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# Documentation guarantees the safe construction of a building objects Jerzy OBOLEWICZ\*1

<sup>1</sup>Scientific Institute of Engineering of the Safety of Anthropogenic Objects, Warsaw, Poland

#### Abstract

The construction documentation imposes certain obligations on the participants of the construction process: investor, investor's supervision inspector, designer, construction manager (works manager). Activities and tasks assigned to individual participants in the process require them to properly understand and interpret the law, because ignorance of the provisions does not exempt them from responsibility. The article defines and characterizes the documentation required during the construction implementation, which proves that all works during the execution of the building object were carried out in a safe and compliant manner.

**Keywords:** construction, documentation, construction, building structures, safety engineering.

#### 1 Introduction

The concept of documentation in Poland has developed historically. Initially, they were viewed as an activity, that is, a written statement made by a specific person that served as evidence of legal facts. With the passage of time, documentation was called both the activity described above and its effect, i.e. a collection of documents. In the second half of the twentieth century, this ambiguity disappeared and documentation (documentation) began to be equated with the registration of human activity and saved in the form of information.

At the beginning of the 21st century , a document was defined as recorded information along with the material in which it was recorded, a carrier of information, and documentation meant a set of documents established for a common topic, eg concerning a given object, problem or task [14]. This understanding of the document and documentation has been adopted in the construction industry. Nowadays, documentation is a collection of documents understood as information recorded (recorded) on any medium [3, 11].

In this sense, documentation should be understood as a collection of documents understood as information recorded on any medium. Documents that we deal with in modern law offices can take one of five forms: written, image, sound, mixed or digital (electronic). Documentation can be categorized according to the purpose for which it is produced. According to it, contemporary documentation can be divided into five main types, i.e. file documentation, geodetic and cartographic documentation, technical documentation, audiovisual documentation or ephemeral documentation. The typology of contemporary documentation resulting from the determination of the purpose for which it is produced is not the only division that can be found in law, professional literature or colloquial language. Apart from this systematization, it is possible to divide the documentation into: archival materials and non-archival documentation, typical and specific documentation, classified and open documentation or original and secondary documentation.

#### 2 Building object

Within the meaning of the construction law, a construction object may be a building, structure or small architecture object, together with installations ensuring the possibility of using the object in accordance with its intended use, erected with the use of construction products [18]. The characteristics of individual types of construction objects are presented in Table 1.

The Construction Law Act regulates activities involving construction and defines the rules of operation of public administration bodies in this field [20]. The construction object as a whole and its individual parts, together with

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 $<sup>\</sup>textbf{*Corresponding author:} \ \, \text{E-mail address: obolewiczjerzy@gmail.com (Jerzy OBOLEWICZ)}$ 

Table 1. Types of construction objects [20]

| No | Object name                           | Object characteristic  |
|----|---------------------------------------|--|
| 1  | Building                              | A construction object that is permanently connected to the ground, separated from the space by building partitions, and has foundations and a roof.  |
|    |                                       | A single-family residential building is a building / detached building or a semi-detached, terraced or group building, serving to satisfy housing needs, constituting an independent unit structurally, in which it is allowed to separate no more than two residential premises or one residential premises and commercial premises with an area of total area not exceeding 30% of the total area of the building.   |
| 2  | Architecture object                   | An architecture object is any construction object that is not a building or a small architecture object, such as: linear structures, airports, bridges, viaducts, flyovers, tunnels, culverts, technical networks, free-standing antenna masts, free-standing advertising boards and advertising devices permanently attached to the ground, structures earthworks, defensive (fortifications), protective, hydrotechnical, reservoirs, free-standing industrial installations or technical devices, sewage treatment plants, waste landfills, water treatment stations, retaining structures, overground and underground pedestrian crossings, utilities networks, sports facilities, cemeteries, monuments, as well as construction parts of technical devices (boilers, industrial furnaces, nuclear power plants, wind farms and other devices) and foundations for machines and devices, as technically separate parts of objects making up the usable whole. |
|    |                                       | A linear object is a construction object, the characteristic parameter of which is length, in particular a road with exits, a railway line, water supply, canal, gas pipeline, heat pipeline, pipeline, power line and traction, overground cable line and, located directly in the ground, underground, embankment anti-flood protection and cable sewage system, while the cables installed therein and the cables installed in the process channel do not constitute a building object or its part or a construction device.  |
| 3  | An object<br>of small<br>architecture | A small facility, in particular:  • religious worship, such as: chapels, roadside crosses, figures,  • statues, fountains and other objects of garden architecture,  • utilities for everyday recreation and keeping order, such as sandboxes, swings, ladders, garbage cans.  |

the related construction equipment, should be built in a manner specified in the regulations, including technical and construction regulations, and in accordance with the principles of technical knowledge, ensuring:

- compliance with the basic requirements for construction works specified in EU regulations [2, 18] establishing harmonized conditions for the marketing of construction products concerning:
  - load capacity and stability of the structure,
  - fire safety,
  - hygiene, health and the environment,
  - safety of use and availability of facilities, e) protection against noise,
  - energy savings and thermal insulation,

Table 2. Types of construction works [20]

| No | Name of the work | Construction work characteristic   |
|----|------------------|--|
| 1  | Construction     | All work aimed at the execution of a given construction object in a predetermined place.   |
| 2  | Reconstruction   | Reconstruction is a type of construction that produces a new building structure in place of an existing structure that has been fully or partially destroyed. The establishment of reconstruction as a type of construction is made in the Construction Law , which implies appropriate consequences related, inter alia, to the requirements for administrative procedures preceding the commencement of reconstruction and related to its completion and handing over the facility for use [15, 18].   |
| 3  | Development      | Extension - colloquially - increasing the area of a given building object. It is when changes include parameters such as cubature, building area, its length or width. Therefore, the extension will be the enlargement of the existing building structure with a technical element constituting a characteristic parameter of the building, which is the (external) part of the building structure [21]. This concept should be understood as enlarging, expanding a building, an already built-up area, adding new elements. The extension covers a wider scope of interference with the building substance, which may consist not only in the replacement of structural elements, but also in a certain change of the boundaries of the building structure.   |
| 4  | Superstructure   | The concept of a superstructure is not defined in the construction law. A superstructure is a type of construction during which a new part of a building object that already exists is created. The result of this superstructure is an increase in the height of the building structure and its usable area. In other words, the superstructure is associated with the enlargement of an existing building structure by increasing its height, while maintaining the same building area. An example of a superstructure may be lifting the gable walls or the existing storey, raising a new storey, or transforming the attic by raising the knee wall [1].  |
| 5  | Renovation       | In the light of the law, renovation includes activities (construction works) carried out in an existing building object, which consist in restoring or restoring the original state, and at the same time not being maintenance. The legal definition takes into account and in its meaning covers the use of construction products separate from those used in their original state. Construction works related to the demolition of the existing building structure and the construction of a new one should not be defined as renovation works. In order to carry out a renovation, the building object in question must already exist. Renovation is also bringing a given building object to a working condition. However, due to the narrow meaning of the definition of renovation, it should be remembered that its scope does not include ongoing maintenance. The most important and characteristic feature of renovation is the restoration of the original condition of a given building. An example of renovation can be activities such as replacement of plasters, replacement of installations, furnaces, windows, doors or terrace barriers, etc. |
| 6  | Demolition       | According to the construction law, there is no clear definition of demolition of a building . In the regulations, it is one of the types of construction works [15]. This, in turn, has certain legal consequences, as demolition of a building is the opposite of construction. However, from the legal point of view, there is no contradiction, because demolition is treated as one of the types of construction works that can only be started on the basis of the final building permit decision [4, 5, 10].   |

- sustainable use of natural resources.
- respect for the legitimate interests of third parties in the area of impact of the facility, including ensuring access to a public road;
- safety and health protection conditions for people on the construction site [6, 17].

Fulfillment of the above-mentioned legal requirements requires the definition and proper interpretation of the word "construction". In colloquial language, it is used in functional and objective terms. In terms of activities, this word covers the majority of construction works performed, including renovation works in a specific place. However, in terms of the subject matter, the word "construction" means a place where renovation or construction works are performed (construction site).

According to the act on construction law, "construction" should be understood as commencing all works aimed at the execution of a given construction object in a predetermined place. It should also be remembered that the construction is not only associated with the creation of a new facility, as it also includes elements such as reconstruction, superstructure or expansion of the building. Construction can also be defined as a certain part of the overall construction investment process. In order for this stage to be carried out, the requirements of the construction law must be met, e.g. the project, as well as the building permit decision and all such formalities required by local authorities.

The above-mentioned terms are very similar in everyday speech and general use and often used interchangeably as synonyms or synonyms, or synonyms, and require legal definition. The law defines them in a quite separate way and highlights clear differences between them, which are important not only due to the general meaning of these words, but mainly from the point of view of all construction permits and other administrative formalities, because in order to prepare the relevant documentation (Table 2).

