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AIRMIC PARTNER GUIDES

Zurich's Guide to Construction

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Airmic is grateful to Zurich Global Corporate UK for producing this guide to Construction. Airmic invited partners to select an area of expertise and produce an introductory to intermediate level guide for the benefit of Airmic members. The intention of this guide is to provide Airmic members with an overview of the topic and provide information on the practical considerations when managing this important risk management/insurance issue.

EXECUTIVE SUMMARY

This guide aims to provide AIRMIC members (particularly non-contractor members) with information about the types of cover that should be in place during the construction of new buildings or facilities, and the repair, alteration refurbishment or extension of existing properties.

By their nature, construction projects are complex, involving multiple contracted partners including architects, contractors, engineers, materials and service providers plus the whole infrastructure and supply chain on which construction projects rely. The forces of nature, technological development, politics, culture and human error further complicate and influence its eventual success or failure.

From a remote mining operation, transportation tunnel, city-centre office block or an extension to a building already in use, the principles of risk management should apply. These should be based on a full understanding of who is responsible for each risk and, where appropriate, who is responsible for insuring what, and what the correct level of cover, sum insured or liability is.

This guide takes you through the cycle from design and preparation, to the construction period, and then on to testing and the defects liability period. It is designed to provide a snapshot of the issues, challenges and potential pitfalls you may face. Ensuring you, the contractor, consultants, suppliers or a combination have the optimum insurance cover in place to provide the correct level of protection throughout the cycle.

CONTENTS

WHO IS RESPONSIBLE FOR ARRANGING INSURANCE COVER?

The contract between the owner and main contractor will determine who is responsible for insuring against specific risks that may arise during the project. As this guide explains, this responsibility varies according to how the contract conditions have been drafted/amended and the stage in the construction cycle. It is not uncommon for parties to a contract to be unaware or unsure of who is responsible for insuring what. This can be exacerbated when contract conditions are amended (often inaccurately) by architects and/or lawyers, and not supported by an explanation of the implications of such amendments to the various parties.

WHY IS OWNER-CONTROLLED INSURANCE A GOOD THING?

The following table provides an overview of the advantages of such an approach.

Financial	Commercial	Claims
Owner retains control of insurer selection and therefore insurer security – critical in multiple-year projects.	The owner will be able to tailor the policy to cover all of the appropriate project parties, as opposed to the project being protected by several policies purchased by each contractor or sub-contractor.	Common deductibles – puts project partners on an equal footing.
Streamlines and reduces project administration – no need to check and re-check all contractors' insurances.	Non-cancellable policy for the duration of project.	Automatic subrogation waivers as all parties enjoy the benefit of Joint Insured status.
Known and fixed insurance cost at outset.	No uninsured contracts and no coverage loopholes.	Handling and settlement efficiencies including project-friendly claims reporting.
Owners achieve benefits of bulk purchase of insurance in terms of premium costs, coverage and reduced administration costs (e.g. owner does not need to check and monitor the status of each contracting party's policies).	Adaptable to changes in the project – extensions in period, changes in contract value.	Helps to eliminate claims between parties. Promotes a 'no-blame' culture.

Financial	Commercial	Claims
Owner is in control of ensuring insurances satisfy financiers' requirements – OCIP is the preferred choice of financiers.	Protects owner's liabilities where the contractors' are limited.	Owner has direct access to insurers, especially for claims matters.
Certainty that premium is paid and therefore insurances are current and valid.	Streamlines interface issues between construction and operational exposures, allowing a more coordinated approach to transfer of risk between the two.	Helps to eliminate legal and contractual disputes between parties.
Avoids duplication of insurances and coverage, saving premium for the project.	Owner retains control of insurance market security and capacity.	Single pre-agreed loss adjuster for all parties.
Maximises the benefits of relationships with existing insurers. Owners usually have a larger and more profitable insurance portfolio with insurers with more synergies across different classes, thus enabling greater opportunity to leverage a whole account view.	Facilitates a uniform and disciplined owner-imposed approach to risk management.	Claims monies are paid direct to owner, keeping the project liquid.
Eliminates contingency loadings and profit provisions by contractor.	Facilitates the purchase of existing structures and delay in start up coverage if required.	
	Single channel of communication for owner on insurance matters.	
	Not affected by insolvency of a project partner or removal of a contractor from the project.	
	Allows the efficient management of phased handovers.	
	Helps to eliminates owner's potentially unknown liabilities/exposures arising from inadequate insurance provided by contractors.	

