Fire Prevention Plan

Fire Protection Recycling Ltd

Unit 1a-1b

Pearsall Drive,

Oldbury

B69 2RA

Arctek Ltd
Grosvenor House, 11 St Pauls Square, Birmingham, B3 1RB

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FPP Document to be read with electronic drawing named '1327_PLAN_30-07-2023' with drawing number '1001-03' provided on the bottom right box. This drawing is being referred to where a reference to 'drawing' or 'drawing number 1327_PLAN_30-07-2023' is being given.

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Site Information & Key Contacts List

Site Address:	Unit 1a-1b Pearsall Drive, Oldbury, B69 2RA		
Site Operator:	Fire Protection Recycling Ltd	**National Grid Ref:**	SO9821189864

CONTACT	**DESCRIPTION**	**OFFICE HOURS**	**OUT OF HOURS**
Tony Mclaughlin	Director	0121 543 6307	
Leyton Reid	Operations Director	0121 543 6307	07305241257
Sandwell General Hospital Hallam St, West Bromwich, B71 4HJ	General Enquiries	0121 553 1831	999
	Accident & Emergency (A&E)	111 / 999	999
	NHS Direct	0845 4647	
West Bromwich Police Station Moor St West Bromwich, B70 8HS	Local Police Station	N/A	999 or 101

1 Introduction

1.1 Fire Prevention Objectives

1.1.1 This Fire Prevention Plan has been designed to meet the following 3 objectives:

To minimise the likelihood of a fire happening;

To aim for a fire to be extinguished within 4 hours; and,

To minimise the spread of a fire within the site and to surrounding neighbouring sites.

1.1.2 All site staff and contractors must be aware and understand the contents of the Fire Prevention Plan (FPP) and what they must do during a fire.

1.1.3 This FPP document will be kept in the site office at all times

1.2 General Site Information

1.2.1 This document considers the risks associated with fire on site at Unit 1a-1b Pearsall Drive, Oldbury, B69 2RA. The site is operated as a non-hazardous Household, commercial and industrial (HCI) waste transfer station with treatment. In summary, waste treatment processes carried out on site on the date of this FPP production include the following:

i) Receive end of life Fire Extinguisher (FE) units

ii) Hand/picking and sorting units for disassembly iii) Drainage of cartridges iv) Sort parts for recycling

1.2.2 If additional processes are to be used, the FPP will be updated accordingly and sent to the EA for comment.

1.2.3 The site receives waste from it's own operations and provides a tipping facility for a wide range of regular customers from the local area to promote recycling and reduce fly tipping.

1.2.4 In addition to this document the site is managed and operated in accordance with a fully comprehensive Environmental Management System (EMS).

1.2.5 The layout of the site is shown on Drawing 1327_PLAN_30-07-2023

1.3 Staffing and Management

1.3.1 The table below details the staff structure of the site when operating at full capacity. Positions in bold italic print below are the minimum staff requirements when the site is open for the reception of waste and, therefore, shows the minimum number of staff available to tackle a fire on site during operational hours. Only the site manager, machine/plant operators and general operatives will be permitted to tackle fires on-site.

Position	Employees	Responsibilities
Site manager	2 ***(1)***	Overseeing and coordinating all activities which take place at the site
Machine / plant operator	9 ***(2)***	Operating loading plant / site supervision
Site / office manager	5 ***(2)***	Managing site administration
General operatives	10 ***(5)***	Sorting waste, maintenance, litter picking etc.

1.3.2 There is a maximum number of 3 agency workers on site.

1.4 Plant and Equipment

1.4.1 The table below details the plant/equipment on site in relation to the waste operations on site on the date of this FPP production. Only trained operators will be permitted to drive/operate the plant/equipment listed below.

Item	Number	Function
HD Platform Scale	1	Determine load weights in/out
Compressor	1	To provide large volume of air for maintenance
Hand Pallet Truck	4	Loading/unloading/movement/sorting
Powder Machine	1	Mechanical processing
Forklift Trucks	1	Loading/unloading/movement/sorting
HGV's	1	Movement of waste material to/from site

Note: The plant/equipment on site may vary and additional equipment may be hired-in to cope with busy periods, larger jobs or jobs with specific requirements.

1.4.2 All plant will be stored on site and will only be operated by trained personnel.

1.5 Hours of operation

1.5.1 The site is operated according to the hours specified below:

Monday to Friday	07:00 - 15:30
Saturday	07:00 - 12:00
Sundays, Bank/Public holidays	Closed

1.6 Correspondence with Water Supplier

1.6.1 Severn Trent Water were contacted in the preparation of the latest FPP review on with a view to obtaining details of existing manholes and drains that serve the premises.

1.6.2 Fire Protection Recycling Ltd will seek a response from the EA and FRS should a fire incident occur or any major site, infrastructure or operational changes with regards to their FPP and associated operations on site. This regular correspondence will ensure all measures to prevent, mitigate and contain fires on site are up to date and deemed sufficient by the FRS.

2 Managing common causes of fire

2.1 Details

2.1.1 TABLE 1 outlines common causes of fire and outlines specific examples of these sources, the associated risks and any mitigation measures necessary to manage them:

TABLE 1

Source	Risk	Specific mitigation
Arson or vandalism	Deliberate ignition of wastes by intruder(s) and/or vandalism of site infrastructure, plant and/or machinery which may give rise to malfunction or compromise the integrity of waste storage/containment measures	Site security measures are detailed in Section 2.7.
Mobile plant/ equipment	e.g. spillages of fuel, sparks from machinery or malfunction caused by ineffective maintenance	Mobile plant/equipment will be kept 6m of combustible waste out-of-hours and each item will be visually inspected prior to use for the presence of leaks and its suitability. All plant / equipment undergoes a preventative maintenance checklist as shown in Sections 2.5-2.6.
Electrical appliances and cabling	Faulty appliances or damaged/ exposed electrical cables may spark as a result of a power surge	All electrics on site are fully certified by a qualified electrician and with written procedures in place that set out the regular maintenance. Any potential ignition sources from suspected electrical faults should be isolated and an electrician should be contacted immediately to rectify the situation. Where possible, staff should immediately remove any stored wastes from the vicinity of the fault area or cable traverse if safe to do so.
Discarded smoking materials	Risk of ignition of stored wastes from smoking materials which have not been fully distinguished	The main operational site has a strict no smoking policy.
Gas canisters	No Gas canisters on site	

Open burning on site or on adjacent sites	Risk of ignition from radiative heat or flaming from open burning on site or an adjacent sites	Open burning is strictly prohibited at the site. Staff are trained regarding the implications if they are found to be carrying out this operation.

