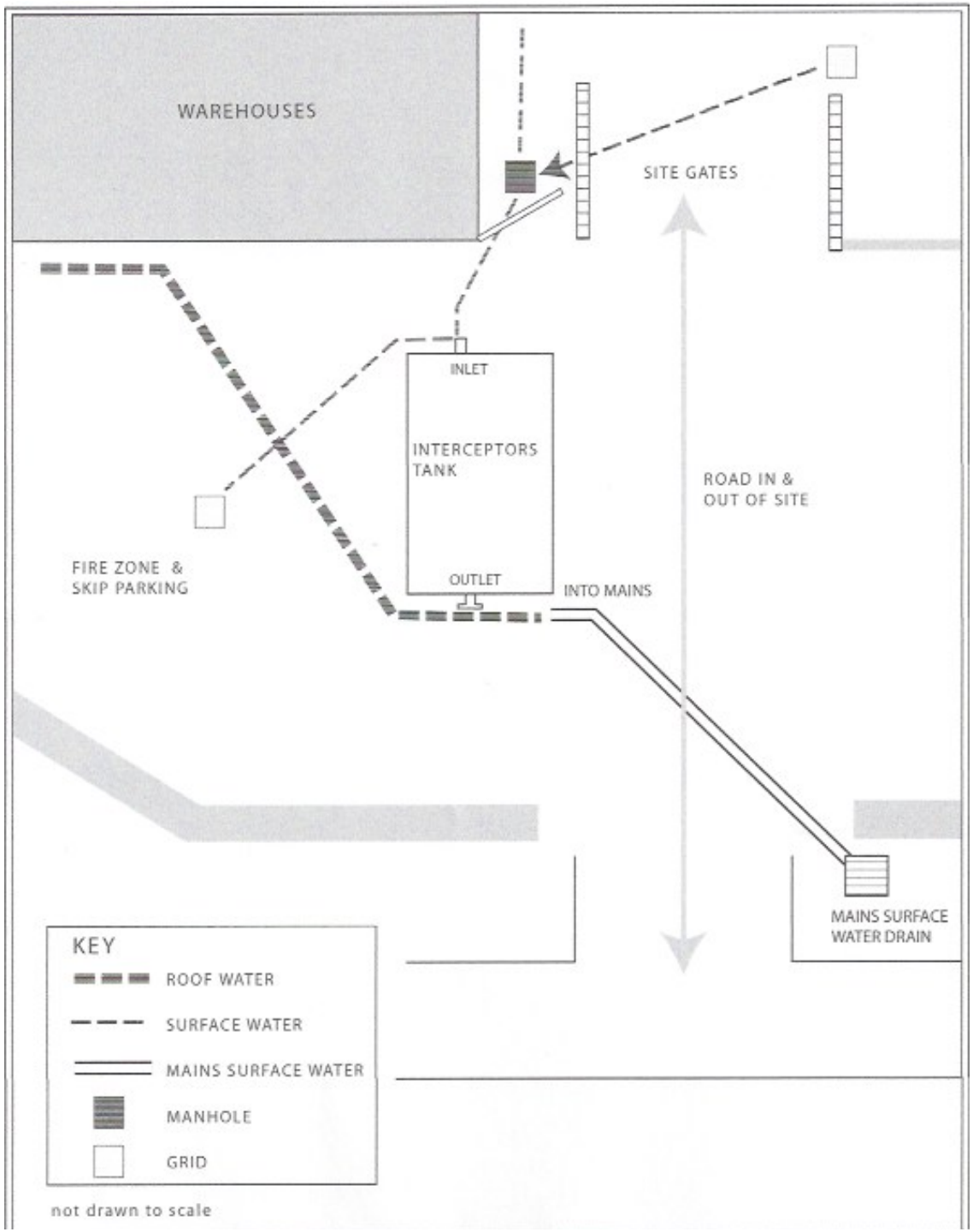


FIGURE 1 Location and Receptors