

How to manage environmental risks facing the construction industry

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Introduction

Even the best planned construction projects carry a risk of causing unintended pollution, from disturbing buried waste to accidental leaks and spills. If toxic material gets into the atmosphere, rivers or groundwater, it can cause a risk to human health and potential biodiversity loss.

In our recent webinar on 23 May 2023, we looked at the environmental risks faced by the industry and what companies can do to prevent pollution happening. We also heard how insurance can help to cover exposures if an incident does occur, while minimizing any reputational damage.

We explored:

- The different types of pollution
- The causes and consequences of pollution incidents
- What environmental insurance covers
- How insurance can help reduce admin time and cost on projects
- Real world case studies of incidents and claims

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What are the main types of pollution?

Industrial pollution isn't just the large oil spills we see on TV – incidents happen every day and can be caused by a wide range of activities.

Historic pollution: after 250 years of industrialization, there are many contaminated legacy sites. Many are near city centres and are prime for redevelopment. It's important for construction firms to know what historic pollution could be lying under the surface as it can easily be mobilized or exacerbated by contractor activity. For example, digging or pile driving foundations can create a pathway for the pollution to enter groundwater or rivers.

Soil pollution: generally happens gradually as a result of buried waste, poor storage of raw materials, or leaking pipelines or tanks. It doesn't always require remediation depending on the nature and scale of the pollution.

Water pollution: can be caused by a direct spill or run off from land into surface water or groundwater and rivers. For example an oil leak can find its way into the drainage system and a nearby river. Long term soil pollution can also leach into water and end up in rivers. A fast response is critical to prevent water pollution getting worse. Groundwater is a protected resource, so this needs to be remediated, which can be very costly.

Air pollution: can come from contaminated dust being blown around in dry conditions, especially in hot countries. Depending on the type of contamination, air pollution can cause long term health issues and birth defects.

Odor: bad smells caused by industrial activities are becoming more of an issue through statutory nuisance claims. It doesn't have to impact human health, but can just affect quality of life. There is potential for class actions, reputational damage and large legal costs.

Biodiversity damage

You don't need to pollute to cause environmental damage. If a vehicle drives over rare plant life in a protected area, or harms a protected animal species, they could be open to prosecution and claims. Some countries now require building projects to show a net gain in biodiversity at the end of the build. If they don't they may have to buy a biodiversity credit or face penalties.



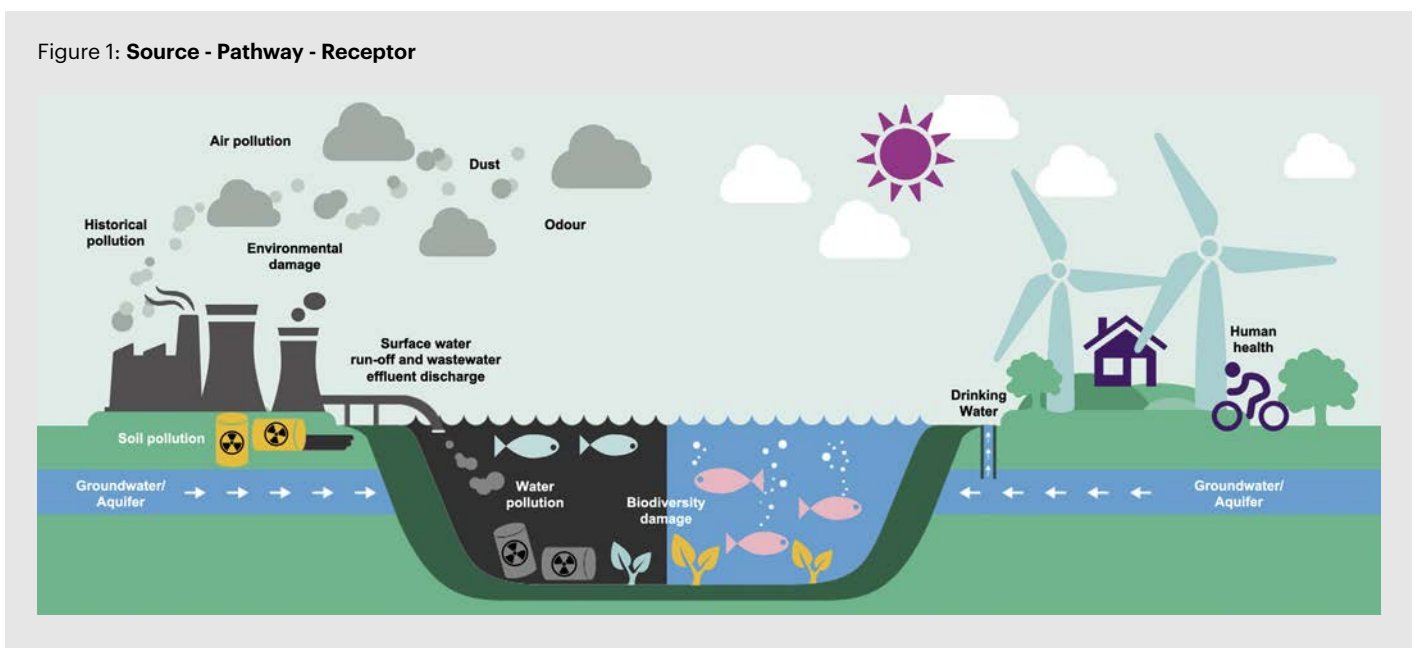
What is an environmental risk?