EMPLOYER/OWNER-CONTROLLED INSURANCE

Where the employer is responsible for arranging the insurance, the most comprehensive solution is an employer/owner – controlled insurance programme. Ideally, this takes the format of a bespoke, all-party cover. This approach ensures that the interests of all of the project parties including the owner, developer, contractors of any tier and financiers (where required) will be protected. For those who regularly procure construction projects, an annual programme or facility can be arranged rather than a series of project-specific policies.

This type of arrangement can provide protection against the risks of damage to the works in progress, existing property and common user plant as well as consequential financial loss and the risk of damage or bodily injury to third parties.

Another owner-sourced insurance product is owners protective professional indemnity (OPPI), which directly indemnifies the owner for losses from negligent acts, errors or omissions of design professionals. In the event of a claim, the policy is usually triggered when the design professional's own limits are exceeded but this can be tailored to your needs.

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STAGE 1: PLANNING FOR SUCCESS – DESIGN

KEY RISK: DESIGN FAILURE

The initial stage of the construction project lifecycle focuses on its feasibility and what the capital expenditure requirement is likely to be. At this stage the key partner is usually either the architect or a design-and-build contractor, who undertakes the combined role.

It is crucial at this stage for the party responsible for design to provide evidence of professional indemnity cover. In the event that they are found to be negligent in their design (a fact that may not emerge until during construction or even after the project has been completed and is in use), this insurance may be called upon to respond. Problems that may materialize can arise out of errors or omissions in design or supervision, the suitability of the chosen site and whether the design meets all government and other regulatory requirements.

Owners should check:

- that whoever has taken out professional indemnity has done so with a reputable insurer and that the limit of liability purchased, scope and duration of cover is appropriate to the project and meets their requirements
- the levels of deductibles in the policy during a recession or hard insurance market; this level may be a lot higher than normal and it is important to ensure that the contractor/consultant has the financial resources to meet the deductible in the event of a claim.

STAGE 1: CONTINUED...

An alternative solution is to consider purchasing inherent defects insurance. This is a first-party cover designed for the benefit of a building owner or the building's tenants. It protects against the risk of collapse or the threat of imminent collapse arising out of an inherent defect originating in the structural part of the building. This removes the requirement for a building owner or tenant to have to establish which party was at fault (contractors, designers, engineers, etc.), prove their negligence and then attempt to engage them to remediate the damage or fund the repair. Policy periods of up to 12 years can be purchased and options exist to extend the cover to include, for example, weatherproofing and consequential loss.

The insurance team should ensure that it is involved in the early discussions so that any jurisdiction or design-related decisions can be identified early. The assets that are being created are going to have to be insured not only during their construction but throughout their operational life – it is therefore critical that property and liability risk engineering options be considered at this stage.

Claims scenario
The principal insured placed reliance on their designer's PI insurance to provide cover for loss or damage during construction caused by design failure, without fully appreciating the contractual requirements in respect of the designer's insurance. On that basis they requested a LEG 2 defects cover under the CAR policy, reducing the total premium payable, but also restricting the available cover. When a serious loss occurred and cause was established as a design defect, it was discovered that the designer's PI insurance was subject to a EUR1.5m deductible, extinguishing the claim. Furthermore, as a more restrictive defects cover was purchased, the insured were unable to recover any funds under the CAR policy, as there was nothing other than defective property and the defect did not cause any resultant damage.

STAGE 2: GETTING READY – PROCUREMENT

Once the initial design is approved (this may evolve and change throughout the project to allow for such things as changes in the owner's needs/requirements or value engineering by the contractors), the owner begins the procurement process including the sourcing of raw materials, creating the supply chain and logistics, determining the combination of skills needed for the project and selecting the contract partners. It is critical that the procurement function understands the criticality of the insurance structure to the success of the project. All contracts should be reviewed by you and your professional advisors to ensure that the insurance structure is both optimised and legally compliant in the local jurisdiction.

The need for professional indemnity cover continues up until and beyond project completion. Product liability (in respect of products supplied) provides important protection against the potential for injury or damage to third parties arising at a later stage.

Contractor selection: There may be no option but to use certain contractors either because of specific capabilities or because they are the best locally available. However, they may not meet the normal standards required. There are insurance products that will protect against the cost of contractor default and additional costs of replacing them.

Marine cargo insurance: This may need to be considered for equipment and materials being delivered to the project, particularly those which are being sourced from overseas by ocean marine or air transportation. It needs to be clearly established who is responsible under contract for arranging the insurance in this respect. Specialist resources may be required to undertake transit surveys and work with the logistics company to ensure that the equipment is capable of being delivered intact to the site.

