



Escape of Oil – Claim case studies

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The purpose of this paper is to share a case study of a major domestic escape of oil loss and a case study of a commercial escape of oil loss. These case studies provide a framework to draw out learnings and to share these with the CILA community.

Property



The subject of the case study is a large 6 bed, detached property built in the 1920's sitting on a 1.5 acre plot and located in a semi-rural area.

In the early 2000's the property was extended, an additional two storey

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wing was added creating an in-door pool and library at ground floor level with a very large master bedroom above.

Due to the rural location of the property there is no mains gas and the property uses oil for central heating, hot water and to heat the swimming pool.

Following construction of the extension the newly built part of the structure suffered defects that resulted in litigation action against the contractor, which the insured won.

The library suffered damp penetration from ground water and had to be tanked, with multiple methods of tanking employed both internally and externally to the structure.

The Loss

A leak was discovered on Christmas Eve 2015. The last delivery of oil was in October with the purchase of 5,000 litres.

The spill followed the declining nature of the site from its elevated position by the tanks down towards the house. It was suspected that oil had got beneath the main dwelling.



Originally a 2,500 litre tank was present (the right hand tank) and following the construction of the swimming pool and the oil being used too quickly a second 5,000 litre tank was installed.

The tanks were sited on concrete slabs, laid onto compacted soil (all pre OFTEC regs. – see Note 1)

Between the two tanks was a fuel supply line, being a 28mm copper pipe at approximately 30cm above ground level. The site has a high water table and a clay based sub-soil meaning often the ground is subject to high levels of saturation. Both tanks had settled over time, the differing weights of each storage vessel allowing the larger 5,000 litre tank to settle more.





The hypothesis is this led to the separation of the fuel supply line between the tanks and resulted in the 5,000 litre tank fully discharging to ground and some of the 2,500 litre tank also discharging.

The Environment Agency were informed of the spill.

1st Visit

A major spill was visible to see on the ground and across ground water.

We were in a very wet winter at the time the claim was reported. The property sits on a clay sub soil and each time it rained heavily the spill moved across surface and ground water. The dwelling foul drainage was also known to discharge to a septic tank and therefore there was a risk of off-site migration.

Internal odours were high in the property.

The bedrock geology underlying the property was classified as a Highly Vulnerable Minor Aquifer, meaning this was an area that could easily transfer contamination to ground water.

The insured had a substantial collection of approximately 22,000 books in the library, with a value of around £400k, which was the first part of the building in the path of the spill. The oil also posed a risk to the library tanking membrane.



Product (kerosene) was visible in high concentration around the base of both tanks, in pooled ground water.



Product was also visible around the perimeter of the main dwelling, with an oily/rainbow coloured residue able to be seen in the ground water sitting amongst

detritus of fallen leaves and the pea shingle driveway beneath.

The kerosene was also very readily smelt in the air around and inside the property.





Emergency works

Like most liquids, oil takes the path of least resistance, whether this be provided by gravity, movement of ground water, drains, soak-away, pipes in the ground with anything that the oil can track along becoming a “path way”. The term path way is used to describe oil moving around an insured location.

When surveying a property following an oil spill incident, consideration is given to the “SOURCE, PATHWAY, RECEPTOR” model. In this instance the source was the oil spill in ground, the initial identified pathway was migration of the lost oil via the surface/shallow groundwater and the receptor was the building structure and occupants.

Containment trenches are a common way of preventing oil spreading, the aim being to interrupt and contain the movement of oil across the insured site, thus breaking the pathway.



A vapour extraction kit was installed in the main dwelling, in order to promote air-exchange to reduce the odour that kerosene gives off; the odour is referred to as Volatile Organic Compound (VOC) and is measured in this unit of reference.

The image shows vapour extraction units, note ducting had to be core-

drilled through the structure in order to vent out the contaminated, odorous air.

Excavations were immediately authorised to try and remove as much bulk contamination from the ground as quickly as possible, aiming to prevent further spread. Often such excavations are referred to as “dig and dump”.





Excavations were to a depth of 1-1.5m and removed approximately 70 tonnes of soil during the full excavation phase of this claim.

Ground water recovery, sump pumps were installed to recover product from ground water at depth. The pumps have to be able to float in their excavated chamber to allow for the ever moving depth of the water table. With kerosene floating on water the pumps skim the product and pump it back to the surface into a mobile treatment plant.



The water and oil separation plant was left operating throughout the claim lifecycle and continued to recover significant product for a period of many months.

The image on the left is looking down into the ground water recovery sump pump set up.

This is the mobile treatment plant equipment capturing and treating the kerosene recovered from the ground water.





Mitigation works

A swift decision was made to remove the book collection, as paper would absorb odour and the value of the collection together with its importance to the insured, made this the right course of action.

Consideration should be given to policy wordings that may include collections within a High Risk or Valuables definition – with a limitation of the cover available.



