Fire prevention plan

Swanscombe Solar Panel Recycling Facility

UBH Group Limited

T/A

Solar Recycling Solutions

Unit B3

Manor Way business Park

Manor Way

Swanscombe

DA10 0PP

WHAT 3 WORDS LOCATION:

INPUT.PLUS.AHEAD

V.3 – November 2025

Site details

Site name: **Solar Recycling Solutions**

Site address: **Unit B3, Manor Way business Park, Manor Way, Swanscombe DA10 0PP**

Operator name: **UBH Group Limited T/A Solar Recycling Solutions**

Who this plan is for

SRS Staff

Site Contractors

Unaccompanied Visitors

Fire Officers

For Induction Record – See end of document

Contents

Types of combustible materials

Combustible waste

Incoming complete solar panels – low combustibility

Granulated glass – very low combustibility

Granulated Metals – very low combustibility

Granulated silicon backing/silver & solder (with some lead present in very small amounts) – very low combustibility

Granulated Plastics that may contain small amounts of POPS – low combustibility Please note this is stored in segregated sealed containers in the yard behind the main building

Persistent organic pollutants

A maximum of 20 tonnes of plastic may be stored at any one time on site.

This will be stored in locked, sealed shipping containers in the southern yard and these containers will be clearly marked for Plastics Storage Only.

The plastic will be stored in bulk bags on pallets within the container.

This plastic may contain POPs so it will be segregated from the rest of the stored granulated products on site.Under this heading you need to identify any wastes that contain persistent organic pollutants (POPs). You need to segregate POPs waste from non-POPs waste and mark them clearly on your site plan.

The plastic/POPs containers effectively act as their own quarantine areas.

The Plastic/POPs containers effectively provide fire walls/bays for this material.

Due to the small volume of these containers and the fact that they are sealed, in the unlikely event that a fire should break out within one of these containers, the FRS will be able to fill each container with c.20m3 of water through the ventilation grills in the container sides, effectively drowning a fire very quickly.

These containers will retain the water, which may be pumped out through a hole cut in the roof of the container once the fire is extinguished.

The remnant plastics will then be disposed of to a suitably permitted facility and the container scrapped.

Other combustible materials

Maintenance fluids & stores – low combustibility

Using this fire prevention plan

Where the plan is kept and how staff know how to use it

This FPP is stored within the Site Reception area, in a box clearly labelled & visible through the front door.

Staff may access a copy held in the site office in order to ensure the reception area copy is not removed.

Testing the plan and staff training

The FPP will be reviewed annually as a minimum.

Staff will be inducted on the FPP after every review and fire drills will be carried out every 3 months.

1. Contact Details – Site, Operators, Regulators & Stakeholders

Site Address:
Solar Recycling Solutions
Unit B3
Manor Way business Park
Manor Way
Swanscombe
DA10 0PP

1.2. Site Operator:

UBH Limited
Trading as
Solar Recycling Solutions
Unit B3
Manor Way business Park
Manor Way
Swanscombe
DA10 0PP

1.3. Key Contacts List

CONTACT	DESCRIPTION	OFFICE HOURS	OUT OF HOURS
Sal Rogers	Site Manager	01892 506916	07920 510409
Darent Velley Hospital Darent Valley Hospital, Darenth Wood Road, Dartford, Kent DA2 8DA	Local NHS Hospital (Main) & Accident & Emergency (A&E)	01322 428100 & 999 - Emergency	999
North Kent Police Station, Thames Way, Northfleet, Gravesend, Kent, DA11 8BD	Local Police	01622 690690 & 999 - Emergency	999
Dartford Fire Station, Powder Mill Lane, Dartford, Kent, DA1 1NS.	Fire & Rescue Service	01622 692121	999
Environment Agency, Orchard House, Endeavour Park, London Road, Addington, West Malling, Kent, ME19 5SH	Environmental Regulator	0370 850 6506	0800 80 70 60
Swanscombe & Greenhithe Town Council, 16, The Grove, Swanscombe, DA10 0AD	District Council General Enquiries	01322 385513	01322 385513
Kent County Council, County Hall, Maidstone ME14 1XQ	County Council (Waste Planning Authority) General Enquiries	0300 041 4141	0300 041 4141
Mike Thompson, Mike Thompson Partnership Ltd.	Specialist Waste & Permitting Consultant	07773 812410	07773 812410

Fire prevention plan contents

Activities at the site

SRS Swanscombe uses a new plant to deconstruct and recycle end-of-life solar panels.
No other waste type is received on site.
All incoming WEEE panels are rapidly reduced to their constituent factions by an automated process line and the recycled factions are sold to onwards processors for re-use within the marketplace.
No panels are refurbished or released for re-use by SRS Swanscombe.

