Fire Prevention Plan Template

Plan version: **Version 3a**
Date of plan: **7 August 2020**

Site details

Site name: **Old Oil Well Pad Site, New Farm**

Site address: **New Farm, South Warnborough, Hook, Hants. RG29 1SH**

Operator name: **T.G.Porter**

Who this plan is for:

- T.G.Porter Site Management
- T.G.Porter Site Personnel
- Environment Agency Officers
- Regulatory Officers
- Fire & Rescue Service Personnel
- Sub-Contractors working on site

Contents

This FPP has been compiled using the Environment Agency template.

It is presented as an Operating Technique (OT1) for the Old Oil Well Site.

OT Figures

Types of combustible materials

Combustible waste

The waste types received and stored on site are:

EWC Code	Waste Description
02	**Wastes from agriculture, horticulture, aquaculture, forestry, hunting and Fishing, food preparation and processing**
02 01	**Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing**
02 01 03	Plant-tissue waste (wood and bark only)
02 01 07	Wastes from forestry (wood and bark only)
03	**Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard**
03 01	**Wastes from wood processing and the production of panels and furniture**
03 01 01	Waste bark & cork
03 01 05	Sawdust, shavings, cuttings, wood, particulate board, and veneer other than those mentioned in 03 01 04
03 03	**Wastes from pulp, paper and cardboard production and processing**
03 03 01	Waste bark and wood
15	**Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified**
15 01	**Packaging (including separately collected municipal packaging waste)**
15 01 03	Wooden packaging
17	**Construction and demolition wastes (including excavated soil from contaminated sites)**
17 02	**Wood, glass and plastic**
17 02 01	Wood
17 09	**Other construction and demolition waste**
17 09 04	Mixed construction and demolition waste other than that mentioned in 17 09 01 and 17 09 03 (wood only)
19	**Wastes from waste management facilities, off-site waste water treatment plants and preparation of water intended for human consumption/industrial use**
19 12	**Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 07	Wood other than that mentioned in 19 12 06
20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**
20 01	**Separately collected factions**
20 01 38	Wood other than that mentioned in 20 01 37
20 02	**Garden and park wastes**
20 02 01	biodegradable waste (wood and bark only)

All incoming waste is in the form of a homogenous pre-prepared waste wood fuel, en-route to Slough Heat and Power's CHP plant.

The specification for this fuel can be found in Operational Technique 5.

Other combustible materials

This section is not applicable as no other combustible materials will be held within the Permit boundary.

All plant maintenance works will be carried out up at the main New Farm buildings complex.

Using this fire prevention plan

Appropriate firefighting equipment is available at the site. Fire on the site will be treated as an emergency and site staff will be instructed to take the following actions in such an event:-

- Notify the Fire Brigade immediately;
- Notify the Environment Agency as soon as practicable;
- If safe, isolate the burning area and attempt to extinguish the fire using suitable on site plant, extinguishers and watering equipment; and
- Evacuate the area if necessary, with staff proceeding to the designated muster point.

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

Current hard copies of this Fire Prevention Plan will be held in red waterproof boxes at the site weighbridge and also at the entrance gates to the Oil Well Pad Site itself. This ensures availability for staff, FRS and E.A. should that be required.

These locations are shown in EMS Figure 10.

Site staff will be inducted on the FPP and this will be recorded in the training records for T.G. Porter.

Testing the plan, training exercises and staff training

T.G.Porter will undertake a documented fire drill once every 6 months for the Oil Well Pad Site, as well as quarterly full tests of the fire pump and pipework held on site.

The FPP will be reviewed annually or in light of any incident as part of the overall EMS review.

Site staff will be re-inducted on the FPP and all relevant OTs upon beginning service with T.G.Porter and annually thereafter. Re-inductions will also take place should any changes to the OTs be made in light of a change in legislation, operations or an incident occurring.

Fire prevention plan contents

Activities at the site

The site will receive and store pre-prepared waste wood fuel on behalf of a CHP facility.

The site is to be operated to ensure the CHP facility (which supplies base load heat and power to a number of large consumers) can maintain its fuel stocks during normal operations and in emergency situations, such as the current COVID-19 pandemic.

The operations of the site are described in detail in the accompanying EMS.

In brief, waste wood fuel will be delivered by bulker articulated truck, discharged, inspected, stockpiled and stored prior to despatch to the CHP plant.

Any rejected material will be sent directly back to the source site if possible or to a suitably Permitted disposal facility if not.

The waste will be stored in monitored stockpiles, some 2,300m^3 in size. This is smaller than the 3,000m^3 stockpiles permitted in the recently surrendered Permit for the site. The reduction in size is to ensure the site can maintain 6m separations between all piles and accommodate a “spare” area large enough to safely receive incoming waste or provide large-volume quarantine if so required by the FRS.

The site will use loading and handling plant, supplied by New Farm as required.

Water bowsers, pumps and bulker trailers (for waste removal) will also be supplied by New Farm as required.

As no processing will be done on site and New Farm is the main employer for site operatives, all maintenance, welfare and other buildings are located at New Farm. No static plant will be located at the Old Oil Well Site and no plant or vehicles will be left on site overnight or otherwise left unattended.

The weighbridge for the site is located at New Farm and all the records will be maintained at New Farm as well.

Site plan

The site location plan is attached as OT Figure 1 & Site Plan is attached as OT Figure 2. OT Figure 3 shows FRS Access, secondary Quarantine and other items outside the Permitted area.

Plan of sensitive receptors near the site

The Plan of Sensitive Receptors is attached as OT Figure 4.

Manage common causes of fire

Arson

The main site deterrent is the fact that the location is so remote. The site is over 500m from any building, habitation, road or public right of way.

This is further assisted by the fact that the site is almost completely screened by a bund and mature and semi-mature trees.

The very low level of activity on site will also serve to minimise attention drawn to the location.

The site is also served by a 2m+ security fence all round and site gates, which are locked whenever the site is not being used, so further minimising attention.