Source	**Risk**	**Specific mitigation**
Overheating of stored waste	sources of heat may include heating pipes, hot exhausts, light bulbs, space heaters or direct	Reference should be made to Section 4 of this FPP which details storage and processing procedures for all wastes on site.
Sparks from loading buckets/shovels	Scraping of loading buckets/shovels causing sparks which may ignite stored wastes	Fire extinguishers are fitted in the cab of all loading plant and operational vehicles.
Hot works	No hot works on site	
Industrial heating	Industrial heaters and/or pipework used to heat internal and external areas on site which may, in turn, supply heat to stored wastes increasing the risk of combustion	There are no industrial heaters situated at the site.
Hot exhausts	Potential source of ignition for both primary and residual heat to stored wastes	Hot exhausts will be kept 6m from combustible waste piles during out-of-hours. Staff will be trained and made aware of the risk. The site manager will constantly monitor operational staff/plant; and where possible, ensure a 6m distance is maintained.
Loose material build up around plant/machinery and exhausts	Light waste and ambient particulates with high combustibility settling and building up in key areas in and around plant/machinery and around exhausts	Plant / equipment is monitored daily as per the checklist and dedicated site staff using cleaning agents to keep the areas around plant and equipment clear of debris. Shift teams at end of each shift clean the area around the equipment they have been working on and ensure the equipment is clear all debris and material. This is shown on Section 2.5.5.
Hot loads	Imported wastes which may contain materials which are above ambient temperature	All loads are inspected in accordance with strict waste acceptance procedures. If such loads arrive at site they are intercepted by site operatives who will refuse the acceptance of the waste. If found following tipping, they will be consigned to the quarantine area to ensure the material does not pose a concern/fire risk to the site. The material

		will if required be treated to ensure the risk of fire is completely negated.
Overhead power lines	Any overhead power lines on or around the site may ignite in the event of a fire and worsen the effects	There are no overhead powerlines located in close proximity to the site.
Naked flames, space heaters, furnaces, incinerators	Potential source of ignition for both primary and residual heat to stored wastes	None stored at the site. If any are stored including other sources of ignition, they will be kept 6m from combustible or flammable waste

2.2 Fuel storage

2.2.1 The site stores the following fuel/oil at the site; locations of which are shown on Drawing No. 1327_PLAN_30-07-2023:

i) White diesel = 1280 litres
ii) Engine oils = 100 litres
iii) Addblue = 1000 litres

2.2.2 The following ensure tanks do not cause a fire risk at the site:

Tanks are surrounded by a bund capable of containing a minimum of 110% of the volume of fuel stored in the tank.

All pipework and associated infrastructure will be enclosed within the bund.

A lock will be fitted to the tank valve to prevent unauthorised operation.

All valves and gauges on the bund will be constructed to prevent damage caused by frost.

2.2.3 All tanks are clearly marked showing the product within and also its capacity.

2.3 Hot works procedure

2.3.1 There are no hot works on site.

2.4 Smoking policy

2.4.1 Smoking of cigarettes and e-cigarettes is prohibited in operational areas on site.

2.4.2 Employees who wish to smoke may do so in their own time during lunch breaks at a location outside of the operational site.

2.4.3 Managers will be responsible for the promotion and maintenance of the no smoking policy operational areas of the site by their staff. Managers will receive training and guidance regarding their responsibilities in relation to the policy and enforcement of it.

2.4.4 Employees should inform the appropriate manager immediately if anyone fails to comply with the policy.

2.4.5 Employees not complying with the policy will be referred to their manager for support subject to the usual disciplinary procedure.

2.4.6 Visitors not adhering to the policy will be asked to comply or leave the site.

2.4.7 All job applicants will be made aware of the policy via application packs, where a requirement to abide by it will be part of the person specification. Applicants will be reminded of the policy at interview stage.

2.4.8 A copy of the policy will form part of new employees' induction packs. Training and guidance on enforcing the policy will form part of new managers' induction process.

2.4.9 The policy will be reviewed every 12 months.

2.5 Plant and equipment maintenance

2.5.1 Any spillages of fuel will be cleared immediately by depositing sand or absorbents on the affected area and removed to the quarantine area or to a dedicated skip to await removal to a suitably permitted facility.

2.5.2 External separation distances of at least 6m will be observed between plant and stored material when the site is not staffed. In the building, all plant will be powered-down and completely shut off prior to cessation of operations on any given day. Plant which is not in use for any extended period will be stored as shown on Drawing No. 1327_PLAN_30-07-2023.

2.5.3 Loadalls, excavators and any other operational vehicles will contain fire-fighting equipment i.e. fire extinguishers in the cab rather than rubbers strips as the main problem is that loading shovels equipped with buckets are used on most sites on ground that is not completely flat and for loading non-homogeneous waste which has the potential to remove a rubber strip on the day it is fitted.

2.5.4 Mufflers will be fitted onto hot exhausts to ensure the source of ignition from plant/equipment is reduced to a minimum.

2.5.5 Dust from processing/treatment operations on site can settle at the end of the shift / working day onto hot exhausts and engine parts so a fire-watch will be implemented after cessation of works. Any build of dust/fluff will be removed from the equipment by using manual techniques i.e. hose/brush at the end of the working day and depending on weather conditions, more frequent. The checklist will be completed and comments noted in the inspection sheet shown in Appendix II or the operator's own in house inspection procedural checklists.

2.5.6 Site management will undertake or delegate additional preventative maintenance checks on a daily basis to ensure it is mechanically sound and no obvious leaks are present.

2.6 **Preventative Maintenance**

2.6.1 All items of plant and equipment listed in Section 1.4 are subject to preventative maintenance checks to ensure their safe operation and to prevent any potential situations which may give rise to faults or malfunction. A preventative maintenance and fire checklist are shown in Appendix II of this FPP as a guide for the operator to observe; as per Section 2.5.5, the operator may have their own in house checklists.