In this case, the books did not have particular value as a collection; the books' individual intrinsic values were what determined their overall value. It was, therefore, felt that the reference to "collections" did not apply and the Insurer had to consider whether their overall contents sum insured would be sufficient to indemnify any potential loss in respect of the books.

Consideration was also given to arranging separate insurance in transit and while in storage to guard the Insurer against this increased risk during the books being moved.

Remediation works

Structural engineer & Surveyor

Anticipating significant excavations around the building and potentially inside the building led to the appointment of structural engineers and the administration duties of a chartered surveyor.

In the event of excavations being required close to any neighbouring property consideration would be needed as to whether the Party Wall Act applied (see note 2).

A health & safety welfare unit was brought to site in order to comply with CDM2015 regs (see Note 3).

A condition (survey) report was commissioned to capture the existing condition of the risk address (this included a top to bottom photographic record of existing defects within the property), which later proved invaluable in responding to allegations of secondary damage being caused by the oil remediation contractor during the execution of their work.





The structural engineer, chartered surveyor and oil remediation specialist worked as a team to best determine how oil could be extracted with the minimal amount of impact to the structure.

Peer to peer review, with the knowledge of a significant spill having gone beneath the main dwelling and a reserve of c.£550k a decision was made to seek a peer to peer review of the oil remediation proposal on the clean-up.

Consideration was also given to the insured's history of litigation; this felt a prudent move to ensure that the specification of the clean-up had been considered by two separate oil remediation contractors; thankfully the second specialist approached to critique the first contractor's proposals was in agreement with the specification of works put forward.

In the event of a dispute or ultimately litigation occurring on this claim, having tested the methodology of the work via two oil specialists, it was felt a strong starting point making sure the best outcome was being put forward for the insured along with appropriate due diligence.

Typically the first approach to removing contamination from the ground is via excavation, which is the main solution applied to this claim.

Bio-remediation (chemical treatment, sometimes via use of enzymes) is a method of remediation where digging may either be limited by physical barriers or excavations undermining a structure.

Chemicals can often be injected into impacted areas, allowing the treatment to break down the kerosene and return ground to environmentally safe levels.

All waste (contaminated soil) is treated as non-hazardous or hazardous waste depending on the concentration of oil and licensed contractors are required to transport material to appropriate disposal sites.

The indoor swimming pool room had a suspended block and beam concrete floor around the pool structure. The nature of this design meant that the void allowed a significant volume of kerosene to come to rest in this area, with the pool structure acting as a containment barrier.



The oil remediation contractor was able to take up localised sections of the block and beam floor to access to the void beneath. Accumulated oil contaminated sediment/sludge was manually removed





for disposal and the exposed sub-floor structures were cleaned and treated using a hydrocarbon degrading surfactant. The only reinstatement was to the final floor finish around the pool area.

Validation works

Upon successful removal and treatment of the contaminated materials the property was subject to validation sampling. Laboratory analysis of soil and groundwater samples demonstrated that the environmental risk had been appropriately addressed and analysis of indoor air samples ensured that the property was safe for the insured to re-inhabit.

Policy Considerations

Is there cover for the value of the lost oil? Typically this is found within a contents policy and is usually subject to a policy limit such as £500, £1,000 or £1,500 and is worth checking.

How can the volume of oil lost be quantified? When was the tank last filled, what size and capacity is the tank, what is the occupants' typical expected usage, does the tank have a sight glass giving visible measurement of the volume of oil remaining, can the oil remediation contractor offer an opinion on the likely volume of the spill?

Un-occupancy terms will often apply to escape of oil claims.

The cost of repairing the fixed domestic oil installation itself is a common exclusion.

Policies may require damage to occur to the "building" in order for cover to operate; some policies will resist claims for oil going into the ground without coming into contact with the building.

Third Party claims

Where an oil spill spreads on to a neighbouring property, it is not uncommon for a claim to be made by the neighbour (or their insurers, via a subrogated recovery claim) for the cost of remediating any damage caused.

In this case, the neighbour was a solicitor and along the boundary line were mature 200-300 year old oak trees that were very likely impacted around their roots by the spill. Oak trees have relatively shallow and wide root growth putting them at risk from the harsh environment of an oil spill.

Whilst there was in fact no claim from the neighbour in this case, it is important to emphasise that when claims are made by neighbouring land owners, there is no principle of strict liability.





A neighbour will need to show that the policyholder was at fault for the spill, usually by establishing that they were negligent. This could arise from a positive act on the policyholder's behalf (for example by accidentally damaging the oil tank or the fuel supply line), or from an omission (such as the policyholder failing to inspect the tank or supply line sufficiently regularly).

Claims from neighbours are often framed as strict liability claims in nuisance, quoting the case of *Rylands v Fletcher*. However that case only applies to 'non-natural' use of land. This has been clarified in subsequent cases as being a use of land which is extraordinary or unusual. It is therefore a solid defence to claims phrased in this way to respond that the storage of heating oil on domestic property is a widespread practice and is not 'extraordinary'.