The site also lies within a very large farm landholding, which has only two entrances. Both of these are gated and the gates are locked between the hours of 20:00 and 06:00.

The main driver for arson as vandalism is to create an impact on as many people as possible – the higher the impact, the more satisfaction for the perpetrator. As this site is so remote and is surrounded by open farmland, it is highly unlikely that the location will be a tempting target as there are minimal people to impact and, due to the open nature of the surroundings, it would be almost impossible for the perpetrator to remain and watch the proceedings without being spotted.

Plant and equipment

All plant and equipment used on site will be supplied by New Farm, which is also owned by T.G. Porter.

New Farm has available numerous loading shovels, telehandlers and bulk tractors and trailers for moving the waste wood fuel as required.

T.G.Porter also own Mid Hants Haulage Ltd, which is based out of New Farm. This company operates bulk articulated trucks for the haulage of prepared waste fuels, further enlarging the stable of plant available to the site.

New Farm also has available numerous wate bowsers, pumps and agricultural irrigation systems, should these be required for dampening down duties.

The Old Oil Well Site also has a permanent palletised fire pump with the requisite hoses and other ancillary equipment.

All plant and equipment is kept at the New Farm buildings, where it is parked, serviced, maintained and refuelled.

No plant is left overnight or unattended at the Old Oil Well Site.

All plant is blown clear of dust after each working day as part of the routine maintenance carried out by the operative. This is recorded in the daily plant checklist and the Daily Checklist/Site Diary.

All maintenance will be carried out by suitably qualified personnel and recorded in the plant maintenance records.

No operative will be allowed to operate plant that they have not received training for and approval from the Site Manager.

Electrical faults including damaged or exposed electrical cables

Electrics certification
No electrical systems are present within the Permitted area, so this is not required.

Electrical equipment maintenance arrangements
No electrical systems are present within the Permitted area, so this is not required.

Discarded smoking materials

Smoking on site policies
The Old Oil Well Site has a blanket smoking ban.

Drivers or contractors caught smoking on site will be banned. Operatives caught smoking on site will be subject to disciplinary action by T.G.Porter.

There is a smoking area near the welfare facilities at New Farm and this is policed rigorously.

Hot works safe working practices

In the event of a breakdown within the Permit boundary of the Old Oil Well Site, the plant in question will be removed to the New Farm workshop if possible before being worked on.

Should the item require repair within the Permit boundary, this work will take place under a T.G. Porter Permit To Work.

If the repair requires hot work, the Permit To Work will include the requirements for:

- Fire watch with a T.G.Porter operative present at all times with the mechanic, watching for potential ignition.
- Fire extinguishers and a wate bowser present within the Permit area at all times during the repair.
- If required, the ground under and around the vehicle/plant under repair will be soaked with a water bowser prior to work taking place.
- The ground under and around the repair area will be soaked with a water bowser once the hot work has been completed, as part of the close-out of the Permit To Work.
- The T.G.Porter operative will maintain a continuous fire watch on the area for an hour following the close out of the Permit To Work.
- The area will also be inspected 2 hours after the works have been completed and at the close of the working day.

Industrial heaters

Use of industrial heaters

This section is not relevant as there are no industrial heaters used within the Permit boundary. There is nothing on site that requires heating.

Hot exhausts and engine parts

All plant and equipment used on site will be supplied by New Farm, which is also owned by T.G. Porter.

All plant and equipment is kept at the New Farm buildings, where it is parked, serviced, maintained and refuelled.

No plant is left overnight or unattended during the day at the Old Oil Well Site.

All plant is blown clear of dust at New Farm after each working day as part of the routine maintenance carried out by the operative. This is recorded in the maintenance daily checklist and the site maintenance Checklist/Site Diary.

All plant maintenance and checks are recorded in the New Farm plant maintenance system and Site Diary/Daily Checklist.

Fire watch procedures

No static plant is required on site as the site will not be processing material.

The unloading, handling, stockpiling and reloading of the pre-prepared wood waste fuel generates relatively little dust as the material itself is produced to a set specification which minimises the fines present in the fuel.

No mobile plant is left on site unattended or overnight as the plant garages, refuels and is maintained at New Farm. All plant will be blown clean at the end of each working day by the operative.

A fire watch will be carried out at the end of each day's shift or waste movements for that operating day. This will comprise of a site operative patrolling the site on foot for 90 minutes at the end of each day's shift or waste movements for that operating day. The results of this fire watch will be recorded in the site diary/check sheet (OT3).

Should any hot works have been undertaken within the Permitted area, carried out under a Hot Works Permit, a separate 90 minute fire watch will be carried out before the Hot Works Permit is signed off by the site management. This will be in addition to the hot works being supervised by a separate T.G.Porter operative and the area in question soaked with a bowser once the work is complete. The details for this extra fire watch will be recorded in the site diary section of the daily check list (OT 3).

Ignition sources

There will be no static ignition sources at the Old Oil Well Pad Site.

All vehicles and plant on site will be maintained as per manufacturer's instructions.

There are no electrical or gas systems on site.

The site has a blanket smoking ban.

No plant or vehicles will be left unattended or overnight on site.

All stockpiles will be placed as shown in EMS Figure 2, with a continuous 6m separation running round each pad.

There are no services under or above the stockpiling area.

Leaks and spillages of oils and fuels

The site plant is maintained as set out in the manufacturer's manuals.

All maintenance is undertaken in the workshop area at the main New Farm buildings complex.

Spill kits are available in the workshop area at the New Farm main buildings complex as shown on the site plan.

The spill kit comprises proprietary absorbent pads and granules, to be used as required.

Once used, items will be segregated and disposed of at a suitably permitted facility.

The Old Oil Well Pad has a completely sealed concrete floor and does not discharge to sewer or to ground, therefore any spills will not get to ground or controlled waters.