#### 3 Construction documentation

The basic documents that are created during the construction investment process and relate to the construction when creating its documentation include: construction design; building permit; construction log (in case of conducting assembly works - assembly log); health and safety plan (BIOZ plan); book of measurements; protocols of partial and final acceptance; documentation confirming the quality of materials, prefabricated elements and built-in devices [14].

#### 3.1 Construction project

The construction design is received by the construction manager from the investor before the commencement of works. Together with the design, he also receives a building permit, information being the basis for drawing up a safety and health protection plan, and usually a cost estimate for works with their bill of quantities. The construction design should include: a title page, a plot or area development plan drawn up on the current map, and an architectural and construction design [20]. The detailed scope of these studies is presented in Table 3.

According to the needs, the construction design also includes declarations of relevant organizational units on ensuring the supply of energy, water, heat, gas, sewage collection and on the conditions for connecting the facility to water, sewage, telecommunications and land networks, as well as the results of geological and engineering surveys and geotechnical conditions for the foundation of buildings [9].

#### 3.2 Safety and health protection plan - BIOZ plan

The site manager's duties include: preparation or ensuring the preparation of a BIOZ plan taking into account the specificity of the building object and the conditions for conducting construction works, as well as coordinating activities ensuring compliance with safety and health rules during the execution of construction works [4, 5, 8, 12, 17, 20].

The BIOZ plan should be drawn up in the case of construction works lasting longer than 30 working days and the simultaneous employment of at least 20 employees or the labor intensity of the planned works exceeding 500 man-days, as well as in the case of construction works whose nature, organization or place of conduct creates a particularly high risk of a hazard. human safety and health, i.e.:

• whose nature, organization or place of operation creates a particularly high risk of a threat to the safety and health of people, in particular buried under the ground or a fall from a height;

Table 3. Contents of the construction project

| No | Name  | Characteristic  |
|----|---|---|
| 1  | Front page  | On the cover page you will find information that is important for the construction supervisor and the construction manager:  • the name and address of the building under construction and the registration numbers of the plot on which the facility is located;  • name and surname or address of the investor and his address; - name and address of the design unit; - name and surname of the designer and possibly co-designers with their specialties and building license numbers as well as the date of preparation and signatures;  • list of the contents of the construction design with a list of attachments (arrangements, permits or opinions, etc.); - where the design is checked, the names of the verifiers, their specialties and authorization numbers, dates and signatures. |
| 2  | Plot or area development plan drawn up on the current map | The document includes: - definition of the plot or area boundaries; - location, outline and layouts of the existing and planned buildings; - utilities networks; - method of sewage disposal or treatment, communication system and greenery system, with indication of characteristic elements, dimensions, ordinates and mutual distances of objects in relation to the existing and planned development of neighboring areas.  |
| 3  | Architectural and construction project                    | The architectural and construction design specifies: - the function, form and structure of the building object; - energy and ecological characteristics; - proposed technical and material solutions, showing the principles of relating to the environment; - description of accessibility for people with disabilities - in relation to facilities that require it. The architectural and construction design is the basis for the construction and consists of two parts: a technical description and drawings.  |
| 4  | Technical<br>project                                      | <ul> <li>The technical design includes:</li> <li>the designed structural solutions of the facility together with the results of static and strength calculations,</li> <li>energy performance - in the case of buildings,</li> <li>geological and engineering documentation or geotechnical conditions for the foundation of buildings - depending on the needs,</li> <li>other design studies.</li> </ul>  |
| 5  | Addidional documents as needed                            | Declarations of the relevant organizational units on the provision of energy, water, heat and gas supplies, sewage collection and the conditions for connecting the facility to the water supply, sewage, telecommunication networks and land roads; - declaration of the competent road administrator about the possibility of connecting the plot with a public road in accordance with the provisions on public roads; - results of geological and engineering studies and geotechnical conditions for the foundation of buildings.  |

- when conducting the activity of chemical substances or biological agents that threaten the safety and health of people;
- hazardous to ionizing radiation;
- $\bullet\,$  run in the vicinity of high-voltage power lines or active communication lines;

- posing a risk of drowning employees;
- conducted in wells, underground and in tunnels;
- performed by drivers of vehicles powered by overhead lines;
- made in caissons, with an atmosphere generated from compressed air;
- requiring the use of explosives;
- carried out during assembly and disassembly of heavy prefabricated elements [2, 9, 11].