Bonds: It may be necessary to issue bonds to third parties either to secure financing for the project or to secure rights or access to the location. In addition the insurance market can provide such financial instruments in competition with the banking industry.

STAGE 2: CONTINUED...

Such bonds may be 'on demand' and as such may be vulnerable to being called without due reason. It is possible to procure unfair call insurance for this risk. But it is also critical that the criteria under which these bonds are released and who validates them is clearly laid out, as there are circumstances where the bond can be held hostage by the party in control of their release.

Paperwork: There may be a requirement for local policy issuance and certification. This may simply be the issuance of certificates to the contracting parties or it could be the issuance of certificates to multiple jurisdictions for multiple lines of cover. It is important to understand what these requirements are to ensure that the insurer has the time and capability necessary to deliver them.

Claims scenario:
Inland transit and DSU (delay and start up) cover were provided under the EAR (erection all risks) policy. Transportation of the turbines to the project site was effected in part by sea and a separate marine cargo policy was purchased. During the voyage a fire broke out on the vessel, severely damaging one of the turbines. As a consequence the COD (Certificate of Delivery) of the project was delayed and the project principal suffered financial losses. The marine cargo policy indemnified the costs of damage to the turbine, but as no marine DSU cover was obtained and the EAR policy DSU could only be triggered by loss or damage covered under that policy (marine transit cover outside of the territorial limits was not provided) and a significant uninsured loss ensued.

STAGE 3: ON SITE – ACQUISITION AND MOBILISATION

As soon as you own or assume responsibility for a site you need to think about exposure to risk and your legal position should an incident occur. Your employees may be exposed to more risk especially if the site is adjacent or attaching to their existing place of work, as will the contractor's workforce as the site comes to life. There are likely to be members of the public, visitors and others attending the site or moving in the vicinity of the site, and liability for injury to such parties needs to be considered.

If you are relying on an existing general liability policy it is important to ensure it covers construction work, especially if this falls outside of your normal business activities. For example, if your business description is logged as a food manufacturer, the fact that you are planning to rely on your general liability insurance for a construction project is something that should be disclosed to your existing insurers. They may require an additional premium or a change in terms and conditions. However, it may also be the case that they do not have the appetite for the increased risk and decline to offer the cover.

Many contractors have global public liability policies and will already be covered for the extension or redevelopment of an existing site. If relying on their insurances you will need to ensure that you are a named insured, or at least have the benefit of indemnification under their policy and ensure that any rights of subrogation against you have been waived.

During site preparation, especially those involving deep excavations, care should be taken with security fencing and warning signs in order that it can be demonstrated that all reasonable steps have been taken to prevent an incident from occurring.

This stage may also involve so called 'early works' packages being let to establish the site, site security, access and facilities. Most projects will have some sort of site huts or camp. The nature of these facilities can vary from simple office accommodation and parking facilities adjacent to city center sites to workers' accommodation, canteen and leisure facilities for thousands of people at remote locations – the latter is common on hydro electric dam and mining projects. It is equally important to establish who has ownership and responsibility for these facilities, and whether they are to be covered for construction only, or also for the duration of the project (operational cover). If cover is required for the duration of the project, details including values should be provided to insurers and policy wordings should make it clear that such items are insured, and for which terms and conditions. Failure to provide clarity in this respect often results in disputes in the event of an incident.

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STAGE 3: CONTINUED...

Different jurisdictions: If the project is in a jurisdiction where there is a large difference between the local standard of living and the standards of the owner's jurisdiction, there may be concerted efforts to create liability claims as the payouts in local courts may be life-changing for the claimants. It is important to consider these cultural issues in the management of risk and dealings with the local community to reduce the overall cost.

Claims mobilisation: There is now a material likelihood of claims and the insureds need to ensure that the claims management process is in place and operating efficiently. This is to ensure that the claims costs are minimised and managed in as an efficient manner as possible so as not to delay the project.

Claims scenario:
Despite having a high security wall around a site and 'keep out' signs clearly warning of the dangers, an intruder climbed over the wall wandered across the site and fell into a deep excavation. The owner was held partially liable as further signage inside the site warning that a fenced-off section contained a deep hole was absent. The owner was deemed negligent because they hadn't taken all reasonable steps to prevent such an accident from occurring and had to contribute to the cost of the claimant's injuries.

