RESPONSIBILITY FOR DAMAGES AND MINIMIZATION OF RISK IN THE CONSTRUCTION PROCESS

In the paper the analysis of risk of different type is performed in the context of Civil and Construction law. There are some tools and procedures that are helpful to manage the risk that is coming from different sources. The reasons of contractual liability that are discussed in the paper are: damage, failure or improper performance of an obligation arising from the contractual relationship existing between the parties, the causal link between the injury and the failure or improper performance and the fault of the perpetrator.

INTRODUCTION

Issues of liability for damage resulting at the construction site always aroused a lot of controversy [1] and were the source of disputes between the participants of the construction process. These damages are often complex in nature, both in terms of the actual law (Fig.1).

1. DAMAGES ON SITE

There are several types of damages. From the engineering point of view the physical defects are taken into consideration (Fig.2).

According to the art. 652 of the Civil Code if the contractor took over the official record of the investor's construction site, he shall be until putting the facility liable on the general principles for the damage caused in the area. The construction site is defined by the provisions of Article. 3 paragraph 10 of the Construction Law as a space in which construction works are carried out together with the space occupied by the machine facilities construction. The provision of Article. 652 of the Civil Code does not form a self-test of liability for damage on the site. It refers in this respect to general principles, and so tort and contractual liability regime.

Liability for torts (tort) is governed by Article. 415 et seq. of the Civil Code. They are used in the event of damage caused at the site to third parties, which are not bound by obligation relationship with the entities of the construction process. Premises of liability in tort are: damage, the unlawfulness of the act giving rise to the damage, causal link between the act and the damage and the fault of the perpetrator. The term “act” is understood as both action and omission.
when the perpetrator could and should have acted. Fault of the perpetrator may be intentional or unintentional. For the adoption of tort is sufficient to determine even the slightest degree of negligence. In practice, it is this form of guilt that occurs most frequently in the case of damage to the site. All indications of tort liability must be shown by the victim if there is a trial. Types of consequences of damages are shown on Fig. 3.

`Fig. 3. Consequences of damages`

Responsibility for non-performance or improper performance of obligations (contract) is governed by the provisions of art. 471 et seq. of the Civil Code and is used in cases where the victim to the construction site and the perpetrator of the damage are bound by an agreement, for example contractor’s liability to its employees, the responsibility of the contractor to the investor. The reasons of contractual liability are: damage, failure or improper performance and the fault of the perpetrator. In the case of contractual liability the existence of fault on the part of the perpetrator is presumed, thus shifting the burden of proof of lack of self-inflicted harm on the offender. Evidence situation of the victim in the event of a trial is therefore easier than in the case of claiming damages in tort.

Protocol transfer of land to build as a whole occurs when one contractor (the general contractor) is obliged to execute all the works that make up the whole of the proposed facility ("turnkey"). The contractor retains the construction site in his dominion, under which undertakes various activities connected with the works, ensuring their regularity and order and security [2]. The aim of these activities is to achieve the desired result - the execution of the object and putting it to the investor together with previously submitted area.

When there are several contractors, and each of them has to do only a certain part of the work, or only work a certain specialization (eg. sanitary, electrical), and partial agreements with such performers includes the investor itself, it remains host to the construction site. It should only make the appropriate part of the facility and the construction site (front works) to partial contractor. Responsibility of partial contractor is limited to the damage caused on a part of the construction site that was given to him. This part, for reasons of clarity, should be in detail described in separate statements by the investor and the partial contractor in a transfer protocol. A similar issue is now the responsibility of subcontractors for damages on the area of construction. The agreement concluded by the contractor with the subcontractor, which requires the investor’s approval, should include appropriate provisions for the introduction of a subcontractor at the construction site and the scope of its responsibilities defined by eg. the place and date of the exercise of his work in this area.

An investor who entrusts the execution of works to a specialized construction company, is not responsible for damage caused by its staff in the performance of contract work (art. 429 of the Civil Code). It is responsible, however, for any own negligence. This view was reflected in the jurisprudence of the Supreme Court.

`Fig. 4. Regimes of responsibility according to the Civil Code`

`Fig. 5. Turnkey model of construction process`
There is no general principle of co-responsibility of the investor and the contractor for tort made to a third party by contractor in the performance of works commissioned by the investor.

Protection systems and equipment, that is surrounded by a construction site against the possibility of damage due to construction works (road) is included in direct obligations of contractors and obligation to control in this regard rests with the investor. So, if as a result of works damaged located in the vicinity of culverts and drainage ditches, the obligation to repair the damage rests with the contractor and severally with him to the investor, unless he carried out a proper and effective control (see. Supreme Court judgment of 20 June 1977, file no. II CR 210/77, OSNC 1978/4/72).

