PBP.I02 Instruction for Carrying Out Earthworks

1. PURPOSE OF THE INSTRUCTION

To ensure proper organization, safe execution and adequate supervision of earthworks.

2. SCOPE OF THE INSTRUCTION

The provisions of the Instruction shall apply to earth moving works performed by employees of all companies operating within the premises of PCC Rokita SA and by external companies commissioned to perform earth moving works within the premises of PCC Rokita SA. The Director of the Office of Security and Prevention is responsible for overseeing the implementation of the manual.

No.	Position (role)	Responsibilities and authorities
1.	Earthworks Coordinator	▪ Completion of periodic training for persons managing employees. ▪ Completion of training for coordinators. ▪ Issuing the "Conditions for Carrying Out Earthworks", "One-Day Permit for Earthworks" or "Local Permit for Earthworks" in accordance with section 3.3 of this instruction. ▪ Checking compliance with the conditions specified in the "Conditions for Carrying Out Earthworks" and in the "One-Day/Local Permit for Earthworks". ▪ Setting out the boundaries of the earthworks scope and marking individual earthworks zones, e.g. using stakes or geodetic spray, in accordance with the base map attached to the "Conditions for Carrying Out Earthworks" and to the "Local/One-Day Permit for Earthworks". ▪ Ensuring that a written "Work Order" is issued when required by the services operating underground networks located in the earthworks area. ▪ Authorizing the commencement of work. ▪ Permitting work to proceed when the requirements specified in the above-mentioned documents are met. ▪ Refusing permission to work if any of the conditions set out in the "Conditions for Carrying Out Earthworks" or the "One-Day/Local Permit for Earthworks" are not met.
2.	Plant Dispatcher	▪ Monitoring in CuteFlow of notifications concerning earthworks carried out on the plant premises.
3.	Power Dispatcher	▪ Acting as the coordinating person when work must be carried out on the basis of a written "Work Order".
4.	GB Office Representative	▪ Checking compliance with the conditions specified in the Conditions for Carrying Out Earthworks and in the "One-Day / Local Permit for Earthworks". ▪ Conducting periodic inspections at the work site regarding possession of the required documents and the methods used to secure the work area. ▪ Deciding, in disputed situations, how the work area should be secured.

5.	Users (supervising underground networks)	▪ Marking out the route of the underground network, determining whether supervision by the user of the relevant network is required and whether a written “Work Order” is required, and marking and describing the above information on the base map of the area where the works will be carried out. ▪ Specifying the conditions for carrying out earthworks in section II of the “Conditions for Carrying Out Earthworks”. ▪ Making daily arrangements, if required, in section 4 of the “One-Day Permit for Earthworks”. ▪ Specifying the conditions for carrying out earthworks in section 4 of the “Local Permit for Earthworks”, including indicating whether and in which sections of the work constant supervision by the relevant service is necessary and whether a written “Work Order” must be obtained. ▪ Deciding whether mechanical equipment may be used or whether earthworks must be carried out manually.
	User of the area where the works will be carried out (person responsible for the work area/site)	▪ Checks compliance with the requirements and authorizes the commencement of work by confirming this with a signature in section 6 of the “Local Permit for Earthworks”.
6.	Person managing the works on behalf of the contractor	▪ Ongoing communication of arrangements to the contractor’s employees participating in the earthworks. ▪ Written confirmation of familiarity with the arrangements in the “Conditions for Carrying Out Earthworks”. ▪ Daily signing, before commencing work, to acknowledge the arrangements of the “One-Day / Local Permit for Earthworks”, confirmed by signature in the relevant fields of the above-mentioned forms. ▪ Direct supervision of the contractor’s employees. ▪ Ongoing verification of compliance with the requirements specified in the following documents: “Conditions for Carrying Out Earthworks”, “One-Day Permit for Earthworks” and “Local Permit for Earthworks”. ▪ Ongoing monitoring of safety conditions at the earthworks site and checking compliance with the attached base map of the area where the works will be carried out.
7.	Construction Equipment Operator	▪ Daily signing, before commencing work, to acknowledge the arrangements of the “Local / One-Day Permit for Earthworks”.