STAGE 4: OFF THE GROUND – CONSTRUCTION

During construction, risk to both property and people increases. The main risks to assets during this stage are based on damage to:

- the new permanent and temporary works
- existing property for extensions, repair, alteration and refurbishments
- adjacent and neighbouring properties
- owner's and contractors' accommodation, camps and stores
- plant and equipment used during construction.

In the latter two cases responsibility and ownership needs to be clearly established and policy wording needs to be absolutely clear on what is and is not covered. For example, 'old fashioned' terms such as 'Excluding contractors' plant, equipment and site huts' can be misleading.

What is the definition of a 'site hut'? Is it accommodation? If owner's accommodation is not specifically excluded, is it covered? Clear definitions of property insured should ensure that there are no unnecessary omissions in this respect. Is 'contractor's plant' equipment used for contracting or equipment that is the property of a contractor?

Other risks relate to:

- delays in commencement of the operation of the business caused by damage
- injury to employees, contactors, sub-contractors, consultants and suppliers as well as the general public and visitors to the construction site arising out of the project.

Like all employers, owners have various duties of care for anyone who is on their property. They must have the necessary levels of public liability and employers liability in place so that they comply with key legislation including:

- Health and safety at Work Act 1974
- The Construction (Design and Management) Regulations 2007.

It is also helpful to be aware of the requirements of the Joint Code of Practice for Prevention from Fire of Construction Sites and buildings undergoing renovation.

The main covers purchased for this stage are Construction 'all risks' and 'third party liability'. Depending upon the location of

STAGE 4: CONTINUED...

the risk and the nature of the works third party-liability exposures could be extremely high and require the purchase of extensive excess layers. Other types of insurance cover specific to the construction phase that may need to be considered are as follows:

DELAY IN START UP (DSU)

This is a type of business interruption that protects you against consequential financial loss due to damage covered by the contract works insurance delaying the commencement of operations. The intention is to protect against the loss of anticipated future revenue or profit or alternatively the cost of meeting ongoing finance repayments. This cover may only be purchased in conjunction with the contract works insurance and is often a financier's requirement. It is also easier to purchase DSU as part of an OCIP. Some believe that relying on contractors liquidated damage provides sufficient financial protection against project delays. However:

- in certain circumstances the contractor may be entitled to a time extension under contract
- the amount of liquidated damages will normally be considerably less than your financial exposure.

This cover is for the benefit of the employer and financiers only.

EXISTING PROPERTY/STRUCTURES

This is often overlooked or the subject of poor advice. Contract conditions are often incorrectly amended or amended without regard to the consequences. For example, standard contract conditions will usually require that the employer/owner arranges this insurance in the joint names of the employer/owner and the contractor. Construction insurers are often unable or reluctant to provide the level of indemnity that may be required due to reinsurance treaty limitations, especially if the value of the existing property is disproportionately larger than the value of the works. This places further importance on arranging this insurance. There is often a misplaced reliance on cover being provided by general property insurances.

However, these insurances often do not provide protection by virtue of some of the following:

- Business description does not envisage responsibility for damage to the property arising out of construction works. This must be disclosed to insurers and approval received, often at additional premium and more stringent terms and conditions.
- Property policies will often exclude damage whilst the property is undergoing repair, refurbishment, alteration or extension. Again, insurers may agree subject to additional premium and changes to terms and conditions.
- In order to comply with the contract conditions, property insurers must either indemnify the contractors or waive rights of recovery against them; this is often a sticking point.
- Property policies are often subject to high deductibles; this will leave you with a higher self-insured element that will be difficult to pass on to the contractor. You are entitled to recover in respect of damage arising out of non-specified perils as a consequence of the contractor's negligence.
- If you occupy rather than own a building, your property insurance most likely only provides protection for contents, fixtures and fittings.
- If you occupy rather than own a building, then it may be that one of the options will be to request that the landlord extends their insurance to enable you to meet the contract requirements – their approval or that of their insurers is not guaranteed.
- Property insurances are usually annually renewable and the requirement to maintain cover will be for the duration of the contract.
- For a risk in the UK, for example, some of you may not purchase terrorism, again this may be a contractual requirement.

Due to such complications it is important that you address such issues at the earliest possible stage. If contract conditions are amended to make the contractor responsible, this should be done in a transparent way as they may also have difficulty purchasing the required insurance. The earlier your insurance advisers know of this requirement, the better chance they have of helping you find a suitable solution.

