

Annex A - Summary report (Tarmac)

(To be read in conjunction with fire risk assessments completed 17th December 2020)

Caveat:

MGR fire and facilities consultants Ltd (MGR), cannot be held responsible for any omissions or discrepancies relating to the production of this report, it is produced in good faith based on site inspections and evidence provided by the client in relation to the formulation of recommendations provided.

General Description:

MGR Fire and Facilities Consultants Ltd, were commissioned to conduct fire risk assessments to the 4no. main buildings that make up the site of Tarmac, Linford Blocks, Buckingham Hill Road, Linford, Stanford-le-Hope, SS17 0PY. Buildings assessed were Linford 1, Linford 2, Workshop and Security weigh bridge.

Following our site visit on Thursday 17th December 2020 we have produced separate fire risk assessment reports for each building, the purpose of this summary is to provide a complete side wide overview of the issues that currently exist. This report will not have specific detail regarding each building as this can be found in the respective risk assessment, and will serve only as a summary.

Executive Summary:

The site is a large industrial area which produces blocks for the construction industry, as such it is a high-risk location in terms of general health and safety requirements. However, due to production methods the numbers of people onsite are relatively small compared to the volume of the buildings and outlying areas, this marginally reduces the overall risk.

Access / Egress:

Access is via the security weigh bridge; this controls the movement of vehicular and pedestrian traffic both into and out of site with all visitors and contractors required to sign in and out.

Any visitor or contractor attending site for the first time is required to have an induction (common on large high-risk sites), however the nature of the induction is very lax with no real structure or monitoring.

Site Induction:

After watching a video for 10 minutes you are presented with a two-sided piece of A4 paper and asked to answer some multiple-choice questions, which are not checked (or at least mine were not).

Visitors and contractors are then allocated a contact whose duty it is to be a point of contact in an emergency and they are responsible for ensuring that you are safely evacuated in a fire / general emergency. I was accompanied on my visit as I had not been to site previously but during conversations it was noted that contractors who are based on site carrying out ongoing works do not bother to sign in, instead they bypass the weigh bridge and go straight to their work areas.

Paperwork / Managerial process audit:

The first element to the fire risk assessment process is to conduct a paperwork and managerial process audit, this includes all elements (from a fire safety perspective), relating to servicing, testing, maintenance, policies & procedures, training, drills, and record keeping.

It was evident from the start that the elements noted previously were not up to any standard and that records were not up to date or relevant, I was given access to a small filing cabinet which contained around 10 years of previous fire risk assessment conducted by Chubb. These assessments were in date order starting with the latest (2018), at the top and descending to the final dated 2010, each assessment noted the same things in each action log (with some minor variations).

It led me to conclude that either the assessment was simply a cut and paste exercise, which the client did not examine or challenge, or that the same issues existed year on year. Either way there was no remediation of any noted actions from the reports, several of the actions noted are again noted within our assessments.

Records were few and far between and those that were available were out of date, fixed electrical wiring reports (EICR), were a case in point. The ones provided were dated 2016, however the subsequently noted asset labels attached to the electrical distribution boards indicated a last inspection date of August & September 2017 (which still makes them out of inspection date), as industrial sites require 3 yearly re-inspection.

The same situation exists with servicing and maintenance relating to emergency escape lighting, fire alarm and associated equipment, fixed heating, and cooling systems etc. It is imperative that these items are serviced and maintained to recommended time frames to ensure they operate as intended in a fire and that any mechanical / electrical item does fail and create an additional fire risk.

The only records provided that were up to date were relating to PAT and fire extinguisher servicing, other elements which could not be confirmed were staff basic fire safety, marshal and extinguisher training, fire evacuation drills and there was no clear company fire / emergency action plan or records of fire incidents, false alarm activations or near misses etc.

The second stage of the assessment process is the physical site inspection, this covers things such as location of potential fires, ability of safe evacuation if a fire occurs, fire alarm provision, category & status, evacuation routes, fire resisting doors, emergency escape lighting, fire signage, housekeeping and any other additional hazards that increase the overall risk.

Fire alarm:

The site has a mixture of ages and types of manual and automatic fire detection in place with Linford 1 having some areas (office block), that have detection to *M/L1 standards, yet the high-risk production areas have a small area covered by “sniffers” (beam detectors), and nothing further. The boiler house attached to Linford 1 has a mixture of commercial and domestic detection installed which is wholly inadequate, Linford 2 has a similar scenario to 1. The workshop and weigh bridge buildings have systems to *M/L2 standards.

The issue with the overall fire alarm system is that it is completely disjointed, and no confidence can be forthcoming in relation to a guaranteed early warning of fire, which is vital when staff, contractors and visitors are spread out across large areas.

It was noted verbally (by several members of staff) that the fire alarm is inaudible in large parts of the site and that to add to this the alarm stopped working in October, this has prompted regular inspection (fire watch), with the use of air horns being employed to notify of any issues.

Evacuation / Signage:

The fire strategy (as verbally confirmed on the day of inspection), is that upon alarm activation the whole site evacuates and goes to one of two fire assembly points. However due to the lack of control over regular contractors and general visitors and contractors (not accompanied), it cannot be guaranteed that all people will get the fire assembly point quickly enough to prevent unnecessary entry in to building (potentially on fire), by the fire and rescue services.

This situation is compounded by the lack of information & directional fire signage around the site, there are no fire action notices by manual call points (at final exits), indicating the location of fire assembly points, and no directional signage guiding people to them when they exit buildings from final exit points.