The situation regarding the involvement of the enforcing statutory authority (usually the Environment Agency or the Local Authority) under environmental protection legislation is different, however. Here the 'polluter pays' principle applies, and the enforcing authority can require the policyholder to pay the cost of complying with a statutory remediation notice without proving fault on the policyholder's part.

It should be noted however that, from a legal perspective, the costs of complying with a remediation notice would not be covered by the terms of most public liability policies. The case of *Bartoline v RSA* in 2006 established that statutory remediation costs do not equate to a 'legal liability to pay damages', which is the insuring clause used in most public liability policies.

Finally, it is worth bearing in mind that it is not uncommon for policyholders to hold buildings and contents insurance with different insurers. Both policies will usually contain public liability cover, and the respective policy wordings should be reviewed to establish which insurer should properly pick up any third party claims arising out of an oil spill.

Commercial Losses

Of course oil escapes impact commercial policyholders too, with serious potential consequential losses (such as Business Interruption and Loss or Rent) as well as physical damage.

This next example involves a large 19th Century premises converted into a Business Centre providing over 50 self-contained offices to some 40 companies over multiple floors. The facilities provided by the commercial landlord included toilets and kitchens, telephony, IT cabling and a reception. Heating to the entire building was provided by two oil fuelled boilers located in a plant room within the roof space, which included the "day tank" (capacity 5,000 litres).





Oil escaped from the plant room tank over a weekend, when the premises were largely unoccupied, and was not discovered until the Monday morning when tenants arrived. During the previous Friday afternoon an oil supplier had made a delivery of some 2,700 litres of heating oil into the main oil storage tank in the rear car park area.



When employees of one of the tenants arrived on site they were immediately aware of the stench of oil, and visible brown sludge covering the ground floor carpet. Elsewhere, other floors showed evidence of the leaking oil, as did many ceilings.

Oil remediation experts were immediately introduced to assist in mitigating the loss. They proceeded to restrict the spread of the oil as best they could. Insurers recommended that the policyholder engage building surveyors known to have experience of oil remediation. Further experts were engaged to provide materials testing, and mechanical and electrical engineers and structural engineers were also appointed to assist in establishing the extent of damage to services and to the structure.

Carpeting and furniture, wall coverings and contaminated plaster were removed, and intrusive investigations commenced to establish the extent to which oil had penetrated the concrete floors and the hard-core beneath the building. Boreholes were dug through the internal floors and externally, and the number and extent of the boreholes was increased when it was found that oil was entering a water course on adjoining land. The authorities were duly informed.

Meanwhile tenants of 17 of the 50 offices had to move out.





The resultant combined loss to Insurers relating to Buildings damage, Loss of Rent and fees was over £1million.

Aside from proactive action and the early engagement of experts, this claim demonstrated the value of thorough cause investigation. Forensic examination showed that contractors had incorrectly calibrated the oil based heating system. The auto shut off mechanism then failed, causing the serious escape. A subrogation action was pursued by the Insurer, with the majority of the loss successfully recovered from the third party contractor.

Practical aspects in the handling of oil spill claims

Faced with an oil spill claim the following are worth considering:

- Can the home owner inform of any nearby water sources, such as rivers, streams, bore holes, etc.? Swift action is necessary to prevent a spill spreading to water sources wherever possible.
- Has the spill been reported to the Environment Agency? Prompt contact is prudent to ensure that they are aware that an insurance policy will address the spill and to prevent the EA using their statutory powers to enforce a clean-up, which would mean you have limited or no control of the costs.
- Can the insured remain in the property, would vapour extraction enable odour to be reduced to safe levels?
- Are emergency works appropriate? Containment trenches are a very effective way of preventing the spread of oil. Could absorbent sponges be used to collect oil on any water courses, as an immediate way to mitigate spread?
- Using a bar of soap is a great temporary fix to apply to a plastic tank, where you have a hairline crack and will, on a short term basis, often bung up the leak until the tank can be drained.
- Engage with any neighbouring property owners when the spill has spread to TP land and request they inform their own Insurer.
- Potential consideration to contents impact? Soft furnishing absorbing odours.
- Carefully examine the cause of the escape, and employ forensic investigators as required so that any possible evidence can be gathered which may support a recovery action
- Ensure the early engagement of appropriate oil remediation experts and related specialists





Note 1 – OFTEC established the standards for competence within the domestic oil heating and cooking industry. They set standards for all new oil installations. Further information on OFTEC can be found at:

<https://www.oftec.org>

Note 2 - For more information on Party Wall etc Act 1996 please refer to:

<http://www.legislation.gov.uk/ukpga/1996/40/contents>

Note 3 - For more information on CDM2015 please refer to:

<http://www.hse.gov.uk/construction/cdm/2015/index.htm>

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