3. RULES OF CONDUCT

3.1 DEFINITIONS AND ABBREVIATIONS

No.	Name	Definition
1.	Earthworks	Any work that disturbs the surface of soil, earth or ground. Work related to excavating soil, interfering with the substrate, removing excavated material, moving it to another place or shaping it appropriately. Earthworks are carried out when the work involves chiselling, drilling in underground structures or in the foundations of above-ground structures, shaping the terrain, preparing the

		substrate for various surfaces, or constructing underground installations, including removing concrete elements whose breaking requires penetration into the substrate, performing geological boreholes and planting vegetation. Earthworks also include work related to laying and compacting earth material in places where there is a risk of damaging any underground or above-ground infrastructure. Earthworks may be carried out mechanically or manually.
2.	Local Permit for Earthworks	A document authorizing work to be carried out for the period specified by the coordinator in item 3 of the "Local Permit for Earthworks", provided that only the work specified in the scope of work, i.e. item 2 of the "Local Permit for Earthworks", is performed within a strictly defined and clearly marked area. The marking must be made using stakes or geodetic spray.
3.	Conditions for Carrying Out Earthworks	A document in which all owners of underground networks specify the conditions for carrying out work by entering guidelines in the appropriate fields of the "Conditions for Carrying Out Earthworks".
4.	One-Day Permit for Earthworks	A document issued on the basis of the "Conditions for Carrying Out Earthworks", prepared by the coordinator before the start of work on a given day.
5.	Work Order	A document authorizing earthworks to be carried out within underground utility networks, including power and electrical power equipment, installations and networks.
6.	Earthworks Coordinator	In accordance with the provisions of the "Instruction for the Safe Organization of Repair, Modernization, Construction and Investment Works", this is a supervisory employee with appropriate knowledge of the place, area and installation where the work will be carried out, designated by name in the handover protocol, e.g. head of an organizational unit, foreman or specialist, or a person indicated by the works coordinator. This person must have completed periodic training for persons managing employees and the required training for coordinators.
7.	Base Map	An excerpt from the base map showing the area where earthworks are planned. The base map is available in PCT Proces as a system application. It is available to works coordinators after submitting a request for installation to pomoc@pcc.eu.

3.2 GENERAL RULES

1. Earthworks should be carried out on the basis of the latest version of the base map and/or documents defining the route of installations and the location of underground equipment that may be within the range of the works being performed.

Note:

Earthworks related to emergency repairs or locating existing water, electrical, gas and similar installations may be carried out without technical documentation, but under the direct supervision of the person managing the works.

2. Earthworks already in progress may be continued under the rules applicable before the amendments to this instruction were introduced.

3. An excerpt from the PCC Rokita base map showing the underground utility network routes, attached to the documentation authorizing earthworks, should be:

a) legible, preferably in colour,

b) prepared on A3 sheets, at a scale presenting as much information as possible within the work area — the recommended scale should not be less than 1:250, with 1:100 being optimal,

c) on the maps, the following should be indicated: the north direction; the boundaries of the work area, including dimensions, must be marked; the exact place of work must be specified precisely, including

characteristic points such as the designation of the organizational unit, the nearest building or facility, roads running near the work area, plot number, etc.; directions to the nearest characteristic points should be marked with vectors/arrows on the map from the work area to the point,
d) the excerpt from the base map should include a legend describing, among other things, the following elements:
- boundaries of the work area,
- description of the networks shown on the map,
- other elements marked on the map that are relevant to the works.

4. The basis for carrying out earthworks at PCC Rokita SA is:
a) written specification of the “Conditions for Carrying Out Earthworks” — the document template is included in section 5 of this instruction as form PBP.00.01.F01,
b) written specification of the “One-Day Permit for Earthworks” — the document template is included in section 5 of this instruction as form PBP.00.01.F02,
c) written specification of the “Local Permit for Earthworks” — the document template is included in section 5 of this instruction as form PBP.00.01.F03.