The site process is as follows:
Panels are checked prior to despatch to Swanscombe to ensure no hazardous waste is present within the WEEE.
Loads are received, unloaded and inspected in the loading/unloading area immediately outside the front and eastern side of the process buildings.
Contaminated panels are rejected if they are not processable.

The panels come palletised and are offloaded by forklift.
All incoming panels are stored in B1 whilst awaiting processing.
The panels are stored with the top panel glass down (if not stored undercover) and on an impermeable surface.

The panels first have the junction/inverter boxes removed from the rear manually and are then placed on the line where the aluminium frame is pulled off the panel as a first operation.
The junction boxes are granulated to recover copper, metals and plastics.
The aluminium frame pieces are placed in a skip for despatch off site & onwards processing at a smelter.

The panel is placed glass-down on the deglazing unit and the glass is removed from the cells underneath through the use of a milling line to take the glass off the silicone cell backing.
The glass is ground to a fine powder and stored in bulk 1 tonne bags for onwards re-use.

The cells of the panel are destroyed through shredding.
The materials are reduced to powder form and then separated using a proprietary technology unique to this plant line.
This produces copper, silver, lead, silicone and plastics as finely divided separated products or a purity suitable for re-use, stored in bulk 1 tonne bags for onwards re-use.

All recycling products are stored within the appropriate areas on a sealed surface.
The products are either stored in sealed bulk bags (granulated materials) or skips (aluminium framing).
Secure storage is needed as the products have a high resale value.
If required, deframed panels are stored in pallets in closed, locked containers in the yard to the south of the building.

Site plans

D.1 FPP Drawing - Location – SRS Swanscombe
D.2 FPP Drawing – Building & Site – Ground Floor
D.3 FPP Drawing – Building & Site – First (Mezzanine) Floors

Sensitive receptors near the site

There are no sensitive domestic properties immediately adjacent to the site. The closest is c.200m away to the south.
A number of vehicle garages & breakers are located close to the site, along with a number of light industrial & storage units.
Swanscombe Peninsula SSSI is located c.140m to the north and west of the site.

Manage common causes of fire

Arson

The site is kept locked at all times when not in operation.
During working hours, the site will operate with all doors closed unless receiving waste or despatching recycled materials.
Out of hours security is provided through a CCTV system which alerts the site managers, foreman and company director in the event of a security breach.
The CCTV system also runs infrared cameras with movement detection, so these will send alerts/alarms to the designated managers in the event of a fire occurring within the building.
During operating hours, the site has a fire alarm system and all staff are aware of its use.
The wastes processed by the site are all stored in secure areas.
The wastes themselves are of low flammability.
No large amounts of fuels or maintenance fluids are stored on site.

Plant and equipment

The whole process plant is electric drive. The process is detailed in the Activities Section above.
The fork trucks used on site are electric drive wherever possible.
Minimal amounts of fuel are stored on site.

Electrical faults including damaged or exposed electrical cables

Electrics certification

The electrics were certified when the plant was installed (the whole line is electric driven) and are regularly inspected.

Electrical equipment maintenance arrangements

The electric drives and systems on the plant is inspected on start up and shut down at every shift. This is recoded in the site diary.
The plant is independently inspected annually or in the event of plant changes.

Discarded smoking materials

Smoking on site policies

The site operates a blanket no smoking policy.

Hot works safe working practices

All hot works are undertaken under a Permit To Work system, signed off by the Site Manager/TCM and recorded in the site diary.
Only SRS-approved contractors are allowed to undertake hot works on site.

Industrial heaters

Use of industrial heaters

No industrial heaters are present on site.

The office and amenity areas use electric storage heaters, all regularly PAT tested.

Fire watch procedures

Fire watch procedures are set out in the Permit To Work – Hot works procedure.
Fire Watches take place for 1 hour after any Permit to Work Hot Works procedure is completed.
The electric drive plant self-monitors and will close down if over heating or over load in motors is detected.

Ignition sources

Solar panels are stored face down and covered to avoid self-heating.
No ignition sources are present on site.
Waste processed is of very low flammability and is stored away from the process plant.
Maintenance stores are kept in a block-built room away from the plant in suitable containers where necessary.

Batteries

No batteries are processed on site.
Should any vehicle or other batteries become waste on site, they will be disposed of at the earliest opportunity by a suitably Permitted contractor.

Leaks and spillages of oils and fuels

The site has a spill management plan (see EMS).
Nothing on site uses liquid or gaseous fuel.
Maintenance fluids (oils) are kept to a minimum by the use of an electric drive processing plan.
Maintenance fluids are kept in the maintenance stores, away from the plant.
Leaking gearboxes or site vehicles are repaired (or parked until a repair can be carried out) and the spill contained & cleared up.
Spill kits are kept in the maintenance stores.