Any waste contaminated by spilt lubricants or fuels will be quarantined and disposed of at a suitably permitted facility.

All spills and the actions undertaken to clear them will be recorded in the site diary.

The location of the spill kit within the Permitted boundary is shown on EMS Figure 2.

Build-up of loose combustible waste, dust and fluff

The only place where a build-up of dust/fines would pose a risk of fire would be within the mobile loading plant used on site.

To counter this risk, this plant will be blown clear at the end of each working day to ensure dust does not build up within the plant.

This action will be recorded in the operator's daily check sheet and the site daily check sheet (OT3 & OT7).

Reactions between wastes

The wastes being stored on site comprise a single homogenous fuel pre-produced from waste wood. The fuel is prepared to a specification set down by Slough Heat and Power.

The material is therefore very homogenous and extremely unlikely to react if mixed.

Deposited hot loads

OT 9 sets out the Waste acceptance and Despatch Procedures for the site and OT 8 sets out the Waste Stockpiling and Stock Rotation procedures for the site. Both of these documents detail how any such hot load would be dealt with at the site.

Under this procedure, all loads are temperature checked on discharge in a separate reception area, prior to being placed in stockpile.

Should a hot load be detected, the waste will be placed in quarantine at least 6m away from wastes currently on site. This waste will be soaked and visually and temperature monitored from a safe distance.

Should the load ignite or be on fire when discharged, the above procedure will be followed if safe to do so and the Fire Brigade and Environment Agency will be immediately notified.

The producer of the waste wood fuel will be informed of the actions taken on site. If possible, the cooled load will be removed from quarantine direct to the CHP plant for immediate use.

Prevent self-combustion

General self-combustion measures

Due to the homogenous nature of the waste wood fuel, its source material, lack of contamination and fines and short storage time, self-combustion should not be an issue at this site.

As the waste wood fuel has already been pre-prepared and is en-route to the Slough Heat and Power CHP facility, it has already been paid for by the CHP. It is therefore in the CHP facility's interest to ensure the fuel be rotated and kept in as good a condition as possible. A deterioration in fuel quality due to poor management, lack of rotation or excessive time in store will cost the CHP facility a lot of money in lost thermal energy long before the material degrades to the point that is it likely to self-ignite.

OT 8 details the Waste Stockpiling and Stock Rotation procedures to be followed at the site to ensure the prepared waste wood fuel is dealt with on a "First In First Out" basis.

Manage storage time

Method used to record and manage the storage of all waste on site
All waste movements into and out of the site will be covered by a Duty of Care complaint Waste Transfer Note System.

The site daily checks record the build/store/remove cycle for each of the 4 stockpiles on site. The stock control procedures are detailed in OT 8 – Waste Stockpiling and Stock Rotation.

The stockpiles are small enough to allow rapid and controlled building and complete removal to clear concrete. This, together with the lack of bays and walls, ensures stockpiles will be completely cleared, leaving no tailings build up.

As the site is a bulking station for a single CHP facility, the fuel brought to and removed from site is all pre-booked and carefully managed.

Stock is managed to ensure a strict rotation and so to reduce degradation of the fuel while on site. Degradation reduces the energy value of the fuel and so it is detrimental to the financial value of the material. As the CHP facility pays for the fuel it uses, the facility does not want to waste value by mis-managing stockpiles.

Stock rotation policy
The stock rotation policy is set by the CHP facility to ensure the waste wood fuel is not left on site long enough to start to degrade and so decrease in energy value.

The stock rotation is shown in OT 5 & 8.

The maximum storage time will be 3 months. Fuel will be rotated and managed to ensure this maximum is maintained.

The stock rotation (OT 5) shows the site being cleared completely approximately every 4 – 6 months.

Monitor and control temperature

Reduce the exposed metal content and proportion of 'fines'

As all the waste wood fuel passing through the site is pre-prepared to a specification, the fines are limited to below 10%. The specification defines "fines" as any material below 10mm in size, so only a small proportion of "fines" will be dust size – the faction most liable to self-heat.

The specification also states:

All material must be clean and free from contamination such as listed Hazardous Wastes, plastic, plasterboard , glass, melamine, metal, stones, dirt, grit, paint, rubber, oil, toxic chemicals and other foreign bodies
So metal and other contaminants will have been removed prior to the waste being delivered to site.

As the CHP Facility imposes quite stringent financial penalties for non-compliance to the specification, waste wood fuel suppliers are vigilant in their processing and preparation of the material, so reducing the fines and contamination and so reducing the risks posed by those items.

Heat generation during processing
As there will be no waste processing on site, this will not be an issue here.

Monitoring temperature
As stated in OT 3 & OT 5, the waste wood fuel stockpiles will be actively temperature monitored.

Loads will be temperature checked by the site operative as they discharge.

The site inspection will include daily temperature checks of the stockpiles using a handheld temperature probe both at surface and at a minimum of 1m depth. If temperatures of 50°C or over are recorded, the checks will be increased to twice daily.

If a temperature of 60°C or above is recorded, the waste will be removed from stockpile, spread on the hardstanding and allowed to cool before being placed back on top of the stockpile.

All incoming loads will be discharged away from the forming stockpile and will be moved to the stockpile with a loading shovel. This enables the waste fuel to be checked prior to stockpiling.

Any non-conforming waste or waste appearing hot can then be removed to the quarantine area.

All monitoring results will be recorded in the Site Diary/Daily Checklist (OT 3).

Controlling temperature
The storage and rotation time for each stockpile will be controlled following the procedures set down in OT 8 – Waste Stockpiling and Stock Rotation and all stockpile movements will be recorded on the Site Stockpile Log within that OT.

Due to the short storage time, relative lack of fines and nature of the material, the risk of a stockpile self-heating will be greatly reduced.

However, should a rise in temperature be detected, the waste will be removed from stockpile, spread on the hardstanding and allowed to cool before being placed back on top of the stockpile.