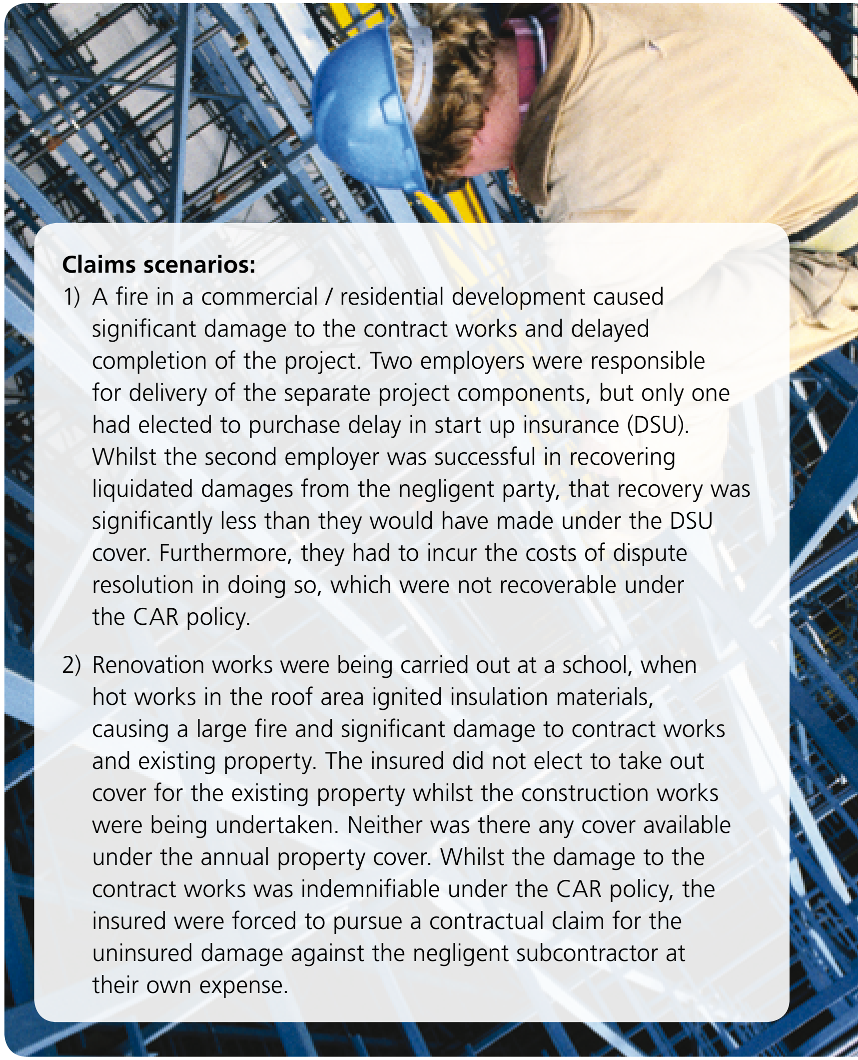
NON-NEGLIGENT LIABILITY

The well-established case law, Gold v Patman and Fotheringham 1958, highlights the limited indemnity of the contractor in the event that third-party damage is caused, but it cannot be shown that the contractor is negligent. The absence of contractors' negligence does not however preclude the employer/owner from an action being raised by a third party and subsequent responsibility to meet the claim. The consequence of this case was the introduction of initially clause 19.2.a into the JCT conditions in 1963, later to be replaced by clause 21.2.1 requiring the contractor to arrange insurance to protect the employer from such circumstances arising out of specific perils. Non-negligent damage exposure is enhanced when the contractor is undertaking façade retention, deep excavations, bored piling and demolition type projects.

PRE-EXISTING CONDITIONS

For new builds, and particularly refurbishment and extension projects that are in close proximity to other buildings, a pre-existing conditions/dilapidation report will establish the condition of third-party-owned surrounding buildings immediately prior to work commencing. This will help an owner and his contracting parties to prove their innocence if an incident occurs – for example, vibrations caused by deep piling that damage an adjacent building. Bear in mind that the consequence will often be a number of small claims within the deductible so it is worthwhile considering the cost benefit of undertaking such work. In cases of potential high exposure insurers will expect this to be undertaken at your cost.

During the construction phase design and supervision is often ongoing and it is important to ensure that the renewal date of contractors' and consultants' professional indemnity insurance is recorded and diarised in order that renewal checks may be undertaken to ensure that the insurance has been maintained in accordance with your original requirements. Such checks should be carried out for all insurances that are the responsibility of other parties.