2.6.2 Much of the plant and equipment on site and all vehicles in the fleet are subject to

manufacturer maintenance to ensure proper working order in the form of service contracts. Site management will undertake or delegate additional preventative maintenance checks on a more frequent basis to ensure i.e. daily, before, during and at the end of each working day to ensure where possible, the machinery is mechanically sound and comments noted on an inspection sheet.

2.7 Site security

2.7.1 The boundary of the site is protected from unauthorised access by members of the public for security. The site's boundary treatment measures (including type and height of the boundary treatments) are shown on Drawing No. 1327_PLAN_30-07_2023. The site access gates are of steel construction and are lockable to prevent unauthorised vehicular o pedestrian access out-of-hours.

2.7.2 The site has 24 hour CCTV system which is remotely accessible and benefits from a videofied intruder alarm system which alerts 2 no. out-of-hours staff who can view the footage and decide what further action to take i.e. visit the site or call the Police / FRS.

2.7.3 The site security measures will be inspected on a daily basis and any defects which impair the effectiveness of the security will be repaired by the end of the working day. If this is not possible, temporary measures will be put in place to ensure no unauthorised access to the site can be gained until the proper repairs can be carried out as soon as practicably possible.

2.7.4 If unauthorised access becomes apparent as a problem at the site the security measures will be reviewed and improvements implemented.

2.8 Electrical faults or damaged/exposed electrical cables

2.8.1 All electrics on site are fully certified by a qualified electrician annually and with written procedures in place that set out the regular maintenance. PAT tests are kept in the site office for inspection by the EA / HSE.

2.8.2 Any potential ignition sources from suspected electrical faults should be isolated and an

electrician should be contacted immediately to rectify the situation. Where possible, staff should immediately remove any stored wastes from the vicinity of the fault area or cable traverse if safe to do so.

3 Waste acceptance procedures

3.1 Strict waste acceptance procedures are in place at the site and the following details will be recorded for every load deposited at the site which has been extracted from Section 3 of the site's EMS:

a) The date and time of delivery.
b) The name and address of the waste producer.
c) The detailed and accurate description of the waste including type, quantity (in tonnes and/or cubic metres) and EWC codes.
d) How the waste is contained e.g. loose, container type.
e) The carrier's name and address.
f) Driver's name, signature and vehicle registration No.
g) Signature or initials of person(s) producing/ accepting/ inspecting/ carrying the waste.
h) Additional handling details/notes made by the driver after inspection of the load.
i) SIC code of the premises which produced the waste (where relevant).
j) Waste hierarchy declaration.
k) Information on previous treatment of the waste e.g. manual or mechanical.

3.2 Any wastes identified during the incoming waste inspections which do not conform to site acceptance criteria will not be accepted and/or removed and quarantined immediately to await safe removal from site and the EA will be contacted (where necessary) if the nonconforming waste discovered is likely to lead to a breach of permit conditions or a potential risk of combustion.

4 Managing waste storage to prevent self-combustion and the fire spreading

4.1 General

4.1.1 All waste stored on site will comply with Section 9.1 of the EA's FPP guidance

4.1.2 The operator will minimise pile sizes and store waste materials in their largest form.

4.1.3 The aim for the site operator is to follow a 'first in, first out' principle where incoming waste is sorted and processed on arrival to arrange for its export off site as soon as practicably possible, to minimise over-stocking.

TABLE 2 Combustible Wastes/Non-Combustible Wastes Stored.

Waste Type	EWC	How Stored & Storage Duration	Max Quantity Stored	Combustible/Non-Combustible
1. Water, Foam, & Dry Powder filled, pressurised Fire Extinguishers	16 05 05	Metal stillage cages in warehouse. Water and foam filled units processed same day/next day. Dry powder units stored 2-3 days. Full CO_2 extinguishers stored in metal caged stillages in the outside yard	3000 units across all types	Non-Combustible

		against the boundary wall in the area labelled outside storage on site layout plan. Stored for 24hrs prior to being discharged to atmosphere	Max 8 metal, caged stillages.	Non Combustible
		CO2 units discharged outside, empty units stored in warehouse, delivered out 1#/week for refurbishment. Water and foam filled units discharged in warehouse to IBC's prior to sewer discharge.		
		Incoming Extinguishers received into and temporarily stored in warehouse in 1# 40yds^3 Ro Ro container, then segregated to type and stored in metal stillage cages.	40yds^3	
		1#Ro Ro container in warehouse for all empty cases, post discharge. Ro Ro's emptied and refilled daily.	40yds^3	

2. Paper and cardboard packaging	15 01 01	Stored in yard in 2# 8yds^3 closed metal skips with general office waste. Collected for recycling every 7-10 days. Up to 30# flat packed cardboard boxes, used for transport of incoming extinguisher units from a single supplier, stored in building on a single pallet, shrink wrapped, for return to waste producer	16yds^3 1 yd^3	Combustible Combustible
3. Plastic Packaging	15 01 02	Stored in the 2# 8yds^3 closed metal skips in the yard used for paper, cardboard and general waste	Included in item 2 above	Combustible
4. Wood Waste	15 01 03	Stored in 1# 40yds^3 Ro Ro container in external yard, emptied when full ca 1#/month Wood Pallets,stored in yard collected for reuse 1#/month	40yds^3 Max 100 pallets	Combustible

Metallic Packaging	15 01 05	Metallic packaging consisting of metal sheets to be stored on site within the warehouse stacked up to 4 high in a marked area.	Max 250 sheets	Non-Combustible
Composite Packaging	15 01 05	Consisting of a combination of rigid and foldable, plastic stillages Stored in yard to left of warehouse, shutter door or in left yard corner near boundary fence or next to pallet storage. Max 7 days duration	25 units	Combustible

4.2 Combustible waste pile storage

4.2.1 There are no combustible waste stored in piles on site. All combustible wastes are stored as listed in the Table above

4.3 Fire walls and bays

4.3.1 All concrete fire walls which are used on site manufactured have been designed to A1 Class meaning they will provided a permanent thermal barrier. Therefore, the firewalls on site will:

a) resist fire (both radiative heat and flaming); and,
b) have a fire resistance period of at least 120 minutes to allow waste to be isolated and to enable a fire to be extinguished within 4 hours.