The subject of the controversy was a case of liability for any damage caused to third party by the collapse of buildings or detachment of its parts. According to the art. 434 of the Civil Code the spontaneous holder of the building is responsible for such damage, unless the collapse of a building or tearing her part not resulted either from a lack of maintenance of the building in good condition, or from a defect in construction. So it is a strict liability independent of fault. Prevailing views consider the general contractor for the holder of construction within the meaning of art.434 of the Civil Code. The provision of Article 652 of the Civil Code - as unique - unlike art. 434 of the Civil Code determines the person responsible. You should have both in mind that the dispositions of Articles 652 and 434 of the Civil Code do not coincide, since the responsibilities of art. 652 of the Civil Code is much broader and applies to all damage, not just related to the collapse of structures or detachment of its parts. When an investor entrusts the whole of the works of several contractors (or subcontractors), while retaining the right to co-ordinate their actions [...] responsible of art. 434 of the Civil Code is investor as spontaneous holder of buildings [3]. A similar solution will be justified if the investor leaves contractor the admittedly free hand, but the nature of the works makes the adoption of the protocol of transferring the area unnecessary or the building site was not transferred by protocol for any other reason [4].

Crucial to minimize the risk of damage to the site is following health and safety regulations by all participants in the construction process. An important role is played in this regard by health and safety inspector who oversees the health and safety of all workers on the construction site, as well as supervises over the provision of safe stay of others related to the construction process. Health and safety inspector works within the framework of applicable laws, including the Labour Code, Building Law, laws related to human safety in the workplace. He is obliged to take measures to eliminate accidents at the construction site. He prepares and evaluates formal legal documents: the plan of safety and health prepared by the project manager, user safety in terms of work, the book of training on site. He defines risks on construction sites, assesses the risk. Health and safety inspector conducts safety training for construction, including post instruction and familiarizes employees with occupational risks. He also participates in the meetings of coordination in the field of health and safety on site. Health and safety inspector checks the state of safety on the construction site and takes other steps to reduce the risk of accidents. He checks the documents stating the suitability of the use of tools and equipment at the site. He controls abiding health and safety rules by the workers at the construction site as well as their use of clothing, footwear and personal protective equipment, helmets, reflective vests. Health and safety inspector has the right to issue instructions to improve the working conditions and comply with the rules and principles of safety, suspend operation of the machine or device in the event of an imminent threat to life or health of the employee or another person. It can also check that the workers at the construction site have the required qualification permissions. He controls building security against unauthorized access, proper marking of passages, crossings and dangerous places, security posts in the vicinity of the power line, the correctness of storage of excavated material and other materials, labor standards for construction, the use of safe materials for construction. In the event of an accident at the construction site he is obliged to inform about the incident and conduct a post-accident procedure and report suspected occupational disease.

**Fig. 6. Partial agreements model of construction process**
Issues of liability for damages on the site belong to the more complex, both factually and legally [5]. The precise scope of the responsibilities of the parties in the minutes of the construction site where the construction process is without a general contractor can greatly remove the controversy in this regard. Adherence to health and safety regulations will reduce the number of accidents on the construction site.

2. RISK AND CONTRACTS

Parties to the contract for construction works usually start working with the best of intentions, to complete work on the satisfactory quality, on time, with the least expenditure of the investor taking into account a reasonable profit for the general contractor, subcontractors and suppliers. In the course of the execution of works there often appear disputes, delays, interruptions of continuity, which can destroy even the best intentions [6]

Disputes and conflicts usually arise from:
- inadequate and flawed contract documentation,
- abnormal contractual arrangements,
- improper methods of bidding,
- unreasonable distribution of the burden of risk on one party to the contract,
- the staff does not match the type of project,
- the collapse in personal relationships and communication,
- the imposition of the burden of risk on the contractor that is not properly equipped or able to bear such risks,
- insolvency of one of the parties,
- the problems of communication and coordination in case of involvement of more than two parties,
- ambiguities in the contract or other documents, leading to problems of interpretation,
- ambiguous clauses leaving a discretionary decision of one of the parties,
- incomplete drawings or project with the contradictions between the architectural drawings and industry regulations.

Regardless of the drafting of contracts disputes always arise in construction projects. In 99% of cases they are resolved in a friendly manner through discussions and negotiations [7]. Litigation is nothing new. Already in 1689 it was reported a lawsuit against Christopher Wren, who had designed the expansion of Hampton Court Palace.

The aim of the agreement is to establish the rights, duties, responsibilities of the parties and the distribution of risk [8].