Claims scenarios:

1) A fire in a commercial / residential development caused significant damage to the contract works and delayed completion of the project. Two employers were responsible for delivery of the separate project components, but only one had elected to purchase delay in start up insurance (DSU). Whilst the second employer was successful in recovering liquidated damages from the negligent party, that recovery was significantly less than they would have made under the DSU cover. Furthermore, they had to incur the costs of dispute resolution in doing so, which were not recoverable under the CAR policy.

2) Renovation works were being carried out at a school, when hot works in the roof area ignited insulation materials, causing a large fire and significant damage to contract works and existing property. The insured did not elect to take out cover for the existing property whilst the construction works were being undertaken. Neither was there any cover available under the annual property cover. Whilst the damage to the contract works was indemnifiable under the CAR policy, the insured were forced to pursue a contractual claim for the uninsured damage against the negligent subcontractor at their own expense.

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STAGE 5: READY TO GO – TESTING AND COMMISSIONING

Every new construction project requires some element of testing and commissioning. In a simple building project this could involve testing of plumbing, electrical, heating and ventilation systems. However, in more complex projects this is the most critical stage and involves the testing and commissioning of high value equipment. The equipment undergoes initial operational and performance reliability tests often under high pressure, temperature and rotating speed (or a combination of all three). The risk is further increased by the introduction of raw materials such as hydrocarbons in a petrochemical project.

Throughout the testing period exposures are enhanced because quite simply more things can go wrong. The policy should include a period of testing and commissioning as standard – this should correspond to the periods stated in the construction bar chart.

As the testing and commissioning period generally takes place at the end of the project this means that there is likely to be little, if any time, buffer in the construction programme. Consequently, an incident at this stage will most probably result in a failure to achieve the anticipated date of completion and handover of the project and the scheduled date of commencement of the business as there will be negligible opportunity to mitigate any delay. If DSU cover has been purchased and the incident is indemnifiable under the material damage section of the policy, then a DSU claim will ensue.

Claims scenario:
The insured were commissioning a combined cycle gas turbine. After operating in open cycle, they switched to combined cycle mode, intending to allow gases to pass into the HRSG (heat recovery steam generator). However, the main contractor had left a blanking plate in a closed position within the diverter box, ultimately blocking the hot gas path into the HRSG. As the vent to the bypass stack was also closed, gases built up in the diverter box. This led to an over pressurisation, causing severe distortion and ultimately necessitating replacement of the diverter box. The lead time for replacement was significant and a DSU loss ensued. Fortunately a temporary repair was affected, allowing the unit to be used in open cycle mode and the downtime suffered was restricted to the temporary repair and full replacement periods.

STAGE 6:
POST COMPLETION – DEFECTS LIABILITY

Once testing is over there will be a fixed period post-completion that is written into the contract where liability rests with the contractor to resolve any issues. This is usually between 12 and 24 months after practical completion/handover to the client.

There are three different levels of coverage available for this period:

- **Visits maintenance** – provides protection against damage caused by contractors visiting the site to carry our remedial works during the defects liability period.
- **Extended or limited maintenance** – this is most commonly used on international and technology projects (EAR). It includes the same cover as provided for by visits maintenance, and additionally damage which arises from a cause during the construction period which materialises during the defects liability period.
- **Guarantee maintenance** – this is rarely used other than for UK construction all risks (CAR) projects. This incorporates both of the above and damage from a cause prior to the construction period, for example during design.

In many cases this cover also extends to provide protection against liability for injury or damage to third parties.

Once the defects liability period has ended, the owner moves to the final acceptance phase of the contract.

Claims scenario:
During the 12 months defects liability period the contractor attended the project to rectify problems with an internal rail, running next to the glass exterior of the building. This involved removing sections of the rail with cutting equipment (angle grinders). The contractor failed to appreciate the sparks generated by cutting and their effect on the glass exterior. Damage was caused to the glass, in the form of pitting. Visits maintenance cover was included and the cost of replacing the glass was recovered under the policy.

OVERVIEW

For owners involved in construction projects of any type and scale, a range of insurance covers need to be in place at appropriate times during the project lifecycle. Not all of these are the responsibility of the owner, so ensuring their contractor or other third party have the appropriate cover should be viewed as an integral part of a robust procurement and risk management approach.

Group risk and insurance managers should ensure that they engage insurance professionals with experience in the placement of construction insurances at the appropriate times in the cycle and ensure that they themselves are part of the internal team.

Zurich Global Corporate UK
London Underwriting Centre, 3 Minster Court, Mincing Lane, London EC3R 7DD, England.
www.zurich.co.uk

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