4.3.2 The walls are constructed in way to ensure they are adequately sealed to prevent the spread of fire.

4.3.3 Where a firewall is not used between waste piles, the site boundary or buildings, there is no combustible or flammable material stored within 6m of the waste

4.4 Site inspection programme

4.4.1 A daily fire watch using the Fire Checklist will monitor the site at set intervals during the working day, to detect signs of a fire from hot exhausts or engines and cleaning up of loose combustible waste. The intervals may vary due to site operations but there will be at least one at the start and end of each working day. Operational staff may be given a dedicated section of the Fire Checklist to ensure they can monitor at all times throughout the working day. It is estimated the fire watch will take a minimum of 15 minutes but start and end times will be completed using the fire checklist.

4.4.2 Carrying out the above checks daily will keep the levels of dust, fibre, paper and other loose combustible materials, which could aid in the acceleration of a fire, on site surfaces to a minimum and ensure all containment of wastes on site are functioning effectively.

4.5 Staff training

4.5.1 The site managers and TCM will be suitably qualified to carry specific fire risk training to all operational staff who work in relation to combustible waste activities.

4.5.2 Each relevant staff member will undergo training from on-site the fire marshal using the forms shown in Appendix II of this FPP or the operators own in house records. New members of operational staff will be required to complete a training sheet and be deemed competent in completing the fire checklist. As a minimum, each relevant member of staff will be assessed from the date of approval of this FPP and then every 3-6 months afterwards. If feasible, a third party fire risk assessor will be contacted to train operational staff who need to be aware of the content of this FPP if the fire marshals are not present at the site.

4.5.3 Ongoing training by the TCM, site manager using tool box talks will also be provided to ensure site staff are informed of any changes to any of the site management documentation that is subject to regular review.

4.5.4 A full test (drill) of the procedures in this document will be carried out every 3-6 months to test that the plan works. The first test will take place within one month of the agreement of this document with the EA. The outcome and any follow up training for staff will be documented in the site diary and relevant forms in the EMS. The Fire Checklist will also be used during the drill. Details of an in house inspection sheet for a fire drill are shown in Appendix II and following previous drills, on average all staff members can be at the designated assembly point within 2 minutes.

5 Quarantine area

5.1 General

5.1.1 Waste piles stored in the quarantine area are non-combustible.

5.1.2 The quarantine area shown on Drawing No. 1327_PLAN_30-07-2023 measures 68m^2

5.1.3 Wastes will only be moved to the quarantine area if safe to do so following recommendation of the WMFS.

6 Detecting fires & response procedures

6.1 Fire detection procedure (manual)

6.1.1 If a fire is detected or suspected by a member of staff during operational hours, it must be immediately reported to the site manager, TCM or fire marshal. The relevant person will then conduct the following procedure:

a) Raise the fire alarm (if not already done by another staff member).
b) Initiate evacuation of staff and visitors on site to the meeting point and instruct delegated person(s) to conduct a roll-call to ensure all site users are accounted for.
c) Assess the intensity and scale of the fire and make a judgment as to whether the fire can be managed without the requirement for assistance from the emergency services i.e. using the hose or fire extinguishers.
d) If viable and safe, instruct necessary site staff to commence extinguishment.

6.2 Out of hours fire detection (automated)

6.2.1 **Site Security and CCTV system**: Details of the site's security infrastructure and 24 hour CCTV and intruder alarm system are outlined in Section 2.7 which are considered ample to prevent arson inform the operator of an incident.

6.2.2 During times when the site is not operational between the hours of 15:30 - 07:00 and as there are 7 CCTV cameras, remotely accessible, situated throughout the site, an overnight security watchman will not be required.

Trained in using of basic fire-fighting equipment i.e. hose reels, extinguishers

Be trained in fire water containment procedures

Have all contacts for the West Midlands Fire Service (WMFS), out-of-hours staff and adjacent sites who would be contacted in the event of a fire.

6.3 Fire response procedures

6.3.1 Further to the above measures, the following procedure would apply in all incidents of fire detected during operational or out-of-hours:

a) Call the Fire Response Service (FRS) immediately using 999.

b) Call the EA's Emergency Contact Number.

c) Prior to the WMFS arriving, inform all neighbouring premises likely to be affected.

d) If not previously informed, senior management of the company will be informed at this point of the details, nature and extent of the fire and whether assistance from staff from other depots is required.

e) Ensure access routes are clear.

f) If safe to do so, the TCM or a senior member of staff will inspect the location of the fire, to identify immediate risks to surrounding premises and the FRS.

g) Ensure operators of appropriate machinery are standing by in a safe location to help create fire breaks, under the direction of the FRS when they arrive.

h) Ensure relevant site staff are standing by in a safe location to deploy surface water protection equipment under the direction of the FRS when they arrive.

i) The site manager / TCM will identify themselves to the fire service as soon as they arrive on site and will provide them with a copy of this document and update them with relevant information that will assist them in dealing with a fire more effectively.

j) Implement pollution control measures only when safe to do so.

6.3.2 In the event of the site manager or TCM being absent from the site, the operator will ensure a suitable person is employed and familiar with the site.

6.4 Notifying nearby properties

6.4.1 The nearest receptors within 200m of the site i.e. other users of the Industrial Estate will be informed of the fire by employees of the operator and the WMFS, Local Council and EA will be contacted to ensure further properties are informed should the fire become problematic i.e. local business, houses.

7 Suppressing fires & firefighting techniques

7.1 Site-wide suppression (including covered area)

7.1.1 There are a 17 fire extinguishers located around the site which can be deployed in the event of an incident to tackle the fire or for fire suppression in the intervening time between discovery of the fire and the arrival of the WMFS.

7.1.2 There are mains water points located in the buildings and around the site which are shown on Drawing No. 1327_PLAN_30-07-2023. Standard 20m - 50m hoses can be connected to these points.

7.2 Access for emergency services

7.2.1 The nearest fire station is Oldbury Fire Station and situated 1.5 miles and the WMFS could be at the site and begin fighting a fire within 10 minutes of a call.

