SLOVENSKI STANDARD
oSIST ISO/DIS 18400-202:2018

01-februar-2018

[Not translated]

Soil quality - Sampling - Part 202: Preliminary investigations

Qualité du sol - Échantillonnage - Partie 202: Enquêtes préliminaires

Ta slovenski standard je istoveten z: **ISO/DIS 18400-202**

ICS:

13.080.05	Preiskava tal na splošno	Examination of soils in general

oSIST ISO/DIS 18400-202:2018 **en**

DRAFT INTERNATIONAL STANDARD

ISO/DIS 18400-202

ISO/TC **190**/SC **2** Secretariat: **DIN**

Voting begins on: **2016-01-04**

Voting terminates on: **2016-04-04**

Soil quality — Sampling —

Part 202: Preliminary investigations

Qualité du sol — Échantillonnage —

Partie 202: Les enquêtes préliminaires

ICS: 13.080.05

Reference number
ISO/DIS 18400-202:2015(E)

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 18400-202 was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 2, *Sampling*.

This first edition together with ISO 18400-104 and ISO 18400-205 cancels and replaces the first edition of ISO 10381-4:2003, and together with ISO 18400-104 and ISO 18400-203 the first edition of ISO 10381-5:2005. All mentioned parts of the ISO 10381 series have been technically and structurally revised. The new ISO 18400 series is based on a modular structure and cannot be compared to the ISO 10381 series clause by clause.

ISO 18400 consists of the following parts, under the general title *Soil quality — Sampling*:

— *Part 100: Umbrella*

— *Part 101: Framework for the preparation and application of a sampling plan*

— *Part 102: Selection and application of sampling techniques*

— *Part 103: Safety*

— *Part 104: Strategies* (under preparation)

— *Part 105: Packaging, transport, storage and preservation of samples*

— *Part 106: Quality control and quality assurance*

— *Part 107: Recording and reporting*

— *Part 201: Physical pretreatment in the field*

— *Part 202: Preliminary investigations* (under preparation)

— *Part 203: Investigation of potentially contaminated sites* (under preparation)

— *Part 204: Guidance on sampling of soil gas* (under preparation)

— *Part 205: Guidance on the procedure for investigation of natural, near-natural and cultivated sites* (under preparation)

Introduction

All investigation programmes to gather information about soil quality need some basic information about the subject site and its environmental setting to allow appropriate planning of the field work. To collect this information a preliminary investigation is carried out comprising desk studies, retrieval of data from archives and databases, interviews and a site reconnaissance. From the information gathered, and the observations made, a conceptual site model can be developed including hypotheses about soil characteristics and their possible spatial distribution.

It is for the user of this standard to decide the extent and nature of information required in any particular case taking into account the nature of the site and the objectives of the overall investigation: however, some preliminary information will always be needed. Detailed guidance is provided in the standard based mainly on the need to obtain detailed information on many aspects of a site in the more complex cases, e.g. a potentially contaminated site, but the guidance is intended to be helpful when preparing to investigate all types of site.

The sources of information available for use in Preliminary Investigations will vary from country to country and jurisdiction to jurisdiction and thus the guidance given about sources of information in this standard are of necessity generic in character. The user will find it useful to prepare detailed information about local sources for their own use. National standards providing guidance on the design and execution of geotechnical investigations often contain a requirement that a desk study and site reconnaissance should be carried out and thus could provide useful guidance about potential sources of information. Similarly, standards covering the demolition and dismantling of old buildings and industrial plant could provide useful information and guidance.

This part of ISO 18400 deals only with the investigation of the ground. It is important to recognize there could be derelict buildings and/or industrial plants awaiting demolition, dismantling or refurbishment on old urban and industrial sites, but also that buildings in a poor state and containing potentially hazardous materials could be present on farms and similar sites. Failure to investigate these buildings before demolition could put the safety of workers at risk or lead to the spread of contamination on and around the site [7, 8]. The investigation of derelict buildings or remnant foundations is outside the scope of this part of ISO 18400.