The detailed scope and requirements for the BIOZ plan have been legally defined [5–7, 15].

#### 3.3 Building permit

A building permit is the basic document that is required when undertaking works on a construction site. The construction manager receives them from the investor before the commencement of works. This obligation results from the construction law [20], which says that "construction works may only be commenced on the basis of the final building permit decision". The parties to the building permit proceedings are: the investor and the owners, perpetual usufructors or property managers located in the area of impact of the facility. A building or demolition permit for a building object may be issued after:

- conducting the procedure for the environmental impact assessment required by the environmental protection regulations;
- the investor obtains the permits, approvals or opinions of other authorities required by specific regulations (agreement, consent or opinion should be made within 14 days from the date of presentation of the proposed solutions within this period, this means solutions. If in acceptance of the proposed solutions).

The building permit may be issued only to those who

- submitted an application in this matter within the validity period of the decision on building conditions and land development, if it is required in accordance with the provisions on spatial planning and development;
- submitted a statement on his right to use the property for construction purposes [20].

The investor must attach to the building permit application:

- four copies of the construction design together with opinions, agreements, permits and other documents required by specific regulations and a certificate confirming the right to design (valid as at the date of the design development);
- a declaration of the right to use the property for construction purposes;
- a decision on building conditions and land development, if it is required in accordance with the provisions on planning and spatial development (there is no valid spatial development plan for a given area).

The building permit document undergoes the administrative procedure. The decision on the matter is issued by the starost. Then, the competent authority sends it immediately to the commune head, mayor, city president or the authority that issued the decision on building conditions and land development. If no appeal is made within 14 days of receipt of the decision, the decision becomes final and the investor may proceed with its implementation. The party may appeal against the staroste's decision to the voivode through the staroste. The investor should notify the starosta 7 days prior to the commencement of construction works. If the staroste fails to issue a building permit within 65 days from the date of submitting the application, the higher level authority shall impose a penalty. In each case of exceeding the deadline for issuing the decision, separate proceedings are conducted. The architectural and construction administration authority is obliged to send to the higher level authority the certified registers of applications and building permit decisions issued in the previous month on the first day of the month. As a result of the analysis of registers and the finding of a culpable failure by the authority to issue a decision on a building permit, a detailed explanatory procedure is carried out, taking all steps necessary to clarify the facts, including enabling the architectural and construction administration authority concerned to submit explanations regarding the delay. If, as a result of the investigation, the reasons for the delay are determined, for which the authority is not at fault, the decision to impose a penalty does not appear. If, on the other hand, the delay is the fault of the authority, the penalty is imposed by way of a decision that is not subject to a complaint. Penalties for delay in issuing a decision on a building permit constitute an expense of the authority competent to issue such a decision. In connection with the establishment of payments on this account with the income of the State Treasury, the amounts of these funds should be transferred to the budget income account of the competent administrator (in the case of penalties imposed by voivodes, it will be the voivode's income account). In the decision on the imposition of a penalty, the number of the account to which payments due to penalties should be made shall be indicated. This decision is enforceable on the date of delivery. The provisions on administrative enforcement proceedings shall apply to financial penalties for failure to issue a decision on the building permit on time.

#### 3.4 Safety and health protection plan - BIOZ plan

The site manager's duties include: preparation or ensuring the preparation of a health and safety environment plan taking into account the specificity of the building object and the conditions of construction works, as well as coordinating activities ensuring compliance with safety and health protection rules during the execution of construction works. The BIOZ plan should be drawn up in the case of construction works lasting longer than 30 working days and the simultaneous employment of at least 20 employees or the labor intensity of the planned works exceeding 500 man-days, as well as in the case of construction works whose nature, organization or place of conduct creates a particularly high risk of a hazard. human safety and health, i.e.:

- whose nature, organization or place of operation creates a particularly high risk of a threat to the safety and health of people, in particular buried under the ground or a fall from a height;
- when conducting the activity of chemical substances or biological agents that threaten the safety and health of people;
- hazardous to ionizing radiation;
- run in the vicinity of high-voltage power lines or active communication lines;
- posing a risk of drowning employees;
- conducted in wells, underground and in tunnels;
- performed by drivers of vehicles powered by overhead lines;
- made in caissons, with an atmosphere generated from compressed air;
- requiring the use of explosives;
- carried out during assembly and disassembly of heavy prefabricated elements.

