

MARSH PROJECT RISK INSIGHTS: WHAT'S THE PROBLEM WITH WASTE?



The waste sector is a broad and growing industry within the United Kingdom (UK) and has a significant number of different processes, technologies, and disposal solutions in place and under development. No longer do we just collect and transport all our waste to the local landfill site for disposal; the industry has developed sophisticated processes to recycle, compost, process, treat, incinerate, gasify, and recover energy from our now segregated waste streams. In a recent Defra study¹ published earlier this year, the UK waste sector generated an estimated GBP6.8 billion in gross value and supported 103,000 jobs in 2013.

However, the waste sector is arguably one of the most challenging for the UK insurance market. High-profile losses and a high frequency of fire claims have led to a significant reduction in underwriting capacity and an increased scrutiny of the risk profile associated with all treatment and disposal processes. In this edition of Insights, we will explore:

- Developments in the waste sector and the losses that have occurred from 2012 to 2014.
- How the insurance market has reacted.
- The importance of adopting a good approach to risk management.
- How Marsh can help.

LOSSES IN THE WASTE SECTOR

Anyone with an interest in waste will be aware of the difficulties faced by the sector due to an “unprecedented” amount of waste fires, which have resulted in significant financial loss being sustained across the industry. Over the last few years, the number and scale of these fires has remained constantly high.

According to the Environment Agency, an average of one in every 18 privately-operated waste sites in the UK experienced a fire between 2012 and 2013. That is a total of 595 fire-related incidents across the period. The following is just a small sample of the fires incurred which have made the national press:

¹ The study, 'Resource management: a catalyst for growth and productivity.'

Date	Incident
February 2012	Fire at wood pellet biomass plant at Tilbury.
June 2013	Fire at a Norfolk baled recycled paper premises.
July 2013	Fire at Smethwick plastics recycling facility in the West Midlands.
July 2013	Fire at Sweeep Kuusakoski's electronic recycling facility in Kent.
July 2013	Fire at Dumfries Energy from waste plant.
August 2013	Fire at Junction 25 Recycling's facility in Stockport - 1,500 tonnes of Refuse Derived Fuel (RDF) material.
October 2013	Fire at a wood pellet biomass plant at Port of Tyne.
March 2014	Fire at a waste paper recycling plant in Salford.
August 2014	Fire at Mechanical Biological Treatment (MBT) facility – East London Waste Authority (ELWA) project finance initiative project.
September 2014	Fire at Melton waste recycling plant in East Yorkshire.
November 2014	Large fire at a combined heat and power waste incineration facility.

Statistics supplied by the Environment Agency show that for the past 10 years there has been, on average, a fire incurred every day. While figures for 2012 were lower than those in 2011, with 96 fires at regulated waste transfer stations and 247 fires at all regulated sites, the downward trend has not continued. In 2013, there were 106 and 254 fires for the corresponding categories.

While this is not a big rise, the scale and profile of major fires in the waste management and recycling industries has certainly increased for a number of years. Indeed, the disclosure of 2013 figures was prompted by a question posed in Parliament by Dan Rogerson, Secretary of State for Environment, Food, and Rural Affairs – a sign of the scale of the problem.

A recycling plant in South East London, for instance, has created a notable reaction. In just two years, it had a total of 11 fires, which required 550 fire engines being called out, nearly 2,000 hours of firefighters' time expended, and GBP560,000 of taxpayers' money.

While an extreme case, the particularly angry and unequivocal response from interested parties was notable. Local MPs and residents expressed anger and opposition to the company continuing to operate. It also pushed the Chairman of London Fire and Emergency Planning Authority to write to the Environment Agency to exert pressure on it to tackle the industry's no longer tolerable fire problem.

Another example² is the textiles recycling sector, which also expressed concern after it was found that, in 2012, there was more than one fire a week at its recycling centres.