7.2.2 The site has direct access from into the site from Pearsall Drive and the width of the surrounding roads and the gateway provide sufficient access onto the site for the WMFS.

7.2.3 Access routes for emergency services around the site for firefighting are clearly shown in on Drawing No. 1327_PLAN_30-07-2023

8 Water supplies

8.1 On-site water supply

8.1.1 The site has access to 1 no. hose reels which connect to the mains water supply which can be used for dousing any hot loads or for any small fires which could break out. The Reel is disconnected at all times unless it is required for use.

8.2 Off-site water supply / fire hydrants

8.2.1 As there is no readily available information in terms of the hydrants, the following guidance on water supplies for industrial estates has been referenced in order to determine an average flow:

a) Up to one hectare minimum of 20 l/sec (1200 l/min)
b) One to two hectares minimum of 35 l/sec (2100 l/min)
c) Two to three hectares minimum of 50 l/sec (3000 l/min)
d) Over three hectares minimum of 75 l/sec (4500 l/min)

8.2.3 The surrounding Industrial Estate comprises over 10 hectares which would easily exceed the required 3,666 litres per minute to ensure the fire is extinguished within 3/4 hours.

8.3 Additional / alternative suppression measures

8.3.1 There are 17 fire extinguishers and 1 no. hose reels located around the site which can be deployed in the event of a smaller fire incident for fire suppression.

9 Managing fire water

9.1 Drainage

9.1.1 Dammit® emergency clay drain mats to be provided over drains in the event of a fire.

9.2 Removal of fire water

9.2.1 Upon successfully extinguishing a fire all standing fire water would be pumped using a hired-in vacuum tanker and deposited to a suitably permitted site for treatment. No firewater would be discharged into sewers. Where mains sewer pipe terminate at boundary of site, plugging points to be provided to prevent fire water from escaping to the main sewer networks. Refer to drawing '1327_PLAN_30-07-2023' for exact location of plugging points.

9.2.2 Land booms to be provided to contain fire water on the floor surface of the unit, prevent spillage past roller shutters and fire escape doors. Refer to drawing '1327_PLAN_30-07-2023' for exact location of Land booms.

10 After an incident

10.1 Contingency Planning

10.1.1 In the event of a fire the site will cease accepting waste. All customers who wish to deliver wastes during a fire will be notified by site admin staff and any who arrive without prior notification will be turned away. If urgent, deliveries will be directed to an alternative waste facility in the borough; details of which can be found on the EA's public register.

10.1.2 No waste will be accepted on site until the post-fire site recovery procedures outlined in the section below have been fully implemented and the site is authorised to re-open for trade and waste acceptance.

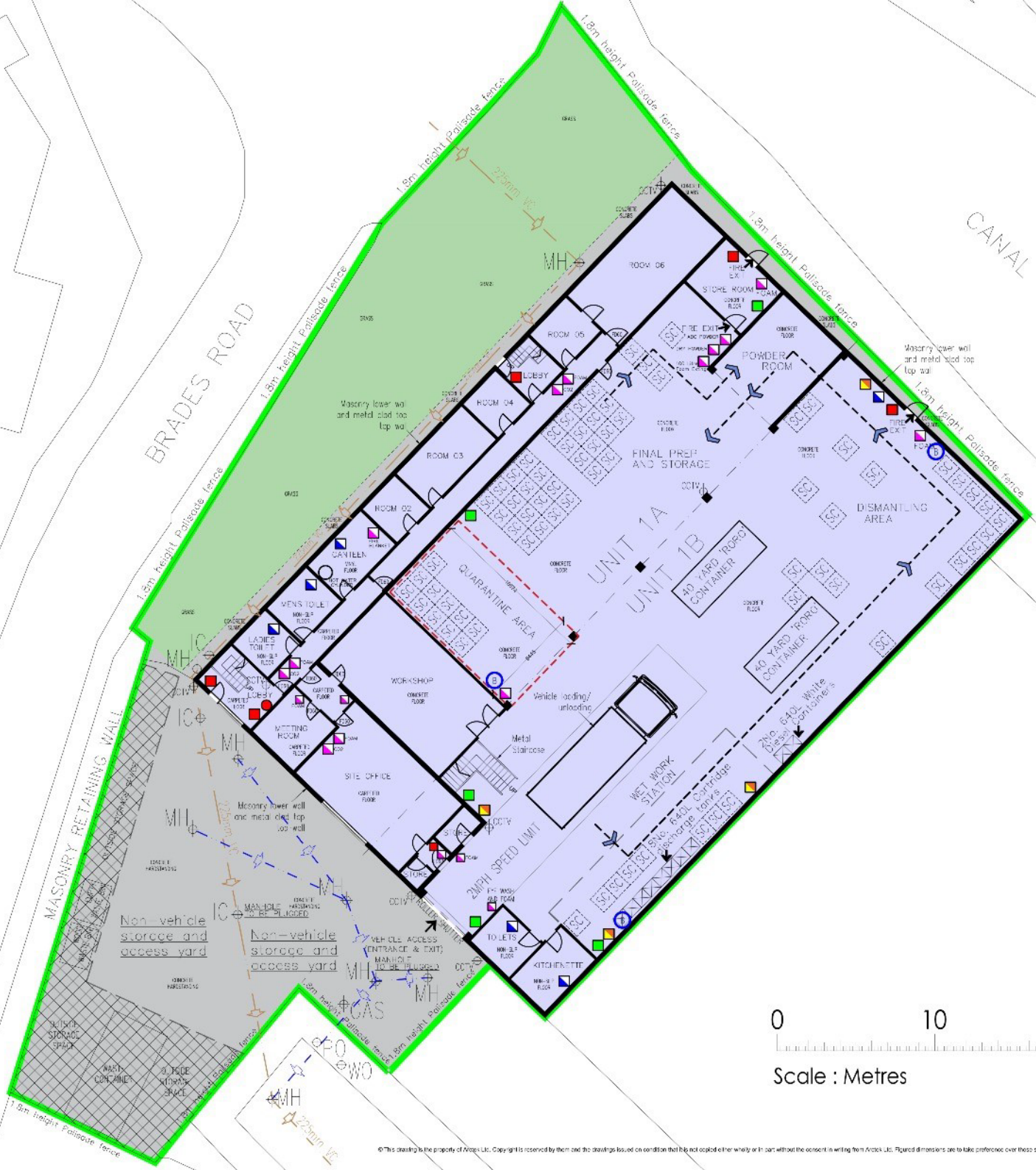
10.2 Post fire site recovery

10.2.1 If a recovery procedure is required, the operator would instigate the following;

a) Remove damaged material to a permitted facility that is able to deal with it legally.
b) Ask engineers to carry out repairs on any plant, vehicles and/or infrastructure.
c) Assist the WMFS with the fire investigation and where necessary engage the advice from a professional fire consultant.
d) Review the FPP and EMS procedures and improve upon where found deficient.
e) Review training requirements for staff.
f) Assess whether further preventative measure could implemented.
g) Ensure all fire equipment, where used, is replenished.
h) Remove fire water to a permitted facility for disposal.

