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Dutch Archaeology Quality Standard

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Dutch Archaeology Quality Standard

W.J.H. Willems & R.W. Brandt

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Preface

The State Inspectorate for Archaeology (RIA) decided in 2002 to publish an English version of the Dutch Archaeology Quality Standard (KNA). An English translation of the KNA was considered useful because it was felt that the Standard would benefit from international discussion and feedback. In addition, even though national traditions in archaeological work can be quite different throughout Europe, it was felt that by translation the Standard could be useful elsewhere. This may also apply for the Dutch territories overseas that have joined in the ratification law of the Malta convention. And finally, the English text might be useful for foreign companies considering undertaking archaeological work in the Netherlands and for Dutch companies and institutes working with foreign staff members or students from abroad.

The project was delayed because of translation problems followed by a need to incorporate some important adjustments in the original Dutch edition. The present text is comparable to version 2.1 of the KNA, as amended in 2004 with some appendices being replaced by information more useful to the foreign reader and without the chapters on maritime archaeology which are still in version 1.0. The text will also be made available as a PDF file from relevant websites in the Netherlands.

This will remain the only printed version: it is not intended to distribute subsequent versions in printed form. At the moment, the Committee for Archaeological Quality (CvAK) that is charged with maintaining the Standard has already started work on version 3.0 that will address some major deficiencies of the current version and will certainly contain a number of additions. Adoption of this next version is not expected before the end of 2005.

As this publication goes into print, the revision of the Dutch Monuments Act of 1988, that will bring Dutch legislation in line with the requirements of the European Convention on the Protection of the Archaeological Heritage (revised) of 1992, otherwise known as the Malta Convention, is still awaiting adoption by Parliament. The proposal for the new law was scheduled to be discussed in Parliament in November 2004, when political and social upheaval changed priorities and caused a postponement until the end of January, 2005. Plans to include the English text of the new law in this book had to be abandoned. It is possible that amendments will bring some changes.

We hope this book may be of use for a variety of purposes.

The Hague/Amsterdam
December 2004

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Introduction

W.J.H. Willems

The implementation of the Malta Convention in the Netherlands has become a long process. The Netherlands signed in 1992, but it has still not officially ratified the convention. The Dutch parliament did in fact adopt a ratification law in 1998 but requested the government to postpone official notification of the Council of Europe until the legislation for implementation had been adopted as well.

This process is now finally under way: a completely revised archaeological section of the Monuments Act has been sent to Parliament in 2004 and we hope the new legislation can enter into force in 2005.

In this introduction to the English translation of the Dutch Archaeology Quality Standard, it is useful to first give a brief outline of its context in the implementation of the Malta treaty in the Netherlands. This will be followed by some technical remarks.

The implementation of the Malta Convention in the Netherlands

The implementation process has taken quite a long period of time, but fortunately that does not mean that nothing has changed. A decree formulating a “transitional policy” to bridge the gap between the current and the future system was gazetted in 2001 so that some of the limitations of the present Monuments Act (1988) can be interpreted flexibly in the light of the new law. More important, however, is that major principles of the Malta convention have already been implemented in practice.

The first principle, preservation of archaeological sites as a first option in all development, has become a priority, integration of archaeological concerns in the planning process is well advanced and ROB, the State Archaeological Service has been reorganised accordingly. The principle that the developer should pay cannot be fully enforced yet, at least not when private developers are concerned, but much development does in fact generate from national, regional or local government, not from the private sector. Apart from that, regional and local governments when possible often make archaeological evaluation a condition for permits to private developers. The result has been that very substantial funding has been made available for archaeology, because all levels of government – and indeed part of the private sector – act as if the Malta principles were already a legal obligation. The actual work – if it involves excavation – can legally only be done under supervision of archaeologists working for the local or national government or at a university, but in practice much work is already being done by private firms although these cannot yet operate independently.

This will change with the new legislation, because the political decision was taken that, in view of the increase of archaeological work, a market for archaeological services should be created in which ‘market principles’ apply. From the moment the new legislation is passed, private firms will be allowed to offer their services independently and in competition. They can offer these services to private or public developers who will be obliged under the new law to have some kind of archaeological work done as a condition for a permit to start a development. Under the decree that formulates the “transitional policy” mentioned above, this system has in fact become operational since the end of 2001, with the restriction that excavation companies cannot work fully independent but have to operate under the licence of ROB, a municipality or a university. At the moment, there are already about 15 such private companies that have been officially admitted, from quite large, around one hundred people, to fairly small, perhaps no more than 10 people. In total, there are at the moment around 70 separate companies that work in archaeology: the other 60 are doing various kinds of specialist services, consultancy, and such: all activities for which a licence is not needed.