REACTION IN THE INSURANCE MARKET

Traditionally, the view of the insurance market has been that the risk of fire loss, although an inherent feature within the sector, is a remote and perhaps "one-off" event, which is unlikely to occur. An insurer on risk might just have considered itself to be "unlucky" if a loss occurred during their policy period, and would have been happy to treat it as such within any ongoing renewal negotiations.

However, as a result of both the number and scale of fire losses which have occurred recently, insurers are moving away from this position. The risk of fire is now being seen as a catastrophic loss which involves very large fires and an attitude from the fire brigade that, where no danger to life exists, the fire/buildings should be left to burn out. As a consequence, the waste sector is now a distressed sector for the purchase of insurance.

Within the market, the majority of composite insurers have now withdrawn from this business, and those insurers which have stayed, including Lloyd's, are being very selective in that they are seeking to develop a more detailed analysis of why such losses occur, and what preventative risk measures can be taken to restrict their liability to future losses.

Working with site owners and operators, insurers now require more thorough loss investigations to take place so they can better understand the particular root cause of any loss, and what steps can be taken to control and prevent future losses.

² "Textiles recyclers struggling to get insured" June 2014
<http://www.mrw.co.uk/story.aspx?storyCode=8663751&preview=1&hash=27BBF369B35099ED8E41DB1E021C18A2>

THE 2015 INSURANCE MARKET AND INSURER APPETITE

OPERATIONAL RISKS

In contrast to the relatively soft insurance market conditions enjoyed globally, insurer appetite for property damage and business interruption insurance in the last two years for the waste management sector has significantly reduced and shows little signs of improving in the foreseeable future. Several key insurers have now withdrawn from the sector, and there are now only three principal insurers remaining that are willing to lead on the insurance of waste risks/assets. These insurers are very selective on the deployment of their available capacity, only providing terms if they are satisfied that the levels of fire protection are suitable for the individual assets being insured. Such insurers have also restricted the capacity that they are willing to offer for each individual risk, leading to the requirement to seek supporting capacity, which is also difficult to achieve in the current marketplace.

The reduction in the number of insurers working in the sector, coupled with an increase in losses and claims, has resulted in insurers looking to significantly increase their premiums across the sector. However, insurers have not only been seeking to impose premium rating increases; they have also increased the level of policy deductibles.

CONSTRUCTION RISKS

Unlike the operational insurance market, the waste construction insurance market continues to have strong insurer competition for good risks.

Construction rates for waste projects have not suffered the losses seen in the operational phase; therefore rates have remained competitive and in line with the current soft underwriting cycle. While competition is strong, some insurers' appetites reduce for projects that involve extensive testing and commissioning periods, especially where full defective design cover (LEG3) and/or guarantee maintenance is required where prototype equipment is being used. We expect most insurers will usually look to restrict this wider cover to the civil works elements only, and would prefer to offer extended maintenance only for the defects liability period.

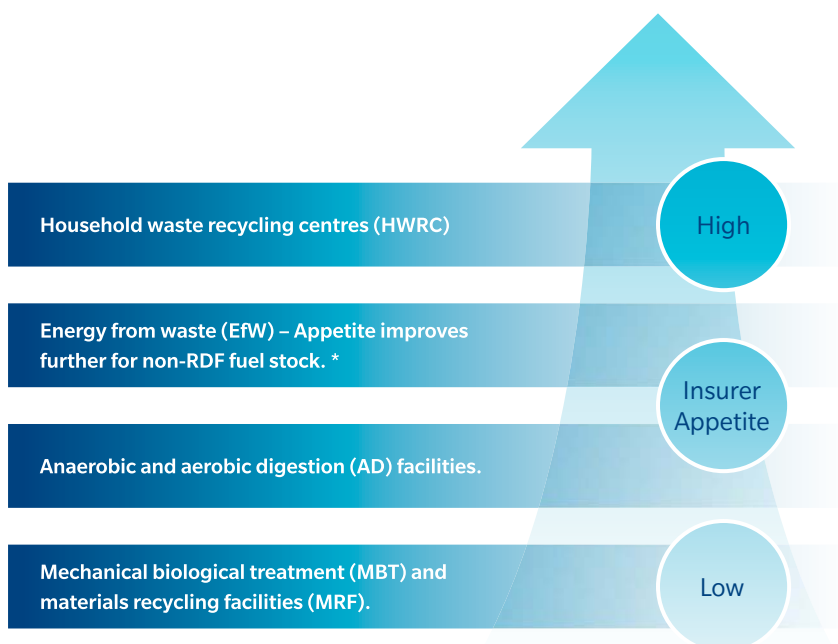
INSURER APPETITE

The waste sector encompasses a wide variety of materials and processes, such as:

- Materials – wood, plastics, paper, municipal/household waste, refuse derived fuel, biomass.
- Processes – sorting, recycling, treating, recovering, shredding, composting, electricity generation, heat generation.

Insurer appetite varies among the processes and the materials to be treated. We have detailed below insurer appetite for the various processes.

The below illustrates that there is a very limited market for insuring MBT and MRF facilities. The typical lead insurer will be very selective on the extent of new business it quotes for and accepts, the limits offered, and the extent of cover provided. On larger projects, minimum deductibles of GBP500,000 for fire perils are becoming commonplace.



* Please note that if the energy from a waste project includes a MBT or MRF, or includes any form of receiving and sorting, the insurer appetite reverts to the same as MBT/MRF.

THE IMPORTANCE OF RISK MANAGEMENT

Given this backdrop, and in order to be able to secure insurance protection, it is critically important that any waste project or facility has a comprehensive approach to the management of its risks.

In October 2014, the Waste Industry Safety and Health (WISH) forum published guidance on reducing fire risk at waste management sites ([See link](#)).

The table below summarises some of the key risk management issues relating to operational procedures:

Risk	Approach
Maintenance regimes and electrical inspections	Regular and planned inspection of systems. These are commonly a source of ignition.
Managing the feedstock/fuel hall	Regular turning of the waste to prevent smoldering. Alternative storage options in the event of plant breakdown.
Effective external storage	Waste stored at a sufficient distance away from the building to prevent fire spread, protected against arson, detection and alarm systems, regular turning of open stacks.
Internal waste storage	Fire wall separation, adequate fire detection, alarm and suppression systems. Stacks maintained to suitable size.
Housekeeping	Regular cleaning programme for all site areas and machinery that reduces levels of dust and combustible materials, and ensures that any flammable materials (greases, fuels, paints) are stored correctly.
Security	As appropriate to location: Site security measures in place to minimise the risk of vandalism and arson. Security fencing, intruder alarm, CCTV, or 24-hour manned presence may be required.
Formal "close down" procedures	Shutting down electrical systems, clearing conveyors of waste, maintaining a fire watch at least an hour after end of operations.
Trained personnel	Operational experience has demonstrated that roving operators and other plant personnel have been key factors in the detection of fires and unsafe conditions. It is important that they are properly trained to observe and react to incipient fire situations. These should be reported to the control room operator for evaluation to determine what action is to be taken.

SITE DESIGN/CONSTRUCTION

The "ACE Design Guide" is an industry recognised standard which any new facility should satisfy as a minimum. It stipulates the minimum construction and fire protection methods that ACE would expect for facilities in this sector, and is widely accepted by other insurers within the market. It typically requires that all construction materials are non-combustible, and that the building standards satisfy the relevant National Fire Protection Association (NFPA) standards.

The ACE Design Guide also stipulates that:

- Fire areas should be separated from each other by either a fire barrier (typically a wall) or physical separation.
- Fire barriers should have a minimum two-hour fire resistance rating.
- Typically for a detached structure to be classified as a separate structure, the physical separation should exceed 15 metres.