If possible (if the site is being cleared as part of the fuel flow cycle), cooled fuel in quarantine will be sent directly to the CHP and not returned to stockpile.

Due to the nature of the material and the short storage time, it will not be necessary to turn wood waste fuel once stockpiled.

However, should a breakdown at the CHP occur which means the site is required to store fuel for more than 2 months, the following procedure will take place. This procedure assumes the site is at capacity and all incoming wood waste fuel has been diverted elsewhere.

- As each stockpile reaches 2 months of age, the southern half of the stockpile will be moved into the quarantine area by loading shovel, so ensuring the material is spread and blended.
- The northern half of the stockpile will be moved to the south by loading shovel, ensuring the material is turned and blended.
- The waste in the quarantine area will then be returned to the northern end of the stockpile footprint and restocked.

In this way, each stockpile can be relatively quickly and simply turned and reformed as required.

The stockpiles should not require dampening during turning.

Should any hotspots be detected whilst turning, these will be retained in the quarantine area and spread to cool as necessary.

Dealing with hot weather, external heating and heating from sunlight

There are no external heating or drying systems on site.

Due to the nature of the material being stored, the relative lack of fines and minimal contamination, the site will not be at risk from heating through external heating from hot weather or sunlight.

The short storage duration will also assist in controlling any potential build up of heat in the summer as the material will be at a lower risk of self-heating when the storage time & First In/First Out stock sequence is managed appropriately.

The material is pre-prepared and so will not contain glass, therefore the likelihood of glass-induced lensing of sunlight and ignition that way is highly unlikely.

The stockpiles are also temperature checked daily. In the highly unlikely event that the surface of a stockpile is found to be heating, the measures set out in OT 8 and elsewhere in this FPP will be carried out and recorded in the Site Checklist/Site Diary.

Waste bale storage

No waste bales will be stored on site.

Manage waste piles

Maximum pile sizes for the waste on your site

All stockpiles on site will store the same material – pre-prepared waste wood fuel.

The Alternative Measures discussion in support of these stockpile sizes is included at the end of this FPP.

Stockpiles will be formed in a set area on site, to a delineated size and separation. Markers will be placed along the boundary of the site to provide sight lines that will allow the stockpile sizes to be accurately monitored. Level boards will also eb placed around the site to ensure the maximum stockpile height of 4m is not exceeded.

The stockpile size and volume has been carefully chosen to balance between desired total storage volume and tonnage and the safety and manageability of the operation with a view to being able to deal with any incident effectively in a reasonable period of time suitable to the remote location, should they occur.

Waste stream	Location	How it is stored	Max. length / m	Max. width / m	Max. height / m	Volume / m^3	Max. time it will be stored
Pre-prepared Waste Wood Fuel	Stockpiles 1 to 4	Open stockpiles	36m	16m	4m	c.2,300 m^3	3 months

Storing waste materials in their largest form

All waste wood fuel coming through the site has been pre-prepared elsewhere. The site will act as a bulking station for a CHP facility.

The pre-prepared waste wood fuel will be stored in the largest form available to the site.

The fuel size will be compliant with the specification detailed in OT 5.

The fuel description is as follows:

A clean dry recycled wood chip (<25% moisture) product comprising > 70% grades A and B Wood**, 75 mm to 120 mm in any dimension and free from treated, surface coated, hazardous materials and contamination (For further information see 'Quality Guidelines')*

The specification allows for up to 10% of fines (specified as material below 10mm in size).

Therefore the pre-prepared, homogenous waste wood fuel will be stored in the size as laid down by the specification with the minimum levels of fines as set down by the specification. This is the largest size available to the site.

Where maximum pile sizes do not apply

Waste stored in containers

Section not applicable. No waste is stored in containers on site.

Prevent fire spreading

Separation distances

All stockpiles will be separated from each other, the site boundary, site sump, reception and quarantine areas by a clear, 6m wide separation roadway.

This will be inspected daily against the stockpile markers and the inspection recorded in the daily check sheet.

Fire walls construction standards

This section is not applicable as the site uses 6m separations so fire walls are not required.

The site will not use fire walls as the fire control plan relies on site plant having quick, unimpeded access to all sides of every stockpile to facilitate the rapid removal of any unaffected waste fuel, so reducing the amount of fuel available to the fire.

Storing waste in bays

This section is not applicable as the site does not have any storage bays.

Vulnerable External Receptors

The site lies within a large farm landholding and the nearest receptor (human or environmental) is c.550m to the north of the site and comprises the buildings of the main New Farm complex.

There are also no roads, services or public rights of way within 500m of the site.

Due to the location of the site, there are no combustible structures or at-risk receptors close enough to the site to be at risk from a fire, should one occur.

Quarantine area

Normal use quarantine area location and size

The normal-use quarantine area will be kept as small as possible. Unless an incoming load is hot, dangerous to re-load or is not covered by the haulier's Waste Carrier's Licence, any non-conforming material will be immediately reloaded onto the delivering truck and sent back to the source site, such actions being recorded in the site diary and confirmed with the source site and Slough Heat and Power.

Any loads unfit to be immediately returned will be soaked if required and removed within 72hours, so minimising the amount of non-conforming waste held on site.

This normal-use quarantine area will be moved as required. It will be demarked by a set of traffic cones. The site does not have a large enough footprint to allow a permanently demarked quarantine area.

The whole site has an impermeable surface that drains to a main sump. The quarantine area will always be placed close to the sump on the northern side of the site to minimise the risk of hot or non-conforming material being carried into the stockpiles by quench water flow.

The quarantine area will always be placed a minimum of 6m from any other stockpile within the site.

Should any hot or unreturnable loads be received, the load will be soaked if required as it is placed into quarantine.

All loads will be deposited away from the stockpile under construction and then will be moved into the pile by loading shovel. This will allow the operator to check all incoming waste prior to stockpiling, reloading if necessary. This will reduce the amount of waste requiring quarantining.