**Manual relates to manual call points (MCP's) and Automatic fire detection relates to - smoke / heat detectors installed in various areas throughout the building*

**M relates to manual / L - denotes life safety / 2 - is the category of installation with 2 noting that automatic detection is installed to all escape routes, rooms exiting onto escape routes, other high-risk rooms and areas that could affect evacuation*

Conclusion:

The site is a high-risk area, from a fire safety perspective, although this is mitigated with relatively small numbers of staff, visitors, and contractors onsite. However, this adds to the issue in some ways, in large open industrial areas where sight lines are clear, we can usually manage the risk of notification of fire by a simple manual alarm system. When the fire is noticed, a manual call point is activated which sounds the alarm to ensure a swift evacuation of all personnel.

In this instance we have people that are spread out and fragmented across a large area, which contains many obsolete buildings, and as such we need to provide comprehensive early warning of fire to achieve the same outcomes, therefore a combined manual and automatic fire detection system (see recommendations that follow), covering all areas and linked together would ensure early notification of fire for all site users allowing for swift evacuation.

Along with a comprehensive early warning system we need a robust staff, visitor, and contractor management system with clear and concise notification of anyone remaining in an area affected by fire so that appropriate actions can be taken (see recommendations that follow). This can only be achieved by a controlled entry / exit process to all points of the site, with no access to the site available through unchecked points.

This must be coupled with clear fire signage to ensure that all personnel reach their intended location for assembly as quickly as possible.

The key element that underpins all the above is a robust management process to ensure that all elements operate as well on day 1,000 as they do day 1, this must include the provision of all servicing and maintenance requirements along with testing and checking of all passive and active fire safety systems installed.

A thorough understanding of commissioned risk assessments and audits along with clear protocols to remediation of all noted actions associated with those reports, along with the checking of actions completed and improvements delivered is the only way to achieve the high levels of compliance that are required.

Recommendations:

Automatic & Manual fire detection:

As noted in the summary above, the site is very fragmented with all types of manual, automatic and domestic fire alarm equipment installed.

We have made some recommendations below (we are not fire alarm engineers and you should consult a suitably qualified contractor to deliver a recognised system to standards defined within BS 5839-1:2017), the recommendations are based on our experience / expertise in examining this type of building many times previously:

Linford 1/2 – within the large production parts of the building (and boiler house in Linford 1), a system should be used which filters or avoids the issues arising in this type of environment (such as dust etc.), we would recommend either:

- Aspirating system - Aspirating smoke detectors operate by drawing air in through a network of pipes with holes strategically placed within them to allow air to be drawn through the pipe network, the pipes are connected to an aspirating device which houses a smoke detector that samples the air drawn through the pipe network for smoke particles
- Linear detection - a continuous linear thermometer actively reporting temperature readings in real time

Offices, Workshop & Weigh bridge:

Within the respective office / welfare blocks and to the workshop and security weigh bridge we would recommend a system to at least M/L2 standards, all areas should be checked to ensure the audibility of the alarm notification (internal & external), where high noise areas exist visual beacons should be incorporated into the system.

All buildings / areas should be linked to ensure a clear site wide notification of the alarm activation ensuring all personnel are afforded the longest possible time to evacuate safely.

Staff, Visitor & Contractor management:

It is a vital part of overall fire safety that any site should have a good understanding as to who is always on or off site in case of emergency, this requires a robust procedure to be operational in large open sites such as Linford Blocks.

With the issues noted previously in the report we recommend a system that would control access / egress and deliver clear and accurate information as to who is onsite, the system we have seen in operation in several large industrial sites uses swipe access / egress and allows for full understanding of all persons onsite at any point.

It operates in the following way (basic description):

- All entrances & exits to site are operated by use of card readers
- No one can access or leave site without “swiping” in and out (this gives accurate records at all times)
- All visitors & contractors given a pass once induction process completed
- Induction should happen on an annual basis to allow access to the site
- Fire assembly points are provided with card readers, during a fire evacuation (or drill), all staff, visitors & contractors swipe into the assembly point when they arrive during an evacuation informing the system of all those who have left the buildings
- Real time information available at security weigh bridge to inform fire & rescue services of potential missing persons

There are many systems on the market that would achieve this scenario, we believe that this is the most effective way to control movement of people around site and to ensure that missing people in an evacuation situation can easily and quickly be identified.

Staff Training:

All staff should have a good understanding of basic fire safety, knowing how a fire starts, develops and how rapidly it can spread, are all fundamental requirements to keeping people safe.

Those staff who have additional roles and responsibilities should be given a more comprehensive insight into fire safety along with hands on familiarity training with firefighting equipment (relevant to the environment they are based in).

We recommend the following procedures and time frames:

- **Basic fire safety training (all staff)** – at induction for all staff (face to face covering site specific issues and locations of manual call points, assembly points, exits etc.)
- **Refresher training (annually – all staff)** – this can be delivered either face to face or via an e-learning platform (however every 3 years a face-to-face refresher should be provided)
- **Additional specific fire training (staff with additional roles)** – this should be delivered face to face every 3 years and cover specific role and responsibilities such as marshal / warden duties
- **Hands on firefighting equipment training (staff with additional roles)** – delivered every 3 years and should cover all relevant firefighting equipment relating to the working environment

All fire safety training should be refreshed if any significant changes to the working environment / buildings change