The detailed scope and requirements for the BIOZ plan have been legally defined [15, 20].

#### 3.5 Building log

The construction logbook is an official document that must be present on almost every construction site. It records the course of construction works as well as events and circumstances occurring during their performance. Its content may be important for the assessment of the correctness of the works carried out. A construction (or demolition) log must be kept on the construction site and for all construction works for which a building permit has been issued. In the case of works that do not require a permit, as well as works reported to the competent architectural and construction administration authority, it is not necessary to keep a log [13, 16, 20].

The construction log can be obtained for a fee, e.g. from the architectural and construction administration authority that issued the building permit. The amount of the fee for publishing a journal should be similar to the cost of its purchase and depends on the volume of the journal - from a few zlotys for a journal intended for small investments to several zlotys for large investments. For example, for the construction of a single-family house, a medium-sized journal with a dozen or so pages should be sufficient for entries on the course of works.

It is the investor's responsibility to obtain a building permit and then a construction log . The construction log book is compliant with the construction law only if it is issued (registered and sealed) by the competent authority.

The construction logbook should be permanently located on the construction site and be available to persons authorized to make entries in it. It must be stored in such a way as to prevent it from being damaged, destroyed or stolen. Keeping a log (and all construction documentation) and documenting the course of works (making appropriate entries) and its proper storage is the responsibility of the site manager. In addition to the site manager, entries may be made by:

- investor,
- investor's supervision inspector,
- designer,
- construction works manager,
- persons performing surveying activities on the construction site,
- employees of construction supervision authorities and other bodies authorized to control compliance with regulations on the construction site: labor inspector, sanitary inspector, voivodship conservator of monuments or employees acting on his authorization.

Entries made by these persons should be within the limits of their duties. During the construction execution, the designer has the right to demand that works are suspended by an appropriate entry in the log if he finds that they are not being performed in accordance with the design or that there is a possibility of a threat. The investor's supervision inspector representing the investor on the construction site and exercising compliance control of the works carried out has the right to issue recommendations to the construction or works manager confirmed by an entry in the construction log.

The form of the construction logbook is legally regulated [13]. This document is in A-4 format, with numbered pages and is protected against incomplete completion. The individual pages of the journal intended for entries are double - the original and the copy with perforation, which allow easy tearing it out. The journal issuing authority places seals on the individual pages of the construction log. The title page of the construction logbook includes the number, date of issue and the number of pages of the log, the investor's name and surname or name (company), type and address of construction, demolition or assembly, number and date of issuing the construction permit, and information on how to keep the logbook and liability. On the first document, the investor shall include the name and surname or the name (company) of the contractor or contractors and persons exercising construction and construction management, author's and investor's supervision, stating their specialties and numbers of construction licenses. These persons confirm with their signature and date that they have accepted the duties entrusted to them. The following pages of the construction log are intended for entries on the course of construction works. Each entry should be dated and signed by the person making the entry, giving the name, surname, function and name of the organizational unit or body he represents. If, during the execution of construction works, there is a change of the construction manager, works manager, investor's supervision inspector or designer with author's supervision, an entry shall be made in the construction log describing the progress and security of the transferred construction, demolition or assembly. This entry is confirmed with the date and signatures of the handover and the assuming person. Under each entry in the construction logbook, the persons concerned by the entry confirm that they have read its content with their signature and date. The construction manager confirms with an entry in the construction logbook that the log is closed or its continuation in the next, consecutively numbered volume. Entries in the construction logbook shall be made in a permanent and legible manner on the originals and copies of the pages, placing them in chronological order, in a way that prevents further additions. If it is necessary to amend the entries already made, the incorrect text should be deleted in a way that makes it easy to read and the correct content should be introduced, justifying the introduced change. Deletions and corrections are made in the form of an entry in the construction log. Entries may not be made on the back of numbered pages. Protocols related to the construction or drawn up in the course of the performance of construction works are entered in the construction log. It is allowed to make protocols on separate sheets. These sheets should be attached permanently to the original construction log and its copy or placed in a separate set by making an entry in the construction logbook that they have been kept. In the event of conducting assembly works, an assembly log [13] should be kept.