Fortunately, the introduction of a market for archaeological services is only one aspect of the political decision that has been taken. The complementary part of this decision is that, while it is acknowledged that archaeological work may be a service, it should also be regarded as research which is of vital importance for the understanding and valuation of the national archaeological heritage. Therefore, market principles can only be allowed to operate when the quality of the necessary work has been ascertained. Otherwise, there is too big a risk that commercial and financial considerations will prevail. As a result, a free market system has been introduced *in combination with* a system of quality assurance which is based on legal requirements, so that basic standards for all archaeological work are guaranteed.

This can be illustrated by a diagram (fig. 1) which shows the triangular relationship that will exist between the authority, which can be a local or national government, the developer of plans, and the archaeological contractor at the bottom. The upper line of the triangle gives the relation between the competent authority and the developer: their relation takes the form of a permit, or usually a whole series of permits, which the developer needs to realise his plans because society wants an ordered and planned use of space. The main issue here are the conditions which the government wants to set to control the impact of the proposed development.

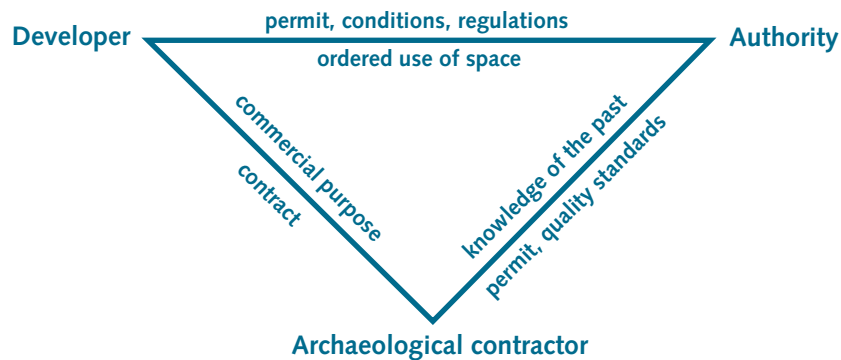


Fig. 1 The relations between the government, archaeological contractors and developers.

The issue which concerns us most here is indicated by the right part of the triangle, which gives the relation between the competent authority and the contractor. The main issue in this case, is the acquisition of knowledge about the past. Archaeological sites are the most important source of information about 99 % of our past and they constitute a fragile resource which makes it a government's responsibility to ascertain that it is properly handled. In the Dutch view, this cannot be guaranteed by the mechanisms on the left part of the triangle: the issue there, is time and money: in order to comply with the conditions for his permit and to realise his commercial purpose, the developer needs the service of an archaeological contractor and their relationship takes the form of a contract by which the principal seeks to ascertain that the work is being done as economically as possible and within a specified period of time. That, and nothing else, is the product which the developer wants from the contractor. The government, the competent authority, however, wants the contractor to produce something very different, namely relevant knowledge about the past and for that reason the government needs its own control in the process, which are the quality standards for archaeological work.

The whole point of the Malta Convention is that the permit which the developer needs, should preferably not be given if valuable archaeological remains are at stake. If he does get it, because other interests are considered to be more important, archaeological investigation should be a condition and it is up to the authority to guarantee that this investigation is properly done. Therefore, the system of quality standards must be based on the law, so that it will not be easy to circumvent it. On the other hand, it should not be in the law, because it needs flexibility (frequent updates and adaptations). The solution to this is that the law requires work to be done by parties who have demonstrated that they are capable of doing so. Second, it requires work to be done according to 'accepted standards' and those are defined as the standards that have been accepted (and are maintained) by the community of Dutch archaeologists.

Aspects related to quality assurance

Because the standards which are the basis for the quality assurance system must be widely accepted, they have been developed by the Dutch archaeological community as a whole. In 1999 a national preparatory committee was established, in which all sectors: universities, private enterprise, local, regional and national government, the Dutch Association of Archaeologists (NVvA) and even developers were represented (see Appendix VI). An

intensive process of consultation has assured that the archaeological community was involved and by and large accepts the outcome.

Of course it was evident from the start that much archaeological work is quite difficult to standardise and there was consensus about the idea that most of this work is in fact a scientific process which should not be made inflexible by too many prescriptions. For these reasons, the approach taken by the committee is that detailed specifications of products are only given in some cases. In most cases, the process of work has been described instead of the product, and for all steps in a specific process, for example in an excavation, the actors have been defined. So instead of defining in detail what needs to be done, the standard says who is allowed to do it.