You need three elements to have an environmental risk:

- A **source** of contamination – for example, an oil drum that’s leaked.
- A **pathway** for the contamination to move through – for example through soils and into groundwater.
- A **receptor** for the contamination to cause harm – for example fish in a river or people breathing contaminated dust.

To prevent environmental damage, construction firms need to remove one of these elements. The obvious way is to clean up the source of contamination, but it’s possible they could remove the pathway by some kind of physical engineering.

Figure 1: **Source - Pathway - Receptor**





Managing environmental risks on construction sites

Contractors have responsibilities under environmental regulations and insurers expect them to have taken reasonable steps to prevent pollution. The level of planning and mitigation will depend on the nature of the site and whether there are any known environmental risks associated with it.

Construction environmental management plan (CEMP): many businesses use a CEMP to manage and mitigate environmental risks, especially on brownfield sites or locations that are known to be contaminated. This should include:

- How to manage waste such as asbestos, contaminated soils and demolition waste, and categorize waste types for recycling and disposal.
- How to store and manage spoil on site and ensure that any soil sold on is safe for its purpose.
- How to prevent dust spreading from construction sites during dry weather.
- Effective vehicle management controls, including wheel washing and covering trucks and wagons to prevent dust and spills.
- An emergency management plan for responding to a pollution incident, such as a major spill or leak.
- Storm water controls to prevent silt runoff during a weather event such as flash flooding.

A biodiversity management plan is needed to make sure protected plant and animal species are not harmed by construction. It should include ecological reports and monitoring of protected species both on-site and in surrounding areas.

Environmental impact assessment: this is a legal requirement in many countries to assess the all environmental impacts that could result from a project before construction begins.

Site investigations are needed to make the land is safe to be built on and occupied. Contractors should also do a thorough clean-up of the site before project completion.

Groundwater monitoring plan: if there are known groundwater issues on site, a long-term monitoring plan may be required to make sure construction does not impact groundwater further.



Loss examples

Historic pollution

On a housing development project a contractor was using a grader to level the site. During the works, the contractor spread soil that contained historic contamination, including asbestos, heavy metals and polychlorinated biphenyls (PCBs), across the site and also onto neighboring properties. The contractor was held responsible for exacerbating pre-existing contamination and was ordered to pay compensation. The total cost of the incident was in excess of €2.85 million.