Build-up of loose combustible waste, dust and fluff

The site operates a floor sweeper to clear up any dust (which is not combustible as it is mostly glass).
The plant is cleaned down at the end of every shift.
These duties are recorded in the site maintenance logs.

Reactions between wastes

No waste received on site will inter-react as only solar panels are received on site.

Waste acceptance and deposited hot loads

Solar panels are received palleted and undercover to prevent heating.
Loads are inspected as they are unloaded pallet by pallet.
No hot loads are received on site.

Hot and dry weather

As all operations take place within an enclosed building, hot dry weather will pose no issues.
All solar panels are stored face down and covered to prevent heating.
No waste processed on site will self heat to combustion point.

Prevent self-combustion

No waste on site will self-combust as the solar panels are stored face down and under cover.

Dealing with hot weather and heating from sunlight

All solar panels are stored face down and covered to avoid heating under sunlight.

Waste bale storage

No baled waste is stored on site.

Manage waste piles

Storing waste materials in their largest form

Incoming solar panels are stored either a complete panels, silicon backing (stacked covered & face down) or granulated products in sealed bulk bags under cover.

Maximum pile sizes for the waste on your site

Solar panels are stored on pallets in sealed containers or within the process building prior to deconstruction.
Granulated products are stored in sealed bulk bags within the building.
Plastics potentially containing POPs are stored in sealed bulk bags within sealed containers labelled as such.
Each container/storage area effectively becomes its own bay.
All materials stored on site are of very low flammability.
Process waste (inc. broken pallets) is stored either in a labelled roll-on-off bin or in small wheelie bins within the maintenance area.

Waste stored in containers

Types of containers you are using

Containers used on site will either be sealed, locking shipping containers or, if waste is not reactive to sunlight, roll-on-off bins.

Accessibility of containers

All containers are machine-accessible as the waste inside is moved to store and out for processing.

Moving containers in a fire

If the material inside a container is on fire, the container will not be moved.
It will be flooded by the FRS in-situ through the ventilation holes in the sides or doors of the container.
In this way, the fire may be drowned quickly with minimal risk.

Prevent fire spreading

Container Storage

Materials are stored in closed containers, so providing in-built fire walls.
Waste processed on site is not organic or liquid and has a very high flash point and so separation distances will not be an issue.

Fire walls construction standards

The process building has brick/blockwork walls and these provide the necessary protection.

Storing waste in bays

Containers replace bays on site.
Waste stored within the process building tends to be of very lowly flammability (solar panels) or not flammable (bulk bagged granulated metals & silicon/silver/solder mixed).

Quarantine area

Quarantine area location and size

The site uses a roll-on-off bin or skip as a quarantine area – labelled and segregated as such.
This will be located in the yard behind the building.
All incoming solar panels are inspected pallet-by-pallet as they are unloaded. They were also inspected by the drivers as they were loaded and refused loading if unacceptable or contaminated.
If, for some reason, a pallet of solar panels is rejected, it is returned to the client.
No rejected panels are flammable.
The plastic/POPs granulated product containers are clearly labelled and effectively act as their own quarantine areas – keeping the material separate from production to despatch.

How to use the quarantine area if there is a fire

The quarantine bins will be used to remove the debris after a fire.
Due to the nature of the site & how the waste & products are presented, stored & handled, it will be faster & safer to deal with a fire within a container or storage area with the waste in-situ.

Procedure to remove material stored temporarily if there is a fire

If there is a fire within a quarantine bin, it will be quenched by the FRS filling the bin with water.
The bin will not be moved as this increases risk of harm to operators & spark generation.

Detecting fires

Detection systems in use

Out of hours security is provided through a CCTV system which alerts the site managers, foreman and company director in the event of a security breach.

The CCTV system also runs infrared cameras with movement detection, so these will send alerts/alarms to the designated managers in the event of a fire occurring within the building.

During operating hours, the site has a fire alarm system and all staff are aware of its use.

Certification for the systems

The CCTV system certification is attached.

Suppressing fires

Suppression systems in use

Due to the low-flammable nature of the waste processed and the all-electric and compartmentalised processing line, the fire suppressions systems available within the building centre on the fire extinguishers available at strategic points for use by the site staff.

The waste processed and resulting products do not self-heat due to their nature and correct storage.

The only potential risk of fire would come from an electrical fault within the plant and, because the plant is completely closed down and isolated when outside operating hours, no fixed fire suppression system is fitted within the building.

The fore extinguishers are to be used in the event of an electrical fire on the plant and to contain this as much as possible prior to the FRS arriving, so complying with the requirement to have the fire extinguished within 4 hours.

No waste is stored close enough to the plant to be ignited in the event of an electrical fire breaking out when the site is outside operating hours.