5. Horizontal directional drilling may be performed only on the basis of the “Conditions for Carrying Out Earthworks” and the “One-Day Permit for Earthworks”, regardless of the duration and area of the works.

6. Earthworks carried out in the immediate vicinity of networks and/or installations such as power, gas, telecommunications, heating, water supply and sewage systems should be preceded by the contractor’s management determining the safe distances from existing networks and/or installations at which the works may be performed, as well as the method of carrying out such works.

7. The safe distance for carrying out the works referred to above is determined by a representative of the organizational unit operating the given network or installation, on the basis of applicable legal and normative acts. The locations of such works must be marked with warning signs and fenced off.

8. If it is necessary to perform work, such as mechanical work, welding, earthworks, etc., in an excavation made by employees of another contractor, the employee managing such work is required, before commencing the work, to:
a) notify the earthworks coordinator of the planned works in the already completed excavation. For carrying out the above-mentioned works, the coordinator should issue a separate “One-Day Permit for Earthworks” form.

9. Earthworks near underground installations, as well as exploratory excavations, should be carried out manually.

10. Excavations with unsupported vertical walls, without strutting or support, may be carried out only to a depth of 1 m in cohesive soils, provided that the area next to the excavation is not loaded within a strip whose width is equal to the depth of the excavation.

11. Excavations without support, deeper than 1 m but not deeper than 2 m, may be carried out if permitted by the results of soil tests and geological-engineering documentation.

12. Openwork protection of excavation walls may be used only in cohesive soils.
Note:
The use of openwork protection for excavation walls in winter is prohibited.

13. It is prohibited to use elements of excavation support in a manner inconsistent with their intended

purpose.

14. When carrying out excavations with slopes at a safe inclination, in accordance with separate regulations, the following must be done:
a) within the strip of land adjacent to the upper edge of the slope, over a width equal to three times the depth of the excavation, slopes must be formed to allow easy drainage of rainwater away from the excavation,
b) any disturbance to the soil structure of the slope must be eliminated by removing the disturbed soil while maintaining a safe inclination at every point of the slope,
c) the condition of the slope must be checked after rain, frost or a longer break in work.

15. The safe inclination of excavation walls should be specified in the design documentation when:
a) earthworks are carried out in waterlogged soil,
b) the area next to the excavation slope is to be loaded within a strip equal to the depth of the excavation,
c) the soil consists of clays prone to swelling,
d) the excavation is carried out in landslide-prone areas,
e) the excavation depth exceeds 4 m.

16. When using an excavator to perform narrow-space excavations, support must be installed only from the secured part of the excavation, or prefabricated support must be used with previously planned mechanical equipment.

17. If an excavation reaches a depth of more than 1 m below ground level, an access route into and out of the excavation must be provided.

18. The distance between access points into and out of the excavation should not exceed 20 m.

19. Entering and leaving an excavation by climbing on struts, walking on exposed elements of underground networks and installations, and transporting people using equipment intended for removing excavated material are prohibited.

20. Each time work in an excavation is started, the condition of its support or slopes must be checked.

21. If work is carried out in a narrow-space excavation at the same time as excavated material is being transported, the excavation must be covered with tight and durable protection.

22. Containers used for transporting excavated material should be loaded below their upper edge.

23. Storage of excavated material, materials and products is prohibited:
a) at a distance of less than 0.6 m from the edge of the excavation if the excavation walls are supported and the load from the excavated material has been included in the support design,
b) within the natural soil failure wedge if the excavation walls are not supported.

24. Traffic of transport vehicles next to excavations should take place outside the boundary of the natural soil failure wedge.

25. When backfilling supported excavations, the protection must be dismantled from the bottom of the excavation and gradually removed as the excavation is backfilled.

26. Protection may be removed in one stage from excavations made:
a) in cohesive soils — to a depth not exceeding 0.5 m,

b) in other soils — to a depth not exceeding 0.3 m.

27. During earthworks, soil overhangs must not be allowed to form.

28. During operation, an excavator should be positioned at a distance from the excavation of at least 0.6 m outside the boundary of the natural soil failure wedge.