This obviously requires a definition of all personnel working in archaeology, and the Dutch Association of Archaeologists has been asked by the State Secretary for Culture to design a national register of archaeologists, which will allow professionals to be registered according to education, training and experience. This part of the work has not been completed yet, but the association has agreed on the basic principles. A blueprint for the register has been presented to the archaeological community in the fall of 2004.

The standards themselves cover all major processes: from desk based assessments and field evaluations all the way up to physical conservation of sites, the publication of a site report, archiving the documentation and conserving and depositing the finds. The actual standards are of course similar to what is common practice in most countries although they have only rarely been written down and agreed upon.

In order to identify which processes should be covered, the national preparatory committee has taken an amended version of the archaeological heritage management cycle (fig. 2) as a starting point.

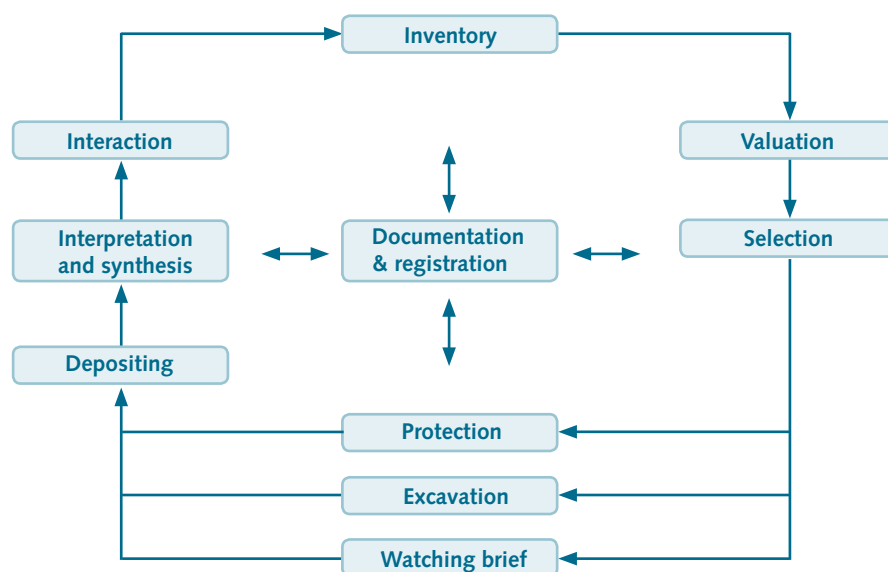


Fig. 2 The archaeological heritage management cycle

This has led to the identification of 6 main processes:

- The first main process consists of inventarisation and valuation, and comprises the desk-based assessment and the archaeological field evaluation
- Selection is a separate step in the management cycle, but has not been included because it is a decision taken by a government which can lead to 3 different main processes but which is not a process in itself.
- The second main process is physical protection. Protection as such has two aspects: administrative and physical. Administrative protection (whether by legal designation as an ancient monument, by a planning decision, or on the basis of bye-laws) is a matter

for an authority. Physical protection, however, is conservation in situ and hence it is work that can be put out for tender.

- The third main process is excavation or conservation ex situ
- The fourth is a watching brief, which is sometimes similar to work being done during an archaeological field evaluation but which is a separate process.
- The fifth main process is depositing. Although material and documentation is supposed to end up in public collections, depositing itself is work that can be contracted.
- Finally, the sixth main process is registration. Obviously, this is related to ARCHIS, the central information system maintained by the ROB. The committee did, however, decide to develop a standard for the information from all parts of the total archaeological process that must be registered.

Evidently, the management cycle is not completed with these six main processes. The committee decided, however, that it would not be appropriate to develop standards for interpretation and syntheses, which is high level scientific work. Of course, standards have been developed for the initial analysis and interpretation in the standard report which has to be produced within 2 years after excavation. But it was felt that further interpretation and synthetic work is research that should not be regulated in the same way.

By analogy, the committee decided against developing any standards for 'interaction', which is the communication about archaeological work and discoveries to society as a whole. Of course it is vital that this step is taken, both as an ethical obligation of the archaeologist and as the only way to secure public understanding and support for the archaeological heritage. But it was felt that the process of interpreting the past, giving meaning to it, and presenting it should not be regulated in any way. Interpretation and presentation are a subject matter for charters and declarations by international organisations such as ICOMOS (International Council on Monuments and Sites) or the EAA (European Association of Archaeologists), not for regulation at the national level.