Appendix I

Drawings



KEY:

- Perimeter boundary
- Storage areas
- Sealed buildings
- Concreted area
- Vegetation/grass area
- Mains water
- Spill kit
- Fire fighting equipment (extinguishers, etc.)
- Electricity shutoff
- Plant shutoff
- Fire alarm
- Gully
- Main Fire Alarm control panel
- Emergency vehicle access route
- Foul drainage
- Rain/Surface water drainage
- MH — Manhole
- IC — Inspection chamber
- CCTV — Closed circuit surveillance camera
- SC — Metal stillage store cage (1200x1200)
- B — Land Boom (wall mounted)

NORTH

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ARCTEK LTD
GROSVENOR HOUSE
11 ST PAULS SQUARE BIRMINGHAM B3 1RB

CLIENT
FIRE PROTECTION RECYCLING

SITE ADDRESS
UNIT 1A-1B PEARSALL DRIVE
OLDBURY,
B69 2RA

DRAWING TITLE
PROPOSED SITE PLAN

DATE
30-07-2023

SCALE
1:250 @ A3

DRAWN BY
MA

DRAWING NO
1001-03

JOB NO
1327

FIRE PROTECTION, UNIT 1A-1B, PEARSALL DRIVE, OLDBURY, B69 2RA

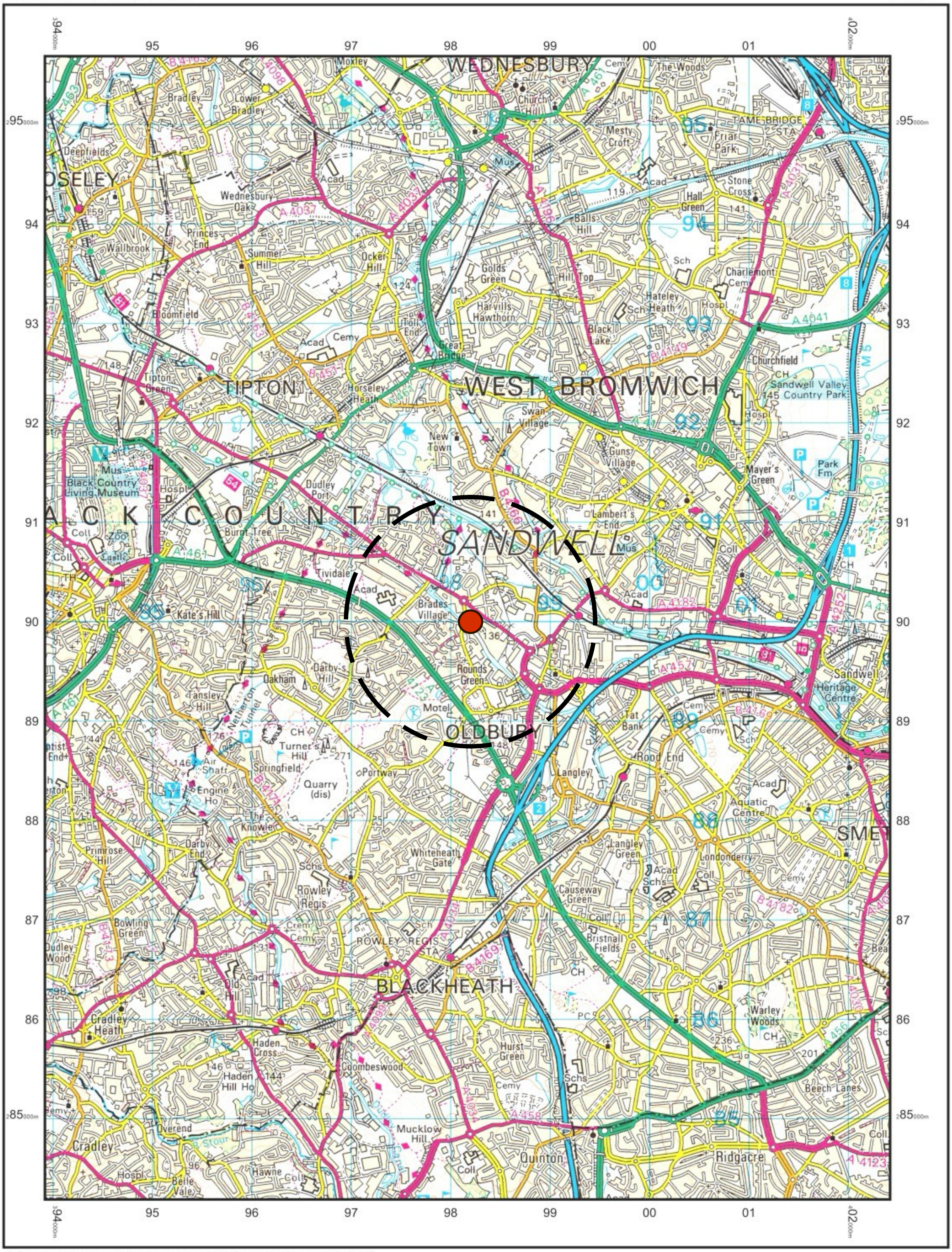
Supplied by: www.ukmapcentre.com

Serial No:265582

Centre Coordinates:398169,289938

Production Date: 11/06/2023 16:59:35

North



The representation of road, track or path is no evidence of a boundary or right of way. The representation of features as lines is no evidence of a property boundary.