29. When performing earthworks with mechanized equipment, a danger zone must be designated in the field and appropriately marked.

30. The presence of persons between the excavation wall and the excavator, even when the excavator is stationary, is prohibited.

31. Heating, thawing or freezing of soil should be carried out in accordance with the design documentation and the safety instruction prepared by the contractor.

32. The area where soil heating, thawing or freezing is carried out should be fenced and marked with warning signs throughout the process, illuminated at dusk and at night, and professionally supervised.

33. Installing support or assembling pipes in a previously made excavation with vertical walls at a depth greater than 1 m requires temporary protection of persons using protective cages or prefabricated support.

34. Enclosed spaces, tunnels, tanks, wells, technical equipment and channels should be equipped with gravity ventilation or, if necessary, mechanical ventilation.

35. Electrical equipment used in the rooms and spaces referred to above should have protection against electric shock and explosion.

36. Outdoor workstations should be separated, properly marked and protected against access by unauthorized persons.

37. Persons must have a quick evacuation route in the event of flooding, fire or the occurrence of harmful gases, as well as the possibility of obtaining immediate medical first aid.

3.3.2.13 The conditions for carrying out earthworks must be specified and confirmed in the “One-Day Permit for Earthworks” by the specialists of the disciplines whose networks, according to the entries in the “Conditions for Carrying Out Earthworks”, are located in the place where the earthworks will be carried out.

Arrangements with individual disciplines are not required if there are no power, ICT, water supply or similar installations within the area and scope of work performed on a given day, or if the discipline specialist has precisely specified the method of carrying out work near existing networks in the “Conditions for Carrying Out Earthworks”.

Note:
Excavations deeper than 1 m should be checked by an employee of the Safety and Prevention Office (GB) or another person authorized by PCC (external OHS Inspector/OHS Specialist). A representative of the Safety and Prevention Office is additionally available by telephone at +48 667 650 769 (or +48 885-965-354 — external OHS Inspector).

Note:
If the agreed scope of work established with an employee of the Safety and Prevention Office (GB) or another person authorized by PCC (external OHS Inspector/OHS Specialist) changes, the Contractor **must not continue the work. New conditions for carrying out the work must be established.**

3.3.3 Commencement of work and inspection of earthworks

3.3.3.1 The earthworks contractor should notify the works coordinator by e-mail of the intention to commence earthworks by 12:00 on the day preceding the start of the works. Then, by 13:00 on the day preceding the start of the works, the works coordinator should inform the discipline specialists about the earthworks planned in the given area. The discipline specialists notified by the coordinator have until 08:00 on the following day (the planned day of work) to submit their arrangements/comments to the “One-Day Permit for Earthworks”. The absence of additional comments from the discipline specialists means consent to carry out work in the given area without the need for additional arrangements.

3.3.3.2 The works coordinator is required to notify the host/user of the area where the earthworks will be carried out, by telephone or in person, of the start and completion of earthworks on a given day, providing the following information:
a) place where the work is carried out,
b) scope of the work being carried out,
c) name of the contractor performing the work,
d) number of contractor employees,
e) duration of the work (specifying the start and end time).

3.3.3.3 On non-working days, the Plant Dispatcher, based on notifications in the CuteFlow application, prepares a list of earthworks being carried out and forwards it to the shift leader of the Plant Rescue Service (ZSR).

3.3.3.4 The ZSR shift leader orders, during patrols carried out by ZSR employees, checks of the correctness of documents authorizing earthworks held by contractor employees at the work site.
Note:
If irregularities are found, the earthworks should be immediately stopped by ZSR employees.

3.3.3.5 If earthworks are carried out using construction equipment, the operator of such equipment, after becoming familiar with the “Conditions for Carrying Out Earthworks” and the “One-Day Permit for Earthworks” or the “Local Permit for Earthworks”, is required to confirm in writing that they have acknowledged and will comply during the earthworks with the arrangements set out in the above-mentioned documents.
Note:
If earthworks on a given day are carried out without the use of construction equipment, the works coordinator enters “NOT APPLICABLE” in item 8 of the “One-Day Permit for Earthworks” or the “Local Permit for Earthworks”.