How to use the quarantine area if there is a fire

If the discharge, checking and handling process works as it should, then, should any fire occur, it will be in the waste held in quarantine.

Due to the immediate reload/prompt return practise, the amount of waste in quarantine will be minimal. This will enable fast and efficient extinguishing using on-site facilities.

In this case, all the material within quarantine will be soaked, being moved by loading shovel to facilitate the thorough wetting and extinguishing of the burning material.

Should there be a fire within one of the site stockpiles, the quarantine area shown on OT Figure 2 will be established and used to receive unburned waste as it is stripped from the affected stockpile. This quarantine area will be 30m x 10m in size – approximately 52% of the area of the 36m x 16m stockpiles.

As no deliveries will be accepted by the site during an incident, the reception area will not be required.

This quarantine area will be sufficient to receive half of the waste contained within a single stockpile. If the fire is small and easily extinguished, this will be sufficient to allow isolation of the burning portion of a stockpile by clearing a section of the stockpile.

If the incident is more major, New Farm also has the capacity to provide a secondary quarantine area, in the location shown on OT Figure 3. This secondary area is within the perimeter for the old Environmental Permit (EPR/AB3104HA) and utilises the impermeable surface laid for that Permit.

The secondary quarantine area can be made ready rapidly as it is currently used as a farm machinery park. It will be a minimum of 15m x 40m in size and is more than sufficient to contain a complete waste stockpile, should that be necessary.

The most effective way to manage a fire on site will be to remove any unaffected part of the burning stockpile, quarantining and soaking the material in the on-site quarantine area. Once safe, this removed material can then be transferred to the secondary quarantine area using the plant held by New Farm. Using the two quarantine areas in this way will allow the site to safely strip an affected stockpile of any unaffected material safely and efficiently.

Once the volume of the affected stockpile has been reduced as far as is deemed safe and practical, the remaining waste can be extinguished using water recirculation, as directed by the FRS. Site plant can be used to deliver water into the fire and open up the stockpile as required to allow the water to penetrate into the mass.

As the stockpile is worked and extinguished, wet and cold waste fuel can be removed to the on-site quarantine. Heavily affected material will be inspected and sampled by Slough Heat and Power and despatched for recovery at that facility if suitable. If not, it will be sent to another suitably Permitted facility for disposal.

Procedure to remove material stored temporarily if there is a fire

In the event of a fire, the temporarily quarantined waste will be removed by loading shovel and truck to a suitably Permitted facility or to the secondary quarantine area.

New Farm is used as an operating base for Mid Hants Haulage (amongst others) so there is always at least one bulk articulated truck or similar vehicle present on site which can be used to remove any temporarily stored waste.

All waste stored within the quarantine area will have been soaked if the quarantine storage is due to the load being hot so removal by truck will be possible.

Detecting fires

Detection systems in use

The Old Oil Well Pad Site has no automated detection systems in place.

The site does not have a CCTV system in place.

There is a permanent T.G.Porter presence at New Farm (c.550m to the north).

The site will be inspected daily (including Bank Holidays and weekends) by a site operative or site management. These checks will take place every day without exception and will be recorded in the Site Diary/Daily Checklist (OT 3).

As well as these daily checks, the site will be subject to a 90minute fire watch at the end of each shift or waste movements on that working day.

As part of the site checks, the surface temperature of the stockpiles will be assessed using an infrared heat sensor at numerous positions around each stockpile. These checks will also be recorded on the daily check sheet.

All waste discharged at the site will be discharged separately to the stockpile being built and will be inspected and temperature checked prior to being moved into the stockpile by a site operative driving a loading shovel.

As the stock of waste fuel on site is rotated relatively quickly and the site has a complete smoking ban, hot incoming waste is seen as one of the main potential fire sources, hence the stringent check and quarantine/return measures in place.

Certification for the systems

There are no certified detection systems on site.

Suppressing fires

Suppression systems in use

All mobile plant is fitted with an in-date extinguisher in the cab. The presence and condition of this is recorded in the Site Checklist/Site Diary (OT3) and also the plant daily check list (OT7).

All third-party waste carrier vehicles will have in cab fire extinguishers and some will have built-in fire suppression systems as well.

The site is also equipped with c. 380m^3 of water in dedicated permanent storage and a skid-mounted fire pump. Checks on the condition (and volume) of these stored resources are recorded in the Site Checklist/Site Diary. Maintenance of the skid-mounted fire pump is recorded in the plant maintenance records system (OT 7).

As well as the stored water, the site is equipped with a 60mm delivery main into the 250m^3 fire water storage tank and a large (500m^3) sump, which will be used to capture and recirculate any water used for fire suppression.

The following equipment will be retained in full working order at the main New Farm buildings complex for use in the event of a fire to allow site staff to carry out sustained defensive firefighting operations after the Fire Service has dealt with any initial incident:

- 4 lengths of 100mm hard suction hose including basket strainer
- A light portable pump capable of receiving 100mm hard suction hose
- 4 lengths of 45mm soft delivery hose
- 1 firefighting branch
- 1 portable monitor/branch holder

Certification for the systems

The site has no certified suppression systems present.

Firefighting techniques

The layout of the site may be seen in OT Figure 2.

The fire access routes, secondary quarantine area and pertinent information outside the Permit boundary may be seen in OT Figure 3

Active firefighting

As detailed above, the most effective method of firefighting will be to remove as much of the unburnt waste as possible, whilst using recirculated water to dampen down the affected part of the stockpile. Once the unburnt waste has been removed, site plant can be used to open up the stockpile (under instruction from the FRS) to allow the water to penetrate more effectively.

In this way, the amount of waste available to the fire can be rapidly reduced and the fire extinguished more effectively.

As the site is some 550m from the nearest receptor and has no vulnerable infrastructure present, overhead or beneath ground, it is proposed that the 4 hour extinguishing time is not required at this location. It would have a far lower impact environmentally and on resources to manage a fire through stockpile stripping and controlled dampening down than just relying on extinguishing by water.