Other aspects

Both the register and the standards will be maintained and when necessary they will be adapted to changing circumstances or new technical developments by the profession itself. The government should have no part in this and in fact wants no part in it because it would mean that a few colleagues, for example from the State Service, would prescribe to the whole profession how to do their job. That, of course, would not be acceptable to anyone. Moreover, it is intended that standards will be used not just to provide basic guarantees for the quality of the work, they will also be the basis for a system of certification or admission, and accreditation for this is only accepted for any branch of work if broad support for the standards exists in that branch.

Therefore, the register is to be maintained by the national association of archaeologists and the committee that will be responsible for maintaining the standards shall be part of a private foundation, which will also organise the certification of private companies working in archaeology. During the certification or process of admission, it can be established if a company or institute has the right equipment, the necessary internal procedures, qualified personnel, and so on, to receive a certificate to do excavations, or field evaluations, or any other type of work. Audits will guarantee that the requirements of the certificate are maintained.

For the moment, under the above mentioned interim policy, this work is being done by a Committee for Archaeological Quality (CvAK) that has been appointed by the State Secretary to provide advice on the suitability of all companies who want to do excavation work.

The legal basis for this system is provided by a paragraph in the new law, which says that a licence is required for excavation work. At the same time, such a licence will be given automatically to institutes or private companies that have a certificate or admission that is recognised by the Minister of Culture. No archaeological work involving excavation can be done legally by anyone without a licence and this requirement is only waived if you have gone through a process of certification. In practice, this means that archaeological companies from abroad can also work in the Netherlands: as long as they can meet the requirements for certification, they can participate in tendering processes and do the work. Of course the standards require that products are in the Dutch language and that the work is done by archaeologists have a good knowledge of Dutch archaeology, but these can be hired for that purpose.

This entire system is of course dependent on many other things. This is not the place to discuss the entire new legal structure which, in any case, may still change after discussion in parliament. But it is useful to draw attention to some aspects that are not the same everywhere else.

One important element of the new system is that there will be a legal obligation to report all information to a central information system that is maintained by the State Service (ROB). There are provincial and local sites and monuments records, but all data have to go into this central system, so that up to date information is available to all parties in the heritage management process. The ROB shall obviously not attempt to have a system which encompasses all details of all excavations, but basic information must be provided. Especially the results of the innumerable field evaluations which are nowadays done each year are very important, and it will not be possible for a developer to keep these for himself. When delivering a report to his principal, the archaeological contractor is obliged to give the same data to the information system. The web-based version of this revised registration system, called ARCHIS2, has become operational in 2004.

A second element in the new system is that a State Inspectorate for Archaeology (RIA) has been created. Much is being delegated to the private sector, and the ROB will have a role as a national centre of expertise, which is incompatible with that of policing. Therefore, an independent inspectorate is needed to monitor what goes on in practice and to report to the minister when correction is needed. Quality assurance systems do not work when there is no independent supervision and the Minister of Culture needs an instrument to be able to implement political responsibility for such a system. In addition, as any responsible archaeologist knows all too well, it is possible to comply formally with standards while still doing a very bad job in the field, so there must be a way to establish if work is being done properly, if reports are produced on time (that is, within two years), etc.

A final element which is considered of vital importance is that all archaeological work should be research driven and problem oriented. A quality assurance system provides guarantees for the standard of the work being done, but it does not guarantee that the right questions are being asked. Therefore, the quality system requires that the cycle of archaeological work will begin with the advice of an experienced archaeologist. Any local, regional or the national government will have to consult a senior archaeologist to prepare a project outline, also called a brief, that will contain the research questions. In many cases this work is done by a curator in the service of that government but it can also be a consultant. In principle, therefore, the developer does not just get a permit for a development on condition that an excavation is done first, he also gets a project outline which specifies what should be investigated, why, and how. In short, he gets the basis for a research design which is as detailed as needed in a particular case. This assures that the work done will be relevant from a research perspective. And it also assures that the amount and the kind of work to be done, does not play an important part in the tendering process so that in principle one contractor cannot be cheaper than another because - for example - environmental analysis is left out. It has been recognised that for this advice to be most effective, it would be very valuable indeed if research agendas were developed at the national and preferably also at lower levels of government. That is one more tool which is currently being developed in a process where the ROB and Dutch Universities have taken the lead, but in which other parties take part, such as the provincial archaeologists, the standing conference of municipal archaeologists, and the association of archaeological companies. By the end of 2004, a draft version of this National Research Agenda had been completed. Its publication is expected in the course of 2005.