UK MAP CENTRE .com

0m 1cm = 500m 2500m

Scale 1:50000

Ordnance Survey Licensed Data

Appendix II

Record Keeping Forms

Appendix II

FIRE PROTECTION RECYCLING LTD
SITE INSPECTION FORM (MINIMUM TWICE DAILY)

DAY												
TYPE OF INSPECTION												
TIME OF INSPECTION (START)												
TIME OF INSPECTION (FINISH)												
SITE ENTRANCE/NOTICE BOARD												
SECURITY - GATES												
SECURITY - FENCING												
SITE ROADS (CLEAR FROM HAZARDS)												
IMPERMEABLE CONCRETE AREAS (INTEGRITY)												
BUND AROUND CONCRETE PAD (INTEGRITY)												
INTERCEPTORS												
WASTE CONTAINERS & BAY WALLS												
WASTE STORAGE LIMITS – INERT												
WASTE STORAGE LIMITS – BIODEGRADABLE												
WASTE STORAGE LIMITS – COMBUSTIBLE												
COMBUSTIBLE WASTES (AWAY FROM POTENTIAL IGNITION SOURCES)												
REJECTED WASTE TYPES / STORAGE												
NOISE LEVELS												
FIRES (ANY INCIDENTS REPORTED)												
QUARANTINE AREA CLEAR OF WASTE												
NO SMOKING SIGNS IN PLACE												
FIRE FIGHTING EQUIPMENT												
FIRE BREAKS IMPLEMENTED												
PLANT/EQUIPMENT MAINTENANCE CHECKS												
HOT EXHAUSTS FIRE WATCH (DUST/FLUFF CLEANED REMOVED)												
SPILLAGES OF OIL/LIQUIDS CLEARED												
OFFICE/WELFARE FIRE RISKS CHECKED												
ELECTRICAL APPLIANCES AND CABLING CHECK												
FUEL TANK/BUND												
LITTER												
DUST												
ODOUR												
VERMIN												
RECORDS												
COMPLAINTS RECEIVED												
OTHER (SEE NOTES BELOW)												
INSPECTION CARRIED OUT BY												

NOTES/ACTION (CONTINUE ON A SEPARATE SHEET IF NECESSARY):

CHECKED BY		**SIGNATURE**	
POSITION		**DATE**	
Sheet		***of***	

FIRE PROTECTION RECYCLING LTD - PREVENTATIVE MAINTENANCE

CHECKED BY		POSITION				
DATE		DATE OF LAST CHECKLIST				
	EQUIPMENT ITEM					
OFFICIAL MAINTENANCE CHECK REQUIRED (Y/N)						
IF NO, DATE OF LAST CHECK						
IF YES, DATE OF NEXT CHECK						
IS ITEM IN CORRECT WORKING ORDER						
LEAKAGES OF OIL/DIESEL ON MOBILE PLANT / VEHICLES						
IF NO, WHAT REPAIRS ARE REQUIRED (USE SEPARATE SHEET IF REQUIRED)						
WERE REPAIRS DETAILED ON THE LAST CHECKLIST						
IF YES, HAVE THEY BEEN CARRIED OUT						

ADDITIONAL REPAIRS OR ACTIONS REQUIRED						

Appendix II

FIRE PROTECTION RECYCLING LTD - EMPLOYEE TRAINING NEEDS ASSESSMENT / REVIEW

EMPLOYEE NAME				**DATE**						
POSITION				**REVIEW DUE**						
TRAINING CARRIED OUT BY										
POSITION										
TRAINING REQUIRED	**GENERAL OPERATIVES**		**DRIVERS**		**PLANT OPERATOR**		**YARD MANAGER**		**TECHNICALLY COMPETENT MANAGER**	
CARRIED OUT?	Y/N	SIGNED BY EMPLOYEE	Y/N	SIGNED BY EMPLOYEE	Y/N	SIGNED BY EMPLOYEE	Y/N	SIGNED BY EMPLOYEE	Y/N	SIGNED BY EMPLOYEE
SITE RULES AND INFRASTRUCTURE										
EMERGENCY PROCEDURES										
FIRE SAFETY/ FIRE FIGHTING										
RECOGNITION OF WASTE TYPES										
RECOGNITION OF MAXIMUM PILE SIZE										
RECOGNITION OF MAXIMUM STORAGE DURATION										
FIRE DETECTION - EARLY SIGNS I.E. VISUAL/SMOKE										
STORAGE AREAS/LIMITS										
FIRE FIGHTING EQUIPMENT & ALARMS										

FIRE WATER CONTAINMENT MEASURES, DRAIN MATS, PENSTOCK VALVE										
PLANT / VEHICLE CHECKS (Preventative Maintenance)										
PLANT OPERATION LOADING PLANT										
FIRE PREVENTION PLAN, MANAGEMENT SYSTEM & PERMIT										
SPILLAGE/CLEARANCE MEASURES										
OTHER 1 (PLEASE SPECIFY)										

Appendix II

Appendix III

CCTV

Appendix III

HIKVISION

DS-7332HGHI-SH
TurboHD DVR

TurboHD

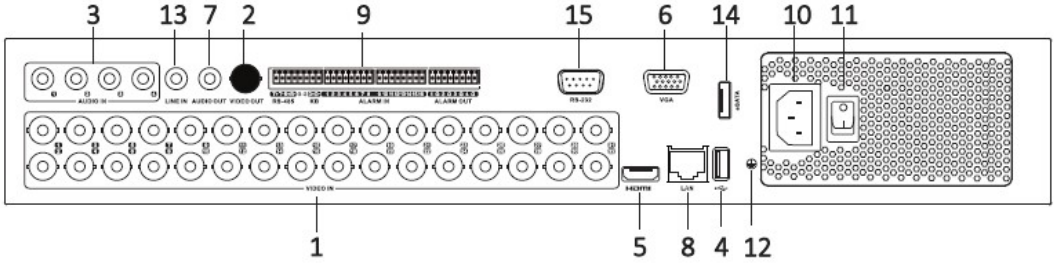
Key Features

- Dual Stream H.264 Compression
- HD-TVI/Analog/Network Camera Tribrid
- Auto-Detect/Configure HD-TVI/Analog Input
- Full Channel @ 1080p Resolution Non Real-Time Recording
- HDMI and VGA Output at Up to 1920 x 1080p Resolution
- High Resolution Over Coax Cable
- Supports Up to 16-ch Synchronous Playback at 1080p Resolution