3.3.3.6 Carrying out earthworks by contractors without the required documents or contrary to the “Conditions for Carrying Out Earthworks” and the “One-Day Permit for Earthworks” or the “Local Permit for Earthworks” constitutes grounds for imposing a penalty of PLN 20,000. This penalty is independent of charging the costs related to covering losses incurred by PCC Group companies as a result of improperly carried out earthworks.

3.3.3.7 Before authorizing earthworks, the works coordinator is required to determine in the field whether the excavation route conflicts with electrical, water supply, sewage, gas or other installations. For this purpose, the current base map, available detailed technical documentation of the routes of individual installations, and cable route locations determined using specialized devices such as underground utility detectors or tracers should be used.

3.3.3.8 If it is necessary to carry out earthworks at or near electrical installations/cables on the basis of a written “Work Order” — in accordance with the entry made by the LabMatic LE-1 employee in the “Conditions for Carrying Out Earthworks” — such work should be performed by employees operating the given installation or network, or by other authorized employees under the supervision of employees responsible for supervising the operation of the given installation or network. Employees performing the above-mentioned work should hold valid qualification certificates in accordance with separate regulations.

Note:

In such a case, it is not required to obtain a “One-Day Permit for Earthworks”.

3.3.3.9 The checklist is a tool supporting the work authorization process, in particular in the field of occupational health and safety.

3.3.4 Securing the earthworks area

3.3.4.1 The earthworks area must be fenced and marked with warning signs in a manner preventing access by unauthorized persons.

3.3.4.2 During earthworks, hazardous places, such as excavations, must be fenced off and warning signs must be displayed.

3.3.4.3 During excavation work, in places accessible to persons not employed in these works, the excavation must be marked at dusk and at night by placing protective barriers equipped with a red warning light around the excavation.

Note:

A protective barrier consists of a 0.15 m high toe board and a guardrail placed at a height of 1.1 m. The barrier should have diagonal stripes of similar dimensions painted at an angle of 45° in yellow and black or white and red. The free space between the toe board and the guardrail must be filled in a way that protects employees from falling into the excavation. The guardrails of the barriers referred to above should be located at a height of 1.1 m above ground level and at a distance of not less than 1 m from the edge of the excavation.

3.3.4.4 Regardless of the placement of the barriers referred to above, in cases justified by safety considerations, the excavation must be tightly covered in a manner preventing anyone from falling into it.

3.3.4.5 If the excavation is covered instead of using protective barriers, the work area may be marked with barriers made of ropes or plastic tapes placed along the excavation at a height of 1.1 m and at a distance of 1 m from the edge of the excavation.

3.3.4.6 If the area where earthworks are carried out cannot be fenced, the contractor should ensure its constant supervision.

4. LIST OF DOCUMENTED INFORMATION

No.	Type	Subject of communication	Information provider	Information recipient	Communication frequency	Communication format	Person retaining the information	Retention period	Archiving period
1.	Internal	Conditions for Carrying Out Earthworks	Works Coordinator	Works Coordinator	Once, before work begins	Paper form	Works Coordinator	6 months	-

				Works Contractor					
2.	Internal	One-Day Permit for Earthworks	Works Coordinator	Works Coordinator Works Contractor	Daily, before work begins	Paper form	Works Coordinator	6 months	-
3.	Internal	Local Permit for Earthworks	Works Coordinator	Works Coordinator Works Contractor	Once, before work begins	Paper form	Works Coordinator	6 months	-

5. LIST OF FORMS

No.	Link	Form name
1.		PBP.00.02.F01 Conditions for Carrying Out Earthworks
2.		PBP.00.02.F02 One-Day Permit for Earthworks
3.		PBP.00.02.F03 Local Permit for Earthworks
4.		PBP.00.02.F04 Checklist – Earthworks Authorization
5.		PBT.02.F01 Written Work Order Form / Appendix to the Work Order / Form Completion Instructions