From regulation to practice

At the moment of writing, the system that was briefly outlined above, has been operational for three years, at least as far as that was possible under the decree which established the transitional policy. This situation has had some obvious advantages and disadvantages.

The most obvious advantage is that some experience was gained with various aspects, which may lead to improvements in the legislation before it is finally adopted. The second important advantage is, that this interim-period has provided a relatively sheltered incubator period, which has been useful for archaeological companies to gain experience in the

harsh world of economic competition and for other parties to become accustomed to their respective roles.

Of course these effects have occurred only to some degree, because there was no new legislation yet and major elements were lacking. An important missing element is that there is not yet a binding developer-pay principle and even though many parties are willing to act as if it was a legal obligation, many others, including municipalities, refuse to do so, or do so only to a limited degree. Obviously, when finances are lacking, implementing standards can sometimes be a problem.

A more serious handicap resulted from the fact that the quality standard was adapted to what – during its creation – the Preparatory Committee expected would be the new legal system while during the interim period that new system was not yet in place and some of its vital elements were lacking. For example, the role of the Project Outline, or brief, constitutes a cornerstone in the Quality Standard. A good project outline ensures

1. that the archaeological work is relevant, and
2. that commercial competition is fair.

In the Quality Standard it was assumed that the 'competent authority', which means the, the government body empowered to take the decision what should happen and the body that should ensure that a Project Outline is drawn up and approved. In practice, it turned out that quite often there was no government to be found willing to take the role of competent authority as foreseen in the standard. Even some governments willing to take a decision that archaeological work needed to be done were subsequently unwilling to say why in particular, and how, that work should be done..... The lack of a proper Project Outline had – sometimes quite serious – negative consequences for the quality of the work (price becoming the decisive factor in competitive tendering), but it was also detrimental for companies who lacked the instrument that created a level playing field. For example, companies that included analysis of botanical samples or C14 analysis or anything extra, would loose the tender to a company that did not include such expensive extras, which of course were really needed.

This consequence could be amended somewhat by the State Inspectorate that gave some temporary guidelines for situations in which the Project Outline was not approved on behalf of a government, and it has led to proposals for adaptations in the Quality Standard itself, especially concerning the separation between the party that draws up the Project Outline and the party that carries out the work. In the new law, the obligations of governments in the decision-making process will probably be better regulated.

The experience so far, has shown that writing an adequate Project Outline which assures that required minimum quality is described properly – so that the research aims are clear and that a level playing field for the tendering process is created – is by no means simple. Even the very basic step of actually having a PO takes considerable time before it becomes common practice, let alone the next step of having an adequate PO.

Another relevant experience has been that several companies which were non-archaeological entered the emerging archaeological market. This was not unforeseen, but nevertheless it had some unexpected consequences. One of the stated reasons for starting a State Inspectorate had been the concern that independent control was necessary to oversee archaeological work by commercial companies. In practice, while the mere existence of the inspectorate has had a positive influence on the way in which various parties have performed, there has been no evidence that archaeology firms were performing substandard. Quite to the contrary: on average the performance of commercial archaeological companies has not been found inferior to that of traditional permit-holders.

The same cannot be said about companies who took up archaeology alongside their main activities: big contractors and some major Dutch developers. Initially, they avoided offering excavations: because an excavation-permit is required under the Monuments Act 1988, any archaeological work that includes 'excavation' (defined in that Act as: soil-disturbing activities intended to locate or to investigate monuments) can be controlled. However, archaeological advice did (and does!) not require a licence and so it was offered even if no experienced archaeologist – sometimes even if no archaeologist – was available !

The most serious problem arose with archaeological field evaluations. In itself, this type of work is already the most profitable and least risky from a commercial point of view. It is far less risky than an excavation. Dutch archaeology in general has for a long time relied mainly on borehole surveys in archaeological field evaluations. This is an efficient and reliable

method in Holocene areas, but despite solid evidence that it is quite unreliable in Pleistocene soils, it is still used there. To the existing bias towards this type of survey, as opposed to a geophysical survey or trial trenching, must be added the circumstance that augering had never been considered the same as excavating. The reason for that was, that average boreholes (as compared to trial trenching) were not considered damaging to archaeological sites. This, of course, was totally correct, but the result has been that borehole surveys, which in legal terms are clearly "soil-disturbing activities intended to locate or investigate monuments", had never been considered as such so that no permit was required.