#### 3.6 Book of measurments

The book of measurements is used to systematically confirm the number of works performed and is the basis for the subsequent settlement of the contractor with the investor and for the preparation of the as-built cost estimate [20]. Entries in the measurement book are made throughout the entire period of works. In practice, it is recommended that each construction object has a separate survey book, and on construction sites of larger facilities - the execution of various types of works should be recorded in separate survey books. Keeping a test book is not obligatory and results only from an agreement with the investor. In the event that the contractor's remuneration is provided for in the contract in the form of a lump sum, keeping a measurement book is not necessary. Like the construction log book, the measurement book should have numbered pages and be secured against incomplete completion. The pages for

entries are double: the original for the contractor and the copy for the investor. The first page contains construction, investor and contractor data. After completion of each stage of works, the site manager records the number of works performed in the measurement book. The correctness of these data is confirmed by the investor's supervision inspector or the investor himself. It is recommended to save the works in accordance with the content of the relevant take-off items from the cost estimate. However, if there is no cost estimate - according to catalog items. For the construction site manager, the measurement book may be the basis for accounting for the means of production used: human labor, materials and equipment operation [6].

#### 3.7 Construction works acceptance reports

There are three basic building works acceptance protocols:

- acceptance protocol in the contract for construction works,
- works acceptance protocol, i.e. a partial report,
- final works acceptance protocol.

The works acceptance protocols are part of the as-built documentation and are a receipt for the performance and the basis for the parties' settlements, because on the one hand they confirm the performance of the obligation and open the contractor the right to demand remuneration, and on the other hand, they mark the beginning of the warranty period for defects [13]. During the acceptance, it may also turn out that the obligation has not been properly performed in whole or in part due to the existence of defects and liability for defects arises.

#### 3.7.1 Work acceptance protocol in the contract for construction works

The contract for construction works belongs to the so-called named contracts, regulated separately [19]. These contracts relate to construction investments that require the development of a design and obtaining a building permit or the submission of relevant notifications to the architectural and construction administration authorities. The contract for construction works is concluded between the two parties, the investor and the contractor. The contractor undertakes to hand over the object (or works) specified in the contract, implemented in accordance with the design and construction art . On the other hand, the investor undertakes to perform the activities required by law related to the preparation of works, including the handover of the site and the construction design. He is also obliged to pick up the work and pay the agreed remuneration.

The issue of the acceptance of construction works relating to a construction contract is regulated very briefly. Usually, the acceptance of works is carried out by signing the acceptance protocol of the performed works. In practice, a distinction is made between a partial acceptance protocol or, in other words, a works advancement protocol and a final acceptance protocol, which is the most important.

#### 3.7.2 Work acceptance protocol, i.e. a partial protocol

The partial protocol is applicable when the works are highly advanced. In the absence of a different provision in the contract between the investor and the contractor, the investor is obliged, at the contractor's request, to accept the works partially completed, i.e. to prepare a partial protocol for the acceptance of construction works as they are completed and on this basis to pay the appropriate part of the remuneration. As a rule, the partial construction works acceptance protocol is prepared at the end of each settlement period. In practice, the calendar month is usually assumed as the accounting period. Usually, in the partial protocol, the value of the completed works is specified as a percentage. A number of documents are attached to the protocol, including protocols of partial acceptances, protocols of acceptance of disappearing works, etc., as well as declarations of subcontractors and the contractor himself regarding the settlement of amounts due to subcontractors. This is very important as subcontractors may benefit from the protection provided by law [15]. Thanks to this, in the event of non-payment by the general contractor, subcontractors may pursue their claims directly against the investor. In connection with the above, it is in the investor's interest to control the process of hiring subcontractors by the general contractor and the status of settlements.

#### 3.7.3 Final works acceptance protocol

The final acceptance protocol is a document signed by the parties to the contract, ie the investor and the contractor, confirming the final, qualitative and quantitative acceptance by the investor of the investment without "material defects". In practice, disputes arise at the stage of signing the final acceptance protocol. This is due to the different

understanding by the parties of the contract of the moment of acceptance of the works and the possible refusal to do so. The acceptance of the works entails a number of legal consequences that require clarification. It follows directly from the legal provisions that the acceptance of the object is the investor's responsibility [15]. This is confirmed by the position of the Supreme Court, which stated that the acceptance of the facility and payment of the agreed remuneration is the investor's responsibility, which is directly related to the contractor's obligation to hand over over the facility [20].

The works acceptance protocol is a confirmation of the fulfillment of the performance stipulated in the contract for construction works and is the basis for the settlements of the parties. It is necessary to include in the final acceptance protocol arrangements as to the quality of the works performed, a list of all revealed defects along with any deadlines for their removal. Sometimes it is also necessary to include the investor's declaration on the selection of a different right due to the contractor's liability for defects revealed on delivery.