The site is fitted with IR enabled CCTV, so ensuring a fire break out outside operating hours is quickly detected and the FRS called to access the site alongside site staff.

As the office doors on the front of the building are standard double glazed doors, access for the FRS will not be unduly hindered if they arrive on site first.

Certification for the systems

A copy of the fire extinguisher maintenance contact is attached.

Firefighting techniques

Active firefighting

The site design allows for active firefighting through giving clear access to all areas, minimising storage volumes, processing only materials of a very low flammability and only using electric drives on site to negate the need to store fuels.

Water supplies

Available water supply

All fire fighting water will come from local hydrants.
Thames Valley FRS have confirmed the presence of a number of hydrants in the local area close to the site.
There is an unlimited supply.

Show the calculation for your required water supply

The largest flammable waste pile on site will be in the region of 20 tonnes as that is all that can be loaded into a sealed shipping container.
As the container will not be opened in the event of a fire, the FRS will flood the container through the vent holes in the container.
Due to the small volume of these containers and the fact that they are sealed, in the unlikely event that a fire should break out within one of these containers, the FRS will be

able to fill each container with c.10m3 of water through the ventilation grills in the container sides, effectively cooling & drowning a fire very quickly.
These containers will retain the water, which may be pumped out through a hole cut in the roof of the container once the fire is extinguished.

Managing fire water

Containing the run-off from fire water

Due to the sealed building floor; no nearby surface waters; and the relatively low flammability of the contents of the building (requiring low amounts of water), the risk to groundwater in the event of a fire would be low.

There is a relatively low amount of flammable materials within the building.
There is also no flammable waste accepted on site.

Therefore, the amount of fire water required would be minimal and, due to the lack of hazardous material on site, of low contamination apart from various combustion products.

The fire water will be contained on site through the use of fire water booms to the building entrances.
The site staff will be trained in the use of these booms.

Any granulated potentially containing POPS will be stored in sealed, closed shipping containers, clearly marked, in the southern storage area.
Due to the small volume of these containers and the fact that they are sealed, in the unlikely event that a fire should break out within one of these containers, the FRS will be able to fill each container with c.20m3 of water through the ventilation grills in the container sides, effectively drowning a fire very quickly.
These containers will retain the water, which may be pumped out through a hole cut in the roof of the container once the fire is extinguished.
The remnant plastics will then be disposed of to a suitably permitted facility and the container scrapped.

The waste stored in the yard is stored on pallets inside locked shipping containers and comprises the glass panels and silicone backing from the de-framed panels.
As all the material stored in this way is non-flammable and the shipping containers are steel, there is a very minimal risk of fire as there is nothing to burn and so the yard will not generate fire water.

In the event that there is an incident in the yard, the containers will be dealt with using water or foam on an individual basis.

During and after an incident

Dealing with issues during a fire

In the event of a fire, waste imports will be stopped and the solar panels will remain on the client’s site until SRS Swanscombe is able to receive them.
As the panels are designed to live outside for c.20+ years without harm to themselves or the environment, this will not be an issue.
During a fire, site staff will defer to any instructions given by the FRS.

Notifying residents and businesses

Neighbouring businesses will be notified in person in the event of a fire if necessary.

In the unlikely event that a wider notification is required, the Police & FRS will be requested to undertake the notification, using the appropriate means.

Clearing and decontamination after a fire

Any debris will be removed by roll-on-Off bin and disposed of at a suitably Permitted facility.
Fire water will be drained from site or the affected container by vacuum tanker and disposed of at a suitably Permitted facility.
Due to the lack of heavily flammable materials on site, there will not be a large volume of fire water.
Any burned POPs containers will have the fire water vacuum-tankered out & disposed of at a suitably permitted facility.
Any fire damaged POPs containers will be opened and emptied, the plastics being sent to a suitably Permitted facility for disposal.
The container will then be scrapped.
If necessary, the building roof will receive an interim repair whilst a full repair is organised.
The building will be made safe & secure.
All services will be shut down to the building but remote monitoring will be maintained through mobile monitoring units.
Any computers within the building will be retrieved.
Any records within the building will be retrieved.
Any high value granulated products will be removed and forwarded to end users if at all possible.

Making the site operational after a fire

The damage caused by the fire will be reviewed and repaired as required to bring the site back into service as soon as possible.
Depending on where the fire has occurred, this may range from replacing a burned container in the storage yard to importing replacement pieces of equipment form the process plant manufacturer.
Appropriate measures will be undertaken to renew service as soon as is reasonably practicable and the E.A. and clients will be kept informed as to progress.

Appendices

A.1 Fire Alarm System Details

A.2 Fire Extinguisher Maintenance Details

Induction Record – This Document Issue

Staff Signature	Staff Name	Date	Inductor Signature	Inductor Name

To be retained with original FPP document.