Less than half a year after the interim policy had become effective, the Inspectorate had the first evidence that very low quality surveys were being done by non-archaeological companies. For archaeological heritage management, such substandard surveys are of course absolutely fatal, because (usually municipal) authorities base decisions on false indications (usually negative indications, of course, although examples of false positive conclusions were also encountered, which shows that so far the bad result is only due to incompetence, not on purpose).

Meanwhile, this situation has improved as only a few companies remain without qualified personnel that allow them to obtain permission to work under the licence of ROB. In addition, a special decree has been prepared that will require a licence for all survey work by augering, so that the worst effects of current situation will be remedied, hopefully by the beginning of 2005.

Another issue that is worth some comment are the reports. As everywhere else, the Netherlands has the problem of unpublished and therefore unfinished excavations. There is no problem with reports from field evaluations, because the developer has an interest in their results. For excavations, the developer only has an interest in the field work being done so that development can go on, and normally there is little interest in the report. Both the Quality Standard and all excavation permits now require that a report with the basic analysis of the excavation must be completed 2 years after the end of the field work at the latest. Already, it is evident that this works: much more reports than before are being completed. Even if the quality should be inadequate in some cases, this still gives a much better situation than before, when hardly anything was completed with a basic analysis and a publication. At least the general data become available now, for research and for heritage management.

This basic analysis also helps with another problem, namely the storage of finds. If it has been done, it is possible to select finds that need to be deposited in a storage facility or a museum. Prehistoric sites hardly pose a problem here, but it is important that from all the immense quantities of finds from Roman, medieval, and later sites, only a selection needs to be stored. Space in storage facilities is already scarce, and with the increased volume of work being done, this is fast getting a problem. Even though selection is now largely accepted and materials are being removed after analysis, instead of stored, there is not enough space. In some cases, companies are forced to maintain finds in their possession because there is no storage facility to receive them.

Some notes on the translation

Translating the text met with some difficulties. The initial translation proved to be rather inadequate and had to be improved with the advice of a number of colleagues, notably dr. K. Waugh (NL) and P. Hinton and K. Aitchison from the Institute of Field Archaeologists (UK)¹. The translation process proved to be very useful for the Dutch version as well, because part of the initial translation problems were due to ambiguities, small errors, and omissions in the original text which could be improved as a result.

No effort has been made to write 'English' English. This would have been impossible anyway, because even between Scotland and England there are some significant differences in archaeological terminology, and some concepts proved to be virtually untranslatable because they are lacking in English. It is hoped that, with the help of the glossary, all concepts will be understandable for all readers.

The original text has, in principle, been translated as accurately as possible. Because the Dutch version is also intended to give non-specialists an insight in the archaeological process, some explanations may occasionally seem superfluous to a professional. In a few instances, the translation is more extensive than the original text in order to make it understandable for a foreign reader.

¹ At this point, it should be stated that any remaining errors are of course only due to the editors.

Although the initial translation covered the entire Standard, a number of chapters and appendices have been deleted from the present English version. These are the chapters 4 and 5 relating to maritime archaeology, and appendices II (Complexity of excavations in maritime archaeology), III (Draft regulations governing ordered and accessible archive files, 2000) and VII (Maritime Archaeology Glossary). The Appendices were renumbered and a new one, Dutch-English list of terms, was included as Appendix V. This appendix may be particularly useful to Dutch users.

Finally, the text has been adapted with some technical changes and corrections of the Quality Standard that were discussed and approved by the Committee for Archaeological Quality (CvAK) in the course of 2004. In its present form it is comparable, therefore, with Version 2.1 of the Quality Standard.

1 STANDARDS AND GUIDELINES

1.1 Foreword

The following is the result of the work carried out by the Preparatory Committee as discussed in the introduction. The focus of this document is on the quality requirements for archaeological work. As outlined in the introduction, various processes can be distinguished which are all described separately. Each of these processes is preceded by a number of decisions (outlined in the administrative context) and preconditions that define the way in which the work is structured and interpreted. The emphasis is on the following:

- the executing party (contractor, archaeological contractor) is an archeologically certified or otherwise archeologically qualified company;
- the responsible individual employees involved in the project are registered in the professional register; until such time as that becomes available, all responsible individual employees involved in the project must have signed a code of ethics as indicated in table 2 below;
- an assignment has been issued to the executing party;
- a Project Outline has been developed for the assignment that has been ratified by the competent authority;
- the Project Outline can be used to develop a Plan of Approach or (if applicable) a project design. Alternatively, the executing party will be allowed to examine the draft tender;
- idem for the specifications.