It is worth noting that the acceptance of the works and the preparation of an appropriate acceptance protocol does not always mean that the contractor has duly fulfilled the construction works contract. For example, the Supreme Court stated that the preparation and signing of the acceptance protocol for construction works justifies the presumption that they were performed in accordance with the contract, but it is a presumption. This presumption can be rebutted by proving that the construction contract was performed improperly, for example due to quality. In the justification of the cited judgment, great emphasis was placed on the issue of quality and suitability of the works presented for acceptance. The Supreme Court emphasized that the investor's obligation to take delivery, notified by the contractor of the facility, cannot be treated mechanically, i.e. it cannot be assumed that such an obligation exists regardless of the type and severity of the defects found. It is worth emphasizing the position of the Supreme Court that the investor may refuse to accept the works if they find significant defects [22].

Another example may be the position of the Supreme Court, in which the dominant view of the jurisprudence was emphasized that in a situation where the contractor reported the completion of construction works performed in accordance with the design and principles of technical knowledge, the contracting authority is obliged to accept them. In the report on this activity, which is a receipt for the performance and the basis for settlements between the parties, it is necessary to make arrangements as to the quality of the works performed, including a possible list of all revealed defects with the deadlines for their removal or the investor's declaration on the selection of another right due to liability contractor for defects revealed upon receipt [24].

An important issue that requires clarification is the acceptance of works in the event of defects. Another issue that should be addressed is the acceptance of works in the event of defects. The Supreme Court determined that the protection of the investor under the provisions on the warranty for defects is implemented only after the acceptance, i.e. after signing the final acceptance protocol [21]. According to the ruling, the detected defects are legally removed, however, this investor's right does not affect the obligation to collect and pay remuneration for the facility erected in accordance with the design and principles of technical knowledge. The Supreme Court emphasized that the parties to a construction contract may not make the payment of the contractor's remuneration conditional on the absence of any defects [23].

The analysis of court judgments shows that the issues related to the acceptance of construction works are very complex. In the event that the investor does not have a team of people capable of properly carrying out the acceptance procedure, it is worth deciding to hire specialists in this field. An experienced building supervision inspector , and even a whole team of industry inspectors should be involved in the acceptance process of the subject of the construction works contract. It is also worth involving a lawyer in the acceptance process.

### 3.8 Documentation confirming the quality of materials, prefabricated elements and built-in devices

During construction works, only those products that meet the requirements may be used - they guarantee that the construction safety, fire safety and safety of use as well as appropriate hygienic and health conditions will be ensured in the facility constructed with their use. Therefore, it is allowed to use only construction products with a certificate of compliance or a declaration of compliance with the Polish standard or technical approvals.

The technical approval is a confirmation of a positive technical assessment made after appropriate tests have been carried out by an authorized approval body. The approval confirms that the products with the described features will be suitable for use in construction. It is valid for five years and may be renewed. Approvals apply only to products that are not covered by a separate standard (Polish or European). The certificate of conformity is a document in

which one of the authorized certification bodies certifies the compliance of a given manufacturer's product with a standard (Polish or European) or with a technical approval [18].

The declaration of conformity is a document which itself confirms the compliance of the product with the Polish standard or technical approvals and is responsible for the product.

Products used in construction, which are manufactured in the countries of the European Union, meet the requirements established by it, are marked with the CE mark. Such marking confirms the compliance of a given product or its production process with the standards harmonized with EU directives, European technical approval or national technical specification of a Member State, recognized by the European Commission [15]. Pursuant to the Act on construction products, materials are allowed to be marketed and used, whose manufacturer, based in Poland, has made a conformity assessment and issued a national declaration of compliance with a Polish standard or technical approval. These products are marked with the B construction mark. Regional construction products are also allowed to be marketed and used. These are products traditionally manufactured in a specific area by methods proven in many years of practice, intended for local use. They may also be marked with a construction mark under the responsibility of the manufacturer, provided that the provincial inspector of construction supervision has obtained a positive assessment. Product marking consists in placing the CE mark or construction mark directly on the product or on a label attached to it. If this is not possible, the mark is placed on the packaging or a certificate is attached to the product. It should be remembered that the fact of affixing the mark (granting the certificate) should be confirmed in commercial documents. The construction manager is obliged to collect all documents and certificates confirming the quality of materials built into the facility and store them for the investor's control and construction supervision authorities.