FIRE SUPPRESSION/DETECTION SYSTEM

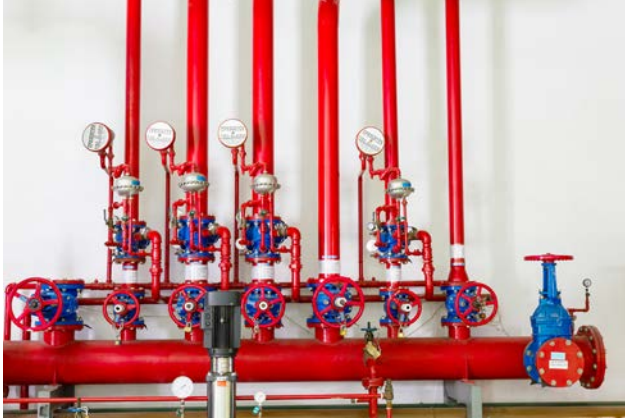
A bespoke fire detection and suppression system is a fundamental part of any risk management strategy. Experience has shown that, with the hardening insurance market, insurer surveyors require improved fire suppressions systems be installed if insurance cover is to be maintained.

Insurers will also require continuous improvements on fire suppression systems as and when new claims demonstrate insufficiency of the existing protection. As an example, insurers now prefer the fully automated shut down of processes and sprinkler system activation in the event of fire, whereas historically, the manual shut down of systems was acceptable.

It is important for any fixed fire protection systems to be based upon a system (or equipment) which is:

- Listed, approved, or certified by a recognised independent testing laboratory (for example, Loss Prevention Certification Board (LPCB), NFPA, FM Approvals, Danish Fire Lab (DFL)) for its intended purpose.
- Designed, installed, and maintained in accordance with acceptable published codes or standards (for example, British Standard (BS)/NFPA/FM) addressing the intended purpose.
- Designed, installed, and maintained in accordance with manufacturer's literature.

Any variation is likely to lead to difficulties obtaining insurer acceptance of the system.



Some of the common mistakes which we see in sprinkler system design in the waste industry include:

- Sprinkler designers/consultants often propose an “Ordinary Hazard 3” system. However, this system only allows for the storage of materials up to a specific height level. The sprinkler system must be designed to protect against the largest fire load expected within the facility, which is typically found within the reception hall/storage area.
- A sprinkler system designed for the wrong hazard class. Sprinkler systems should be designed for the appropriate hazard class (with waste often falling into high hazard).
- Excessive ceiling clearances are not factored into the density of the sprinkler system.
- All sprinkler tests are based on open spaces of 150 metres squared. If the area to be protected is in excess of this, then roof-only protection will typically be insufficient and additional suppression systems should be installed, such as oscillating water cannons or additional detection systems.
- Insufficient plant-specific protection underneath conveyors, on or underneath high-value machinery.

HOW MARSH CAN HELP

We have a wealth of experience across the waste sector, and our experienced project risks team works extensively with clients and their advisers to design and implement solutions that deliver the best value for each client.

Below is just a small sample of the projects we have worked on in 2015. In addition, we act for numerous waste operators and contractors arranging their annual corporate insurance arrangements.

Nature of Facility	Reinstatement Value	Phase
RDF EfW with MBT	GBP160,000,000	Development
RDF EfW	GBP92,000,000	Development
EfW – Perolysis	GBP86,000,000	Development
Waste Wood EfW	GBP45,000,000	Construction
MRF, In Vessel Composting (IVC), AD, HWRCs	GBP94,000,000	Construction
MBT and AD	GBP66,000,000	Construction
EfW	GBP127,000,000	Construction
EfW and MRF	GBP88,000,000	Construction
HWRCs, transfer stations	GBP7,000,000	Interim operations
AD, IVC	GBP20,000,000	Interim operations
MBT, MRF, EfW, HWRC	GBP385,000,000	Operational
Landfill, IVC, HWRC, transfer stations	GBP9,000,000	Operational
MBT and HWRCs	GBP48,000,000	Operational
MBT, Landfill, HWRC	GBP21,000,000	Operational
MRF, Landfill, transfer station	GBP25,000,000	Operational
AD	GBP20,000,000	Operational

BESPOKE INSURANCE AND RISK MANAGEMENT ADVICE

As the table above demonstrates, we are continuously active in this sector and constantly engaged with the insurance market. This ensures our advice remains pertinent, realistic, and appropriate at all times, and applicable to any project at whatever stage in the lifecycle.