Should a fire occur in waste discharged within the reception area, the load will be pushed into quarantine and soaked, being moved by loading shovel to facilitate the thorough wetting and extinguishing of the burning material.

Should there be a fire within one of the site stockpiles, the quarantine area shown on OT Figure 2 will be established and used to receive unburned waste as it is stripped from the affected stockpile. This quarantine area will be 30m x 10m in size – approximately 52% of the area of the 36m x 16m stockpiles.

The reception area will not be required as no deliveries will be accepted by the site during an incident, so the on-site quarantine area will take over the reception area.

This quarantine area will be sufficient to receive approximately half of the waste contained within a single stockpile. If the fire is small and easily extinguished, this will be sufficient to allow isolation and extinguishing of the burning portion of a stockpile through clearing and wetting.

If the incident is more major, New Farm also has the capacity to provide a secondary quarantine area, in the location shown in OT Figure 3. This secondary area is within the perimeter for the old Environmental Permit (EPR/AB3104/HA) and utilises the impermeable surface laid for that Permit.

The secondary quarantine area can be made ready rapidly as it is currently used as a farm machinery park. It will be a minimum of 15m x 40m in size and is more than sufficient to contain a complete waste fuel stockpile, should that be necessary.

The most effective way to manage a fire on site will be to remove any unaffected part of the burning stockpile, quarantining and soaking the material in the on-site quarantine area. Once safe, this removed material can then be transferred to the secondary quarantine area using the machines held by New Farm. Using the two quarantine areas in this way will allow the site to safely strip an affected stockpile of any unburned material safely and efficiently.

Once the volume of the affected stockpile has been reduced as far as is deemed safe and practical, the remaining waste can be extinguished using water recirculation, as directed by the FRS. Site plant can be used to deliver water into the fire and open up the stockpile as required to allow the water to penetrate into the mass.

As the stockpile is worked and extinguished, wet and cold waste fuel can be removed to the on-site quarantine. Heavily affected material will be inspected and sampled by Slough Heat and Power and despatched for recovery at that facility if suitable. If not, it will be sent to another suitably Permitted facility for disposal.

Procedure to remove material stored temporarily if there is a fire

In the event of a fire, the temporarily quarantined waste will be removed by loading shovel and truck to a suitably Permitted facility or to the secondary quarantine area.

New Farm is used as an operating base for Mid Hants Haulage (amongst others) so there is always at least one bulk articulated truck or similar vehicle present on site which can be used to remove any temporarily stored waste.

All waste stored within the quarantine area will have been soaked if the quarantine storage is due to the load being hot so removal by truck will be possible.

Due to the remote location of the site and its simple, robust infrastructure, it will not be necessary to extinguish a fire within 4 hours. This controlled burn methodology has been previously approved for this site in an FPP used to support the more intense activities and larger stockpiles approved under EPR/AB3104HA.

New Farm has numerous items of plant available to assist in the active fighting of any fires found on site. These items of plant include:

- Loading Shovels
- Telehandlers
- Tractors and bowsers
- A palletised fire water pump and associated hoses
- 360º Excavator
- Bulker trucks and agricultural trailers (for removal of unburned waste wood fuel from site)
- Agricultural irrigation equipment

It is intended that, should a fire be detected, the unburned portion of any affected stockpile be removed, placed in quarantine, soaked to prevent further risk and either removed from site (to either Slough Heat and Power or another suitably Permitted facility for recovery/disposal) or placed in an unused stockpile bay.

In this way, the volume of material affected can be very rapidly reduced.

While the stockpile is being stripped, the neighbouring stockpiles may be dampened to prevent ignition. The piles are separated by a 6m wide firebreak so access will be possible all round the affected stockpile.

The site will have 6m firebreaks between all piles and the piles and the site boundary maintained and clear, so reducing the chance of cross-ignition.

Any fire will be reported to the FRS and E.A.

T.G.Porter staff will only attempt to fight a fire if suitably trained and it is safe to do so.

Once the FRS arrive on site, all actions by T.G.Porter operatives will be under the control of the FRS.

Water supplies

Available water supply

The Old Oil Well Site is supplied by water from a number of static tanks:

- 250m^3 Steel panel tank
- 33m^3 Roto-moulded plastic tank
- 96m^3 Ground-mounted tank

The site is also supplied with water from a 60mm water main, feeding into the Steel panel tank. This delivers water at the rate of c.11m^3 per hour.

The Old Oil Well Site also has an impermeable surface with surrounding bund. This surface falls to a c.500m^3 sealed sump.

In the event of a fire, fire water will be captured within this sump and will be recirculated for re-use in firefighting. Effectively this means that the volume of water available to combat a fire greatly exceeds the physical volume held on site.

Due to the location and remoteness of the Old Oil Well Site, it is not necessary to be able to extinguish a fire within 4 hours as no sensitive receptors are close enough to be affected. Therefore, it is proposed that the water be used to dampen the unburned waste fuel held on site as well as assist with managing a controlled burn of the affected fuel stockpile. The major fire-fighting technique for this site will be removal of any unburned material from any affected stockpile and allowing the rest to burn out. This will vastly reduce the firewater and resources required to fight any fire. In turn, this reduces the amount of clearing up and removal of fire water subsequent to a fire.

The site staff will, under the instruction of the FRS, strip the unburned waste fuel from the stockpile in question, so reducing the potential size of the fire as far as is reasonably practicable.

This will allow the fire to be contained and controlled without the requirement for very large amounts of fire water and will also the time and equipment requirements from the FRS.