Rear Panel

1. Video In
2. Not Used
3. Audio In RCA Connectors
4. USB Port
5. HDMI
6. VGA Interface
7. VGA Audio Out
8. LAN Network Interface
9. RS-485 Serial Interface, Keyboard Interface, Alarm In
10. 100 to 240 VAC Power Input
11. Power Switch
12. GND
13. Line In
14. eSATA Interface
15. RS-232 Serial Port

	DS-7332HGHI-SH
Video/Audio Input	
Video Compression	H.264
Analog and HD-TVI Video Input	32-ch
	BNC interface (1.0 Vp-p, 75 Ω)
Supported Camera Types	720p25, 720p30, 720p50, 720p60, 1080p25, 1080p30, CVBS
IP Video Input	8-ch (up to 32-ch)
	Up to 2 MP resolution
Audio Compression	G711u
Audio Input	4-ch, RCS (2.0 Vp-p, 1 K Ω)
Two-Way Audio In	1-ch, RCA (2.0 Vp-p, 1 K Ω)
Video/Audio Output	
HDMI/VGA Output	1920 x 1080/60 Hz, 1280 x 1024/60 Hz, 1280 x 720/60 Hz, 1024 x 768/60 Hz
Encoding Resolution	Main stream: 1080p (non-real-time)/720p/VGA/4CIF/CIF
	Sub-stream: WD1 (non-real-time)/4CIF (non-real-time)/CIF/QCIF/QVGA
Frame Rate	Main stream: 30 fps (maximum)
	Sub-stream: 30 fps (maximum)
Video Bit Rate	32 Kbps to 8 Mbps
Audio Output	2-ch, RCA (linear, 1 K Ω, for VGA output and CVBS output respectively)
Audio Bit Rate	64 Kbps
Dual-Stream	Supported
Stream Type	Video, video and audio
Synchronous Playback	16-ch
Playback Resolution	1080p/720p/VGA/WD1/4CIF/CIF/QVGA/QCIF
Network Management	
Remote Connections	128
Network Protocols	TCP/IP, PPPoE, DHCP, DNS, DDNS, NTP, SADP, SMTP, SNMP, NFS, ISCSI, UPnP™, HTTPS
Hard Disk	
Type	4 SATA interfaces for 4 HDDs; 1 eSATA interface
Capacity	Up to 6 TB capacity for each disk
External Interface	
Network Interface	1; 10M/100M/1000M self-adaptive Ethernet interface
Serial Interface	RS-232, RS-485, keyboard
Alarm In/Out	16/4
USB Port	3 x USB 2.0
General	
Power Supply	100 to 240 VAC, 47 to 63 Hz
Consumption (w/o hard disks)	≤65 W
Working Temperature	-10° C to +55° C (14° F to 131° F)
Working Humidity	10% to 90%
Chassis	19-inch rack-mounted 1.5U chassis
Dimensions (w x d x h)	445 mm x 390 mm x 70 mm (17.5" x 15.3" x 2.7")
Weight (w/o hard disks)	≤5 Kg (11.0 lb)



Order Model

DS-7332HGHI-SH

Hikvision USA Inc., 908 Canada Court, City of Industry, CA 91748, USA • Hikvision Canada, 4485 Dobrin, St-Laurent, Quebec, Canada, H4R 2L8
Tel: +1-909-895-0400 • Toll Free in USA: +1-866-200-6690 • E-Mail: sales.usa@hikvision.com • www.hikvision.com

102116NA

Appendix IV

Concrete Fire Wall Specifications

Appendix IV

Concrete Barrier Block Fire Walls

We use Stacablocs for the construction of concrete barrier block fire walls because they are wider than Virtabloc and allow the wall to be built higher.

We use our Geo concrete mix as the geopolymer characteristics perform better in very high temperatures. In general terms concrete does not burn and can protect other structures from fires caused by inflammatory materials such as tyres, chemicals, fuels any many other materials.

Class A1 fire resistant

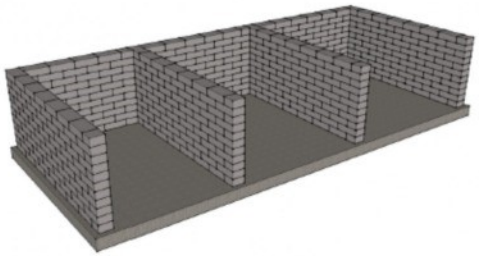
Class A1 fire resistant in accordance with clause 4.3.4.4 of EN 13369. Concrete does not burn and therefore cannot contribute to a breakout and the spread of fire or add to the fire load. As concrete cannot burn it does not emit smoke, gases or any toxic fumes when affected by fire. All building materials have been classified in terms of their reaction to fire and their resistance to fire, which will determine whether or not a material can be used and when additional fire protection needs to be applied to it. Based on the European Construction Products Directive, EN 13501–1: 2002: Fire classification of construction products and building elements classifies materials into seven grades with the designations, A1, A2, B, C, D, E and F, according to their reaction to fire.

The highest possible designation is A1 (non-combustible materials) and the European Commission has published a binding list of approved materials for this classification, which includes the various types of concrete and also the mineral constituent materials of concrete. **Concrete fulfils the requirements of class A1 because its mineral constituents are effectively non-combustible** (i.e. do not ignite at the temperatures that normally occur in fire).

Concrete is a very effective fire shield. The mass of concrete confers a high heat storage capacity. Also its porous structure provides a low rate of temperature rise across a section. These properties result in a low rate of temperature rise that enables concrete to act as an effective fire shield.

Due to the low rate of increase of temperature through the cross section of a concrete element, internal zones do not reach the same high temperatures as a surface exposed to flames.

Even after a prolonged period, the internal temperature of concrete remains relatively low; this enables it to retain structural capacity and fire shielding properties as **a separating element**.



CLASS A1
FIRE RESISTANT

Appendix V

Operator Documents

Appendix VI