From an insurer perspective, the real risk of loss occurs during the operational phase of the facility. Using our experience, we help clients on new projects in the bid/development stage to consider the long-term view and seek to manage the operational risks accordingly. This is done through the implementation of appropriate risk management measures, and ensuring the correct flow-down of risk through the contractual structure.

In addition, Marsh employs in excess of 60 consultants in the UK and Ireland within our Marsh Risk Consulting Practice (MRC), who possess a variety of specialist skills and experience.

Their understanding of the waste sector and related property and risk engineering issues, together with their knowledge of the applicable guidance (NPFA, BS, WISH etc.), provides clients with the insights and assistance needed in the current uncertain marketplace.

We can work with clients to ensure that the overall design, risk management, and fire protection systems are in alignment with best practice, and are able to assist throughout a project's lifecycle.

Where the Marsh Risk Consulting Practice is engaged, we believe that such an approach delivers real value into the project and helps to differentiate your project so as to achieve the best response from the market

ADVISORY AND CONSULTING CAPABILITIES

BID/DEVELOPMENT	CONSTRUCTION	OPERATIONS
Informed premium estimates.	Competitive and innovative insurance placement.	Advice on changing risk environment.
Risk management guidance — ensuring long-term view considered.	Claims advocacy.	Act as the client advocate should the incumbent insurer require costly retro-fits. Prevent over-engineering.
Flow-down of risk.	An advocate position to insurer's surveyor, to assist in challenging their positions as and when appropriate.	Provision of practical risk improvement recommendations designed to reduce the risk exposure to the business.
High-level review of the design philosophy employed.	Differentiate your project with insurers. We will highlight its unique features, showcasing the thoroughness of the risk management approach.	Viable insurance placement.
Detailed review of the fire protection system and equipment, including reference to the applicable latest guidance, WISH, and NFPA standards.	Early and active insurer engagement.	Differentiate your project with insurers. We will highlight its unique features, showcasing the thoroughness of the risk management approach.
Liaise with the project's technical and engineering consultants to agree design specifications.		Risk engineering gap analysis. MRC has developed a methodology to assess risk engineering in the waste and recycling industry. This benchmarks the site against WISH guidance.
Provision of practical risk improvement recommendations designed to reduce the risk exposure to the business.		Claims advocacy.

THE FUTURE

Those insurers involved in the waste sector continue to be very selective on the deployment of their capacity, only providing terms if they are satisfied that the level of fire protection and risk management is adequate for the individual assets being insured. To achieve a successful outcome, early insurer engagement has never been more important. It remains critical to evidence your project's risk protections and operational philosophy to secure insurance cover both now and in the future.

We help our clients by providing insurance and risk management advice and solutions that are specific to their needs. Recognising that each project attracts its own particular risk issues, we work closely with our clients to resolve these on a bespoke basis.

ABOUT MARSH'S PROJECT RISK TEAM

Our project risk team specialises in providing insurance and risk management advice and solutions for complex project procurements; applying a highly-structured approach to the identification, evaluation, allocation, and management of project risk issues.

We have a wealth of experience across the key project sectors, including accommodation, bluelight, custodial, energy, defence, education, health, housing, leisure, roads, transportation, utilities, and waste.

Our experienced team works extensively with clients and their advisers to design and implement solutions (including portfolio insurance procurement) to protect stakeholders and their financial investments, understanding the divergent risk tolerance and particular issues of the public sector, equity investors, lenders, and the construction sector.

ABOUT MARSH'S GLOBAL INFRASTRUCTURE PRACTICE

Marsh's extensive global infrastructure expertise supports clients' interests throughout the negotiation and execution of contractual structure, design and build, operations, maintenance, and refurbishment. All this is in the context of construction projects, secondary purchase and sale of assets, public and/or private financing, or related capital raising. Marsh has a proven track record in the global infrastructure sector, with specialist resources worldwide. This expertise has been recognised through multiple industry awards.

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