This standard is part of a series on sampling standards for soil. The role/position of the standards within the total investigation programme is shown in Figure 1.

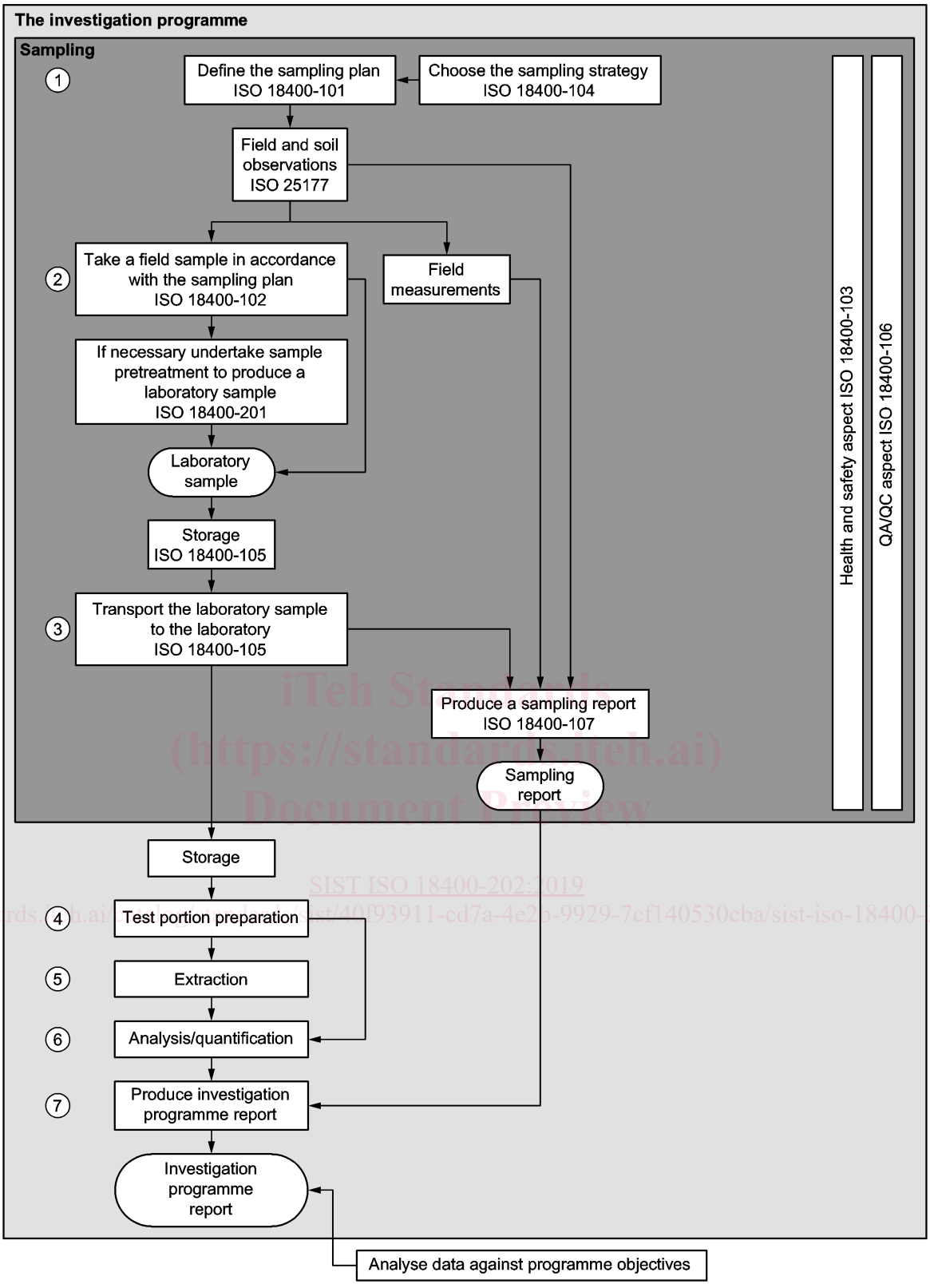

Figure 1 — Links between the essential elements of an investigation programme

NOTE 1 The numbers in circles in Figure 1 define the key elements (1 to 7) of the investigation programme.