#### 4 Conclusions

As it was presented in the article, the construction documentation imposes certain obligations on all participants of the construction process. The activities and tasks assigned to individual participants in the process require them to properly understand and interpret the law. It should be remembered that all requirements are dictated primarily by all safety precautions. Thus, the reliable fulfillment of all legal requirements will make the construction process and the use of the building safe.

#### References

- 1. Bojar, B. Słownik encyklopedyczny informacji, języków i systemów informacyjno-wyszukiwawczych ISBN: 83-87629-84-7 (Warszawa, 2002).
- 2. Chmielewski, R., Baryłka, A. & Obolewicz, J. Analysis of design solutions for strengthening the load-bearing structure of a building for further safe use. *Journal of Achievements in Materials and Manufacturing Engineering* **104**, 5–10 (1 2021).
- 3. Degen, R. in Współczesna dokumentacja urzędowa (ed Robótka, H.) (Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika, Toruń, 2011).
- 4. Obolewicz, J. BIOZ przy posadowieniu budynku. Praca i Zdrowie 10 (2010).
- 5. Obolewicz, J. BIOZ przy wykonywaniu stanu zerowego budynku. Praca i Zdrowie 11 (2010).
- 6. Obolewicz, J. Koordynacja bezpieczeństwa i ochrony zdrowia w budowlanym procesie inwestycyjnym. *Przegląd Budowlany* **2** (2011).
- 7. Obolewicz, J. Przygotowanie planu BIOZ. Inżynier Budownictwa 100 (2012).
- 8. Obolewicz, J. Raport Projektu Badawczego nr NN115347038 realizowanego przez Politechnikę Białostocką (2010 2013) (Politechnika Białostocka, Białystok, 2013).
- 9. Obolewicz, J. Projektowanie bezpieczeństwa i ochrony zdrowia w budownictwie. *Inżynieria Bezpieczeństwa Obiektów Antropogenicznych* 1, 15–23 (2017).
- Obolewicz, J. Projektowanie rozbiórki obiektu budowlanego. Aparatura Badawcza i Dydaktyczna 3. ISSN: 1426-9600 (2017).
- 11. Owczarek, M. & Baryłka, A. Determining the thermal diffusivity of the material based on the measurement of the temperature profile in the wall. *Rynek Energii* **143**, 76–79 (4 2019).
- 12. Rawska-Skotniczy, A. & Nalepka, M. Metody realizacji robót rozbiórkowych. Builder (2016).
- 13. Rozporządzenie Ministra Infrastruktury z 26 czerwca 2002 r. w sprawie dziennika budowy, montażu i rozbiórki, tablicy informacyjnej oraz ogłoszenia zawierającego dane dotyczące bezpieczeństwa pracy i ochrony zdrowia

- 14. Rozporządzenie Ministra Infrastruktury z dnia 2 września 2004 r. w sprawie szczegółowego zakresu i formy dokumentacji projektowej, specyfikacji technicznych wykonania i odbioru robót budowlanych oraz programu funkcjonalno-użytkowego
- 15. Rozporządzenie Ministra Infrastruktury z dnia 23 czerwca 2003 r. w sprawie informacji dotyczącej bezpieczeństwa i ochrony zdrowia oraz planu bezpieczeństwa i ochrony zdrowia
- 16. Rozporządzenie Ministra Infrastruktury z dnia 26 czerwca 2003 r. w sprawie warunków i trybu postępowania dotyczącego rozbiórek oraz zmiany sposobu użytkowania obiektu budowlanego
- 17. Rozporządzenie Ministra Infrastruktury z dnia 6 lutego 2003 r. w sprawie bezpieczeństwa i higieny pracy podczas wykonywania robót budowlanych
- 18. Rozporządzenie Parlamentu Europejskiego i Rady (UE) Nr 305/2011 z dnia 9 marca 2011 r. ustanawiającego zharmonizowane warunki wprowadzania do obrotu wyrobów budowlanych i uchylającego dyrektywę Rady 89/106/EWG
- 19. Ustawa z dnia 23 kwietnia 1964r. Kodeks cywilny
- 20. Ustawa z dnia 7 lipca 1994 roku Prawo budowlane znowelizowane 19 września 2020
- 21. Wyrok SN z 22 czerwca 2007, sygn. akt V CSK 99/07
- 22. Wyrok SN z 24 lipca 2009, sygn. akt II CSK 61/09
- 23. Wyrok SN z 26 września 2012, sygn. akt II CSK 84/12
- 24. Wyrok SN z 7 marca 2013, sygn. akt II CSK 476/12