Air pollution

Contractors working for a council in the UK were carrying out remediation works at a steelworks, digging out lot of contaminated soil and taking it to a landfill site on trucks. However, they didn't cover the backs of the lorries with sheeting. Contaminated dust and slurry was blown and spilt from lorries across an urban area over a period of fifteen years, resulting in several women having birth defects. The court case held in 2009 found that the council had allowed toxic waste to be dispersed into the atmosphere. The total value of compensation payments was thought to be tens of millions with legal defence costs being more than £6.5m.

Water pollution

A U.S. solar farm didn't control erosion from their site which lead to sediments washing into a neighboring fishing lake and wetland causing environmental damage. The neighboring landowner was awarded \$135m in damages.

Biodiversity damage

A construction firm was carrying out large scale excavation works near to a river. During the works, the ground became unstable resulting in a loss of structural integrity and partial collapse of the excavation. This diverted water from the river and loaded it with suspended solids, which could harm biodiversity. The total cost was more than €3 million.



How does contractors pollution liability insurance help?

Standard public liability policies and property policies typically only cover damage from pollution caused by a single, sudden and accidental incident. They don't usually cover historic pollution, pollution from expected or gradual causes, or related costs. Contractors pollution liability (CPL) insurance can fill these gaps, providing cover for:

- Liability to third parties from pollution that's not sudden and accidental
- Statutory clean-up costs if the regulator orders you to clean up a site
- First party clean-up costs regardless of any damage to third parties or their property
- Third party bodily injury and property damage
- Reputational damage
- Business interruption, including cover for project delays caused by pollution
- Legal defence costs
- D&O liability
- Biodiversity damage
- Loss mitigation

How does CPL support prevention and recovery?

CPL can cover most of the clean-up and recovery costs associated with an environmental incident, as well as helping to mitigate risks before they happen.

Site investigation: CPL can also pay for investigations to assess the nature and extent of the pollution, how deep and how far it goes.

Loss mitigation: CPL will pay for preventative measures if there is an immediate risk of environmental damage caused by pollution. For example, if there's a fire on a construction site where chemicals are stored and toxic firewater is in danger of running off into a river, the policy will pay to pump the water out before any damage is caused.

Crisis management response: one of the main concerns for construction firms is the reputational damage that a pollution incident can cause. With CPL, they can access a team of PR consultants to manage the message to media and stakeholders as soon as an incident occurs.

Soil and groundwater remediation: the policy covers clean-up costs, not just on construction site but in the immediate surrounding area as well. First party clean-up costs are often not covered by other liability policies.

Biodiversity restoration: CPL will pay the cost of restoring lost biodiversity. If that's not possible, it will cover environmental restoration works somewhere else to make up for the damage caused.

Ground water monitoring: cover for remediation taking up to 10-15 years to complete.

How does CPL work?

CPL insures damage from covered operations – as listed on the schedule of activities. Typical operations include demolition, construction, remediation of a contaminated site, and ongoing management of a pollution-sensitive site such as a water treatment plant. It's important to get the description of which operations are covered by the policy right at the start to make sure everything is clear when you come to make a claim.

- Cover can extend to the main construction site and third party sites
- It can include new pollution and exacerbation of historic pollution
- Policies can be on an annual basis for construction firms working on a large number of projects, or for one-off projects up to 10 years in length
- Annual policies are usually written as claims made, while one-off policies can be on an occurrence basis – this can be favorable as occurrence wording covers unforeseen damage caused by a project in future years

What kinds of project is this suitable for?

CPL can support construction projects of any type or size, including residential builds. Even small projects can lead to significant liabilities – for example pollution on a city site can affect a large number of properties and people in a crowded area.

It's ideal for owner-controlled insurance programmes (OCIP), which include multiple contractors, site owners and subcontractors on the same programme. It can cover all parties and give reassurance that programme risks are covered.