Acceptance of the undertaking entails the acceptance of the proportional risk of inability to fulfill obligations due to their inability, mistake or due to an external source or event. The agreement defines only the basic rule, and its performance depends on the goodwill, intention and the relationship between the parties [9]. Fixed remuneration places high risk on the contractor.

Public institutions usually do not see risk taking as belonging to their duties. Public investors, rather reluctantly, due to financial and political reasons, accept uncertainty with regard to the contract price. They prefer to contract with lump sum remuneration in which the contractor bears most of the risk and there is only a few conditions to justify a change of remuneration. Private investors, eg. large developers are prepared to incur significant risk in exchange for financial benefits and maintaining direct control over the design and construction work [10].

Fig. 7. Role of health and safety inspector

The important distinction in construction projects are types of risks: controlled and non-controlled. Controlled risk includes, for example diversified people’s quality of management and execution of works. Uncontrolled risks are such factors as: weather conditions, the impact of inflation on costs, soil conditions on a particular site. Contractors and subcontractors easily accept controlled risks [11]. Often, however, the tender documentation are included aggravating conditions for uncontrollable situation at the stage of the offer, for example contractor assumes the risk of the actual ground conditions, he is responsible for providing ground conditions on the site and should have considered in his due pay the cost of excavation in such conditions, which he finds. Within a short period of tender contractor is unlikely to be able to carry out more detailed studies of land construction than make a few test wells, if at all will do it. He must therefore measure the cost of excavation in the worst possible conditions, weighing, however, that the offer is still attractive. Application of risk on the contractor for events not under the control is a short-sighted action. If ground conditions are satisfactory investor will pay a high

Fig. 8. Types of remuneration
salary, taking into account the risk of the contractor, which could have been avoided commissioning a detailed study of the construction of the ground at the design stage.

**Fig. 9. Factor of control**

The fundamental risks inherently characterising each construction project are divided between: the investor, the design team, the general contractor, subcontractors, suppliers under different contractual relationships. These risks include:

- completeness of the project - which party bears the risk of liability for hidden defects resulting from errors in the project
- the cost of the object - which party takes the risk of the actual costs of the project
- responsibility for hidden defects resulting from poor workmanship, defective materials or improper specification - which party is responsible for it - a professional team, the general contractor, subcontractor or material supplier
- security and compensation for accidents - it is customary for the one party to agree to indemnify any other damage and liability to third parties arising from work;
- deadline for completion of the work - which party is responsible for completion of the work within the agreed deadline
- the quality of labor and materials - which party is responsible for ensuring acceptable quality

**Fig. 10. Division of risk**

All the above issues are associated with some form of commitment and responsibility.

Over the last decade the use of insurance contracts developed, more and more there are additional insurance.

Depending on the type of risk, it may be transferred to individual participants in the project in accordance with the concept that risk should be taken by the party which is better equipped to reduce it.
required in the formulation of disclaimers, which are not always recognized by the courts. There is also no point in transferring risk through contractual terms, to the party that is not properly equipped to bear the risk. It is unrealistic to impose sanctions for non-performance of contractual work in the period of such 100,000 zlotys a week to the subcontractor performing small scope of works, with a relatively low value, eg. construction formwork, the company consists of 3 people. The company probably does not have the financial means to cover these costs even if it is proved the responsibility for delay in completion of the project.

Risks imposed on the investor and the contractor are not limited to those provided for in the agreement. Certain risks are imposed by the law regardless of the wishes of the parties, eg. T he employer’s responsibility to its own employees.

CONCLUSIONS

A very important factor in the distribution of risk is an element of possible control of the parties, who are required to take the risk. A rational plan for the distribution of risk will assume that the party, which is in the position that allows you to better control the appearance of events to the contrary, should bear the risk associated with such events. Sometimes, however, the law regardless of the control element, in a different manner regulates the distribution of risk. The effects of improper risk, not taking into account the situation of contractors, their loads and the ability to control risk, are often too high price, low quality of the works, as well as costs arising at the end of litigation.

REFERENCES

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Odpowiedzialność za szkody i minimalizacja ryzyka w procesie budowlanym

Zagadnienia odpowiedzialności za szkody powstałe na terenie budowy zawsze budziły wiele kontrowersji i były źródłem sporów między uczestnikami procesu budowlanego. Szkody te mają często skomplikowany charakter zarówno pod względem faktycznym jak prawnym. Sformułowanie przepisów Prawa budowlanego i Kodeksu cywilnego nie wskazują rozwiązania tych problemów. W artykule przeprowadzona została analiza i wykładnia uregulowań odpowiedzialności za szkody na terenie budowy oraz wskazano sposoby minimalizacji ryzyka w procesie budowlanym.

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