NOTE 2 Figure 1 displays a generic process which can be amended when necessary

Soil quality — Sampling — Part 202: Preliminary Investigations

1 Scope

This part of ISO 18400 provides guidance on the design and execution of preliminary Investigations comprising desk studies and site reconnaissance, and where appropriate, preliminary risk assessment. It is applicable whenever sampling exercises or investigations are to be carried out to determine soil quality.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 11074, *Soil quality — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 11074 and those given below apply.

3.1
conceptual site model
summation of all information about a site relevant to the task in hand

Note 1 to entry: A conceptual site model may be presented in narrative, tabular, and/or diagrammatic form.

3.2
conceptual site model
<potentially contaminated site> summation of all information about a site relevant to the task in hand, including as appropriate information regarding the ground, groundwater, surface water, soil quality, and surrounding environment; and if the occurrence of contamination is likely, the nature and potential sources of hazardous substances that could be present including soil gases and volatile organic compounds (VOCs), potential migration pathways, and potential receptors; taking into account, when appropriate, planned changes of use and anticipated changes in the environmental setting such as in groundwater levels or propensity to flood

Note 1 to entry: A conceptual site model may be presented in narrative, tabular, and/or diagrammatic form.

Note 2 to entry: The future use or uses will not always be known and could also be the subject of client confidentiality.

4 General/principle

A preliminary investigation (Phase I investigation) should always be carried out prior to any intrusive sampling exercise or site investigation. It should be a two-step process involving data collection followed by interpretation and reporting. Data collection should always comprise:

— a desk study (including when appropriate consultations), and

— a site reconnaissance (walk-over survey, site inspection).

The specific scope of each step of the preliminary investigation should vary according to the overall purpose of the investigation and objectives, the availability of existing information, the size and complexity of the site, known or projected future land uses and other relevant site-specific factors.

The assessor should decide the extent and nature of information required in any particular case taking into account the nature of the site and the objectives of the overall investigation: the investigation need to be no more detailed than the task in hand requires. However, some preliminary information will always be needed.

When an investigation is carried out in a number of stages or phases the preliminary investigation would ordinarily only be undertaken prior to the initial stage or phase. However, the results should be reviewed on completion of the first stage or phase, and after each subsequent stage or phase to determine whether the conclusions, including any preliminary risk assessment require amendment.

The results of the Preliminary Investigation enable a preliminary conceptual site model to be developed (see Clause 8).

In the case of potentially contaminated sites, the possibility of contamination can be deduced, and hypotheses can be formulated on the nature, location and distribution of the contamination (8.2). These hypotheses form part of the overall preliminary conceptual site model of the site that should be developed, encompassing not only the contamination aspects but also the geology, pedology, hydrogeology, geotechnical properties and the environmental setting. The current and planned site uses are also important aspects of the conceptual site model.

NOTE Although the conceptual site model is usually first formally prepared following a preliminary investigation, it first comes into existence the moment the question is asked whether the site needs to be investigated. At that stage, for example, it could be recognised that the site is agricultural land or is industrial land and the assessor will immediately form an initial picture about what the site might be like and act accordingly. Thus, it this initial conceptual site model and the purpose of the overall investigation that guide decisions about the scope and depth of preliminary investigation required.

5 Phases of investigation

A phased approach as described in Clause 4 of ISO 18400-104 should always be taken to site investigation. The principal phases are:

— preliminary investigation (this International Standard);

— exploratory investigation; and

— detailed (main) site investigation.