Examples of projects it can support include:

- Contaminated land clean-up, brownfield redevelopment and restoration
- Asbestos, lead and microbial matter abatement
- Demolition, deconstruction and decommissioning
- Transportation, roads, airports, ports, railways and other infrastructure
- Bridges, tunnels and other heavy civil engineering projects

- Power generation, energy distribution and transmission
- Renewable energy, wind farms (both on and offshore), solar, tidal and EfW
- Waste management, waste water treatment and potable supply
- Offices, warehouses and commercial property
- Coastal defence and flood resilience
- Facilities management
- Defence and associated support services
- Hospitals and healthcare
- Homes, residential and urban regeneration
- Leisure complexes, stadia and sports facilities
- Public private partnerships

Why buy environmental insurance?

Contract obligations: banks and funders who are financing projects increasingly require construction firms to have environmental cover.

Balance sheet protection: the potential costs and liabilities associated with a pollution incident can be high, especially on brownfield sites.

Saving cost and admin on OCIP contracts: OCIP contracts can include the project owner, funders, and different tiers of contractors. This can save a lot of admin time, effort and money as the owner doesn't need to check that insurance is in place through the duration of contract, while the parties no longer have to include cost of insurance in their tender documents.

Legal costs: environmental damage claims can be complex and lead to legal action which can be long and expensive.

Reputational damage: more and more businesses are concerned about adverse publicity and reputation damage as environmental issues move further up the corporate agenda.

EXAMPLE: cost-effectiveness of insurance in OCIP contracts

A large council had a tranche of small contracts totalling up to £50m a year, which required lots of administration and time to check contractors' and subcontractors' insurance. They were pulled together in an annual rolling owner-controlled programme, which included the council and tiers of contractors and lenders. The council saw large savings internally as they didn't have to check that contractors have insurance is in place through the duration of contracts or perform legal checks on tender responses. Contractors saved by not having to include insurance in tenders. By buying cover in bulk, the council and contractors also benefited from broad inclusive cover, making their premiums go further.



The market for environmental impairment insurance

Environmental insurance was first sold more than 20 years ago and demand has been growing ever since – driven by publicity around major accidents, increasing legislative and regulatory controls, public pressure and concern over reputational damage. The market is now well established, especially in the U.S. and Europe.

- Globally, there are more than 60 insurers who can provide EIL coverage
- Insurers have on average \$10m to \$25m of capacity per risk and insurance programs can be put in place with >\$150m capacity per loss
- Excess of loss cover is also available for large programmes and projects
- Deductibles can be as low as \$10,000 for CPL policies

WTW has a team of over 25 brokers dedicated to the US market and 4 brokers in the UK who serve our global markets.

What are the underwriting requirements?

Most of the information required to quote CPL cover can be taken from material gathered during the planning process or already included in previous presentations to insurance markets.

This means WTW can often give an initial estimated premium indications at the tender stage of the process, which can help companies make decisions about what cover to buy and factor it into their plans. We can revisit, and often, revise the premium later when we have more information.

Underwriting requirements for CPL include:

- Contract turnover breakdown
- Length of construction period
- Method statements
- Lenders requirements
- Environmental reports
- Construction environmental management plans
- Remediation strategies
- Loss history

Conclusion

Construction firms of all types and sizes face a broad range of environmental and pollution risks, with some exposures such as biodiversity damage on the increase.

It's vital that construction firms have good environmental management plans to understand, mitigate and reduce their exposures.

If an incident does occur, the damage and costs can be wide-ranging from clean-up and crisis management to business interruption and legal defence costs.

Traditional public liability policies only cover third party liabilities caused by sudden and accidental pollution. They don't cover any of the related costs or damage caused by historic or gradual pollution. This can leave large gaps in cover.

Contractors Pollution Liability insurance can fill those gaps. It can also help to respond quickly to an incident, limit any reputational damage and reduce long-term clean-up costs through early remediation.

WTW can develop bespoke solutions tailored to individual businesses and can usually provide initial indications of premium based on information already available from the planning process or previous presentations to insurance markets.