Show the calculation for your required water supply

Maximum pile volume in cubic metres	Water supply needed in litres per minute	Overall water supply needed over 3 hours in litres	Total water available on site in litres
2300 cubic metres	15,341litres per minute	2,761,380 litres over 3 hours	Fire water will be captured and recirculated so actual volume available to fight a fire exceeds physical volume held on site. Total in store – 379,000 litres Total incoming during 3 hours – 33,000litres

The secondary quarantine area located at the Lower Pad, close to New Farm, is also equipped with a large fire hydrant. This was fitted as part of the works required to allow two 3,000m^3 stockpiles to reside there under EPRAB3104HA. However, as only cool or unaffected waste wood fuel would be moved here after inspection, this will not be required other than to act as a secondary supply for the New Farm water bowser, if required.

Managing fire water

Containing the run-off from fire water

The Old Oil Well Site also has an impermeable surface with surrounding bund. This surface falls to a c.500m^3 sealed sump.

In the event that the bund cannot contain the fire water, the bund will be augmented using waste wood fuel or inert virgin soil from New Farm.

In the event of a fire, all fire water will be captured within the bunded area and sump and can be recirculated for re-use in firefighting.

This sump is larger than the sum of all the water tanks on site and has sufficient volume to take a further 14hours of inflow from the supply main. This assumes no water losses due to absorption by waste or evaporation.

However, water volume would be lost from the circulating volume during firefighting through absorption and evaporation, so this sump alone will be more than capable of receiving and holding the fire water generated by the site when using water recirculation and stockpile stripping to extinguish the remnants of a burning stockpile, once the unaffected waste wood fuel within that stockpile have been removed to quarantine.

On top of the sump capacity, the secondary containment area for the for the site is delineated by the site bund and the expanse of the impermeable surface. This is c.5,000m^2. For every average 10mm retained water depth across the impermeable surface, 50m^3 of fire water storage would be added to the 500m^3 volume within the sump.

The sump and secondary containment have no discharge and so must be emptied by pump & tanker (once sampled, analysed and proved fit for disposal).

As the sump has a relatively large volume, it will be practical to use it as a recirculation source for the firefighting water.

Recirculating the water, together with using controlled burn firefighting of any un-removed stockpile remnants, will allow the sump and tanks, together with the supply to the site, to provide enough water to manage an incident should it occur.

This is the practise approved in the FPP for the recently surrendered Permit for the site, that allowed a more intense activity and larger stockpiles.

During and after an incident

Dealing with issues during a fire

During a fire incident and its aftermath, all incoming loads will be diverted away from the Old Oil Well Pad Site.

All loads are pre-booked into and out of the site and the number of loads entering or leaving the site in any one day will be relatively few. All waste fuel entering or leaving the site is pre-booked on commercial contract from waste treatment sites. None is delivered direct from collections, producers or on-spec deliveries. Due to this level of control over a relatively low flow waste stream, diverting loads away from the site is relatively easy.

Should an incident occur, T.G.Porter, together with the CHP facility, will telephone every supplier to divert incoming material directly to the CHP facility, so avoiding the Oil Well Pad Site. If this is not possible, the waste fuel will be held at the suppliers' treatment sites.

Such is the state of the waste wood fuel market in the UK, any material not taken by the CHP facility will be rapidly re-directed by the supplier to one of a number of large waste wood fuelled CHP plants operating through the south of England and Wales, so waste will not build up should the Oil Well Pad Site be out of action for a number of days.

Should an incident occur that demands fuel be diverted from the Old Oil Well Site and the CHP facility, the CHP will have difficulty re-capturing the fuel supply once the incident is over. This is another reason why the waste wood fuel stock held on site will be very closely managed and monitored to reduce the risk of fire as far as possible.

Notifying residents and businesses

In the event of a fire, and if deemed necessary by the FRS and E.A., the following locations would be notified by the site management, either by telephone or in person:

- Domestic dwellings on Pickaxe Lane
- Commercial/Industrial properties at New Farm
- New Farm main building complex – reception and weighbridge
- New Farm main building complex - Farmhouse

These comprise the nearest receptors to the Old Oil Well Site.

However, the nearest receptor to the site is c.550m away.

There are no roads or rights of way crossing the landholding around the Old Oil Well Site, so no route closures would be required. The nearest such route is c.550m to the west.

Due to the distance to receptors (both human and environmental) and the nature of the site infrastructure, minimal risk would be posed in the event of a fire at the Old Oil Well Site.

Clearing and decontamination after a fire

The site will be cleaned using a loading shovel and bulker articulated trucks after a fire.

Contaminated/burned material will be sent to a suitably Permitted facility for either disposal or recovery.

The site staff will sort through and check waste fuel on site and that which is still suitable for use will be sent to Slough Heat and Power – the original destination of the material.

Fire water will be sampled and analysed prior to removal by tanker to a suitably Permitted facility, if required.

Sludge from the base of the sump will be removed by tracked excavator and disposed of at a suitably Permitted facility.

Making the site operational after a fire

Once any contaminated/burned waste has been cleared from the site, the site surface will be checked and repaired as necessary.

These repairs will entail breaking out and recasting any broken or spalled concrete within the impermeable surface to the site and checking and repairing, as necessary, any fences or bunds around the site.

Any such repairs will be photographed and noted within the site diary.

Once the impermeable surface repairs are fit for use, the Old Oil Well Site will be able to start receiving waste fuel again.

As the Old Oil Well Site basically comprises a bunded impermeable concrete pad, with a big sump & water tank, there is not a large amount of infrastructure to be damaged in the event of a fire, so speeding any required repairs and commissioning.

Alternative Measures – Stockpile Sizing and Management

The size and volume of the stockpiles proposed for the Old Oil Well Pad has been carefully chosen after reviewing a number of site-specific factors.

These factors have been reviewed with reference to the three objectives set out in the 'Fire Prevention Plans: environmental permits' guidance (updated 09/01/2020).

The stockpiles proposed are larger than those set out as standard practise in the guidance, but the level of risk and potential impacts at this site is unusually low for a waste transfer facility.

The guidance objectives are:

- minimise the likelihood of a fire happening
- aim for a fire to be extinguished within 4 hours
- minimise the spread of fire within the site and to neighbouring sites.