Thereafter, implementation will take place in accordance with the standards and guidelines detailed below. The process description is based on an ideal situation. In reality, some steps may be omitted or repeated. The standards and guidelines allow for a professional interpretation which makes such choices possible. However, the implementation of any process step must comply with the quality requirements.

1.2 Notes to the quality standard

1.2.1 Quality standards for Actors

All the actors referred to in the processes are stated and defined below. The relevant actors are stated for each process. A decision was made to limit the number of job categories as much as possible by only referring to the main categories. Various types of additional job categories could apply. For example, a specialist is considered to be an *archaeological specialist* such as a materials specialist, etc.). A *non-archaeological specialist* is regarded to be a person from a different specialist field who fulfils a specific role at a certain point during the process. He or she has his/her own specialist field, with its own professional criteria, which is not related to archaeology, for example a land surveyor. As far as possible, these non-archaeological specialists are described as precisely as possible wherever they are needed during the various processes.

The first step is to establish which job categories (archaeologist, specialist, etc.) there are and which levels have to be distinguished within the job categories. In addition, content-related criteria and training requirements are determined for each job level with which the various actors have to comply in order to be employed at a certain job level.

The work that has to be carried out at each stage of the process (see paragraph 1.2.3) is described and an indication given as to which actor with the lowest level within a job category may carry out this work independently. All persons within the same job category with a higher job level are automatically entitled. It is also stipulated which actors, at which job level, will check the work. This will generally be the actor with the highest job level. If the work is so specialised that the manager involved cannot carry out a meaningful check, this will be indicated in the process descriptions. The process description will indicate which actor checks the work in such a situation. The method of checking will also be stipulated.

The following table (Table 1) shows the different job categories for the various actors. A distinction is made between land archaeology (which also includes nautical archaeology on land) on the one hand and underwater archaeology on the other. This has to do with the fact that different skills and job criteria apply to a number of underwater archaeology tasks.

Table 1 shows the job categories and the related job levels. Table 2 shows the underlying criteria that apply to land archaeology and the required prior training, and table 3 shows the same for underwater archaeology.

Table 1. Job categories for the various actors

Actors	Land archaeology	Maritime archaeology
Archaeologist	Senior Archaeologist	Senior Underwater Archaeologist
	Medior Archaeologist	Medior Underwater Archaeologist
	Junior Archaeologist	Junior Underwater Archaeologist
Archaeological Specialist	Senior Archaeological Specialist	
	Junior Archaeological Specialist	
Non-archaeological Specialist This is not an exhaustive summary	Land Surveyor	
	(Civil) Designer	
	Geophysicist	
	Depot Manager	
Field Technician	Senior Field Technician	Senior Underwater Archaeology Field Technician
	Junior Field Technician	Junior Underwater Archaeology Field Technician
Other	Excavation Worker	Diver
	Site Manager	

Table 2. Underlying criteria for land archaeology and required prior training

Actors	Criteria	Training
Senior Archaeologist	- Subscribes to a code of ethics or similar (member of NVvA, EAA, IFA or RPA). - In case university training has not been in archaeology of North-West Europe, the minimal demonstrable experience must be entirely in Dutch archaeology. - Demonstrable experience in depth, broadness and length (must be substantiated by a CV, diplomas and references). - Demonstrable experience in working with the KNA. - Demonstrable experience in writing final reports. - At least 6 years of employment in archaeology (minimum of 1225 hours annually), of which at least 3 years in a managerial capacity. Period may have been interrupted for up to one year. Interruptions of more than one year are not accepted as time in employment. 6 relevant publications, of which at least 2 as the sole author.	Completed university training in archaeology (MA or equivalent)

Continued on the next page

Continuation of table 2.

Actors	Criteria	Training
Medior Archaeologist	- Subscribes to a code of ethics or similar (member of NVvA, EAA, IFA or RPA). - Demonstrable broad or specific expertise - Demonstrable practical experience. - Demonstrable experience in working with the KNA. - At least 3 years of employment in archaeology (minimum of 1225 hours annually).	Completed university training in archaeology (MA or equivalent)
Junior Archaeologist	Subscribes to a code of ethics or similar (member of NVvA, EAA, IFA or RPA).	Completed university training in archaeology (MA or equivalent)
Senior Archaeological Specialist	- Subscribes to a code of ethics or similar (member of NVvA, EAA, IFA or RPA). - Expertise in implementation of specialism. - Demonstrable practical experience. - Demonstrable experience in working with the KNA. - Demonstrable experience in writing final reports. - At least 6 years of employment in archaeology (minimum of 1225 hours annually). 6 relevant publications, of which at least 2 as the sole author.	Relevant specialist training
Junior Archaeological Specialist	MA or equivalent.	Relevant specialist training
Land Surveyor		Relevant training required for the specialist field
(Civil) Designer		Relevant training required for the specialist field
Geophysicist		Relevant training required for the specialist field
Depot Manager		Relevant training required for the specialist field
Conservation Specialist	- Subscribes to the professional standards established in the Code of Ethics of the <i>Vereniging voor Restauratoren VeRes</i>. - Expertise. - Demonstrable practical experience. - Demonstrable experience in working with the KNA (of demonstrable knowledge of the KNA standards).	Relevant training required for the specialist field
Senior Field Technician	At least 6 years of demonstrable practical field experience.	Internal training
Junior Field Technician	Some practical experience.	Internal training
Excavation Worker	No requirements.	
Site Manager	No requirements.	

Table 3. Underlying criteria for underwater archaeology and required prior training

Actors	Criteria	Training
Senior Underwater Archaeologist	• Subscribes to a code of ethics or similar (member of NVvA, EAA, IFA or RPA). • In case university training has not been in archaeology of North-West Europe, the minimal demonstrable experience must be entirely in Dutch archaeology. • Demonstrable experience in depth, broadness and length (must be substantiated by a CV, diplomas and references). • Demonstrable experience in working with the KNA. • Demonstrable experience in writing final reports. • At least 6 years of employment in archaeology (minimum of 1225 hours annually), of which at least 3 years in a managerial capacity. Period may have been interrupted for up to one year. Interruptions of more than one year are not accepted as time in employment. • 6 relevant publications, of which at least 2 as the sole author.	• Completed university training in archaeology (MA or equivalent) • NDC-B
Medior Underwater Archaeologist	• Subscribes to a code of ethics or similar (member of NVvA, EAA, IFA or RPA). • Demonstrable broad or specific expertise • Demonstrable practical experience. • Demonstrable experience in working with the KNA. • At least 3 years of employment in archaeology (minimum of 1225 hours annually).	• Completed university training in archaeology (MA or equivalent) • NDC-B
Junior Underwater Archaeologist	• Subscribes to a code of ethics or similar (member of NVvA, EAA, IFA or RPA).	• Completed university training in archaeology (MA or equivalent) • NDC-B
Senior Underwater Archaeology Field Technician	• Demonstrable amount of practical experience.	Specialist training/ NDC-B
Junior Underwater Archaeology Field Technician	• Little practical experience.	Specialist training/ NDC-B
Diver	No requirements.	NDC-B
Site Manager	No requirements.	

1.2.2 Process diagram

The steps that have to be completed for each main process are shown diagrammatically. The structure is the same each time: first of all a diagram is presented showing all the main process steps, each main process step is then divided up into smaller steps (the process steps).

1.2.3 Descriptions of Procedures

The process steps from the process diagrams are shown here as text.
The following form has been chosen:

Step X: General description of process X				
No	Activity	Procedure/description	Actor	DOC

On the left are the numbers of the various process steps featured in the diagram, with the step referred to under the activity. Thereafter, an explanation is given as to what the step referred to implies. With regard to the activities shown it may also be necessary to prescribe what actions have to be taken. These are the standards guidelines. Under the 'actor' heading the lowest job level of the actor who is permitted to carry out the work independently is shown. Under the 'documents' heading a number is shown which refers to the relevant standards guidelines.

The process diagrams show control moments that have to be carried out whenever necessary on the basis of the work process. These control moments are planned in whenever continuation of the process without a quality check might have a negative effect on the quality of subsequent steps, or at any juncture during the process that the step or series of steps carried out during the remainder of the process cannot be repeated.

During such checks, the following activities will take place:

A check will be carried out as to whether the activities described previously have been carried out properly and fully (in accordance with the quality standard). If such is the case, one can proceed to the following step in the work process. This is indicated in the process diagram by an OK. If it transpires, during the check, that improvements are necessary, these will be executed, after which another check will take place. It must be possible to demonstrate objectively that these result checks have been carried out. The contractor carrying out the archaeological work must develop a procedure and lay this down in writing, after