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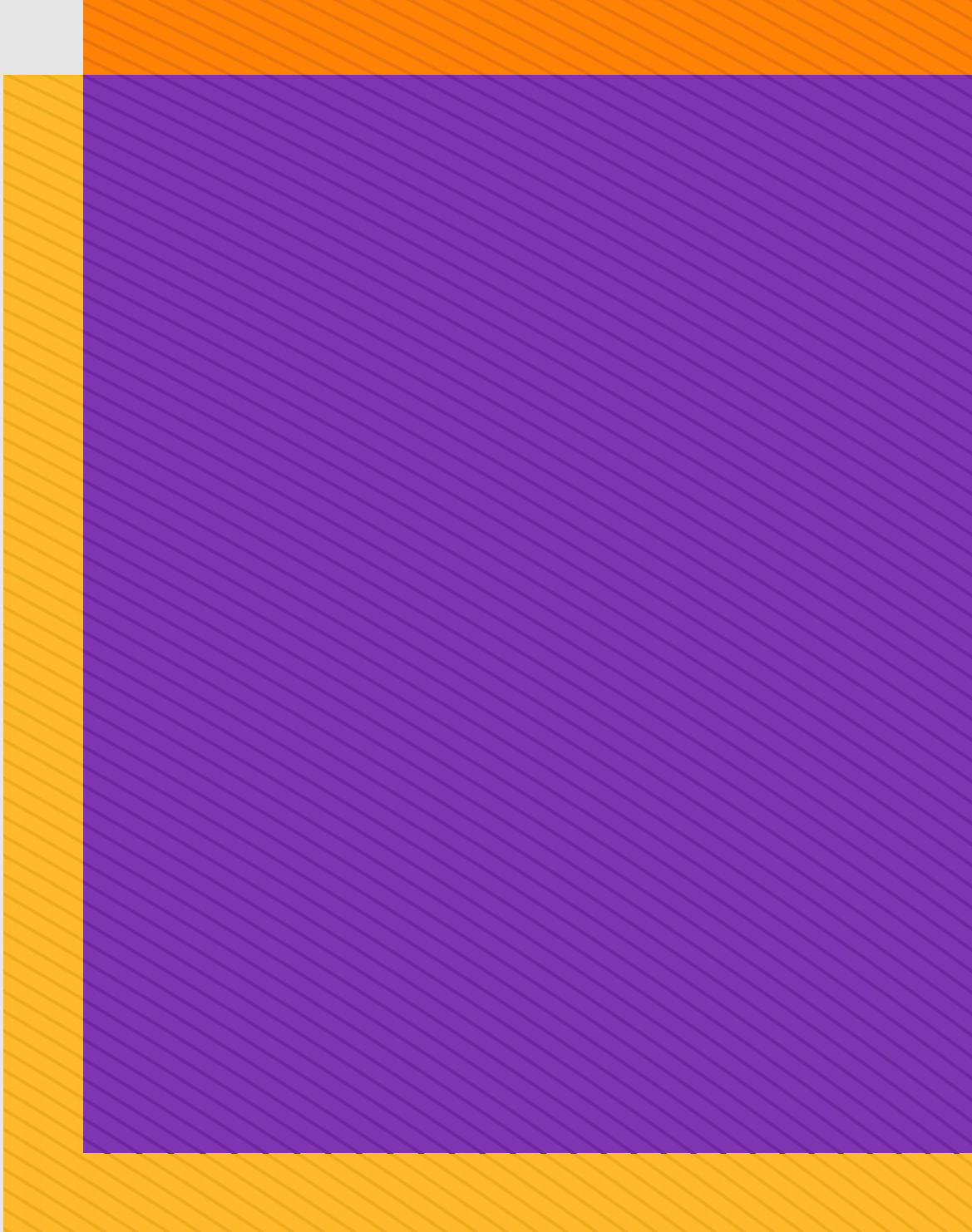
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