These objectives and the site factors are set out and discussed below:

Minimise the likelihood of a fire happening

- The site will have minimal activity, with no sorting or processing of the wood waste at all. This removes the need for process plant, a significant source of ignition.
- The site will have no "resident" mobile plant – all storage, fuelling and maintenance will take place at New Farm. This means, at the close of work, mobile plant will be removed from the site. Again, this removes a significant source of ignition.
- All plant to be used on site will be equipped with extinguishers, recorded in the plant daily checklist and Daily Checklist/Site Diary.
- The end-of-work blow down to clear dust from the machine will take place at the New Farm workshop area and will also be recorded in the plant daily checklist and Daily Checklist/Site Diary.
- The site operatives will undertake a documented 90minute fire watch on site after each shift or the cessation of waste movements for that day.
- As well as the fire watch, the site and stockpiles will be inspected daily by the Site Management and the inspections documented. These inspections will take place every day (including non-operating days) and will include temperature measurements of the waste wood fuel stockpiles.
- The waste to be stored on site is a homogenous, pre-prepared waste wood-based fuel for a single CHP plant, produced to the stringent specifications laid down by that plant.
  All contamination (metal, glass, plastic, etc) has been removed and the waste fuel has minimal fines and is of a large enough size to reduce the risk of water logging and self-heating.
- The waste comes into the site on pre-booked loads, already contracted to the CHP plant. The throughput will be relatively low, allowing the site operatives opportunity to properly inspect every load on discharge and when moving it to the stockpiling areas.
- The waste will be stored and rotated in a controlled "First In/First Out" system and the construction, residence time and removal of each stockpile will be monitored and recorded on the Daily Checklist/Site Diary (OT 3).
- The pre-prepared waste wood fuel is already contracted to the CHP plant and so leaving it on site to degrade will cause the CHP to lose money through loss of calorific value in the degraded fuel. This is another reason why the rotation of the fuel will be stringently managed.
- The site has no on-site fuel or hazardous materials storage, or any other infrastructure than the impermeable pad, sump, surrounding bund and security fence. The lack of gas services, flammable fuels/materials or electrical cabling removes another potential source of ignition from the site.

Aim for a fire to be extinguished within 4 hours

There are a number of factors that should allow the target extinguishing time for any fire to be relaxed for this site without causing undue impact, so allowing larger stockpiles. These are:

- The remote site location and lack of nearby receptors (see below) means that there is little merit in pressing for a 4 hour target time when relaxing this would allow a less intense operation with lower impacts on the environment and less use of resources, should a fire occur.
  The site is very remote and is located within a large farm landholding.
  The nearest receptor to the site is some 550m away.
  There are no designated sites or habitats within 1km of the site.
  There are no services close to, over or under the site.
  There are no highways or public rights of way within 500m of the site.
  There are no vulnerable structures or other items adjacent to the site.
  The nearest airport (RAF Odiham) lies c.3.5km north of the site.
  The nearest railway lies some 4.2km south south east of the site.
- The lack of vulnerable infrastructure, structures or flammable materials on site and adjacent to it means that there is nothing for any fire to spread to within or outside the site.
- The total lack of transport infrastructure or receptors near the site means there is nothing to be impacted by smoke produced by a fire.
- The robustness and simplicity of the site infrastructure (the impermeable pad, sump and fire water tank were designed to deal with a leaking, burning exploratory oil well) means that the site will come to little harm should it take longer than 4 hours to extinguish a fire.
- Relaxing the target time will allow a fire to be extinguished through starving it of fuel (by removing unaffected material from the stockpile) and dampening it with recirculated water. This is the most efficient use of resources and will allow most of any affected stockpile to be saved. Opening up a stockpile and heavily soaking it not only uses large amounts of water but will also cause issues later in that large volumes of fire water must be disposed of and the soaked waste wood fuel, even if unaffected by fire, would be rendered unusable by the CHP through the excess moisture content in the material.

Minimise the spread of fire within the site and to neighbouring sites

- The remote site location and lack of nearby receptors (see above) means that there is little risk of the fire spreading outside the immediate site boundary.
- The lack of vulnerable infrastructure, structures or flammable materials on site precludes a fire spreading to a non-waste wood fuel within the site boundary, so causing more serious issues.
- The robustness and simplicity of the site infrastructure (the impermeable pad, sump and fire water tank were designed to deal with a leaking, burning exploratory oil well) means that the existing site will not promote the spread of fire within the site.
- The remoteness of the site and lack of surrounding structures means that any fire on site has nothing to spread to further outside the site.
- The site will operate with the required 6m clearway around the stockpiles. This is a more-robust management method that fire walls and also ensures that loading shovels can access all sides of the stockpiles quickly and without hindrance.

OT Figure 1 - Site Location Plan (named as *EMS Figure 1*)-V3

Attached as a pdf document.

For the avoidance of doubt, the Permitted area will NOT have any of the following infrastructure:

- Buildings
- Weighbridge
- Hazardous material storage
- Natural or unmade ground used as a working surface
- Any processing plant – fixed, semi-mobile or mobile
- Any drainage discharge to ground or sewer
- Fire walls
- Maintenance area or workshop
- Fuel or lubrication storage

OT Figure 2 - Site Permit Boundary, Drainage & Layout Plan (named as *EMS Figure 2*)-V3

Attached as a pdf document.

For the avoidance of doubt, the Permitted area will NOT have any of the following infrastructure:

- Buildings
- Weighbridge
- Hazardous material storage
- Natural or unmade ground used as a working surface
- Any processing plant – fixed, semi-mobile or mobile
- Any drainage discharge to ground or sewer
- Fire walls
- Maintenance area or workshop
- Fuel or lubrication storage

OT Figure 3 - FPP Location and FRS Access-V3

Attached as a pdf document.

OT Figure 4 - Local Receptors (named as RA 2 Figure 1)-V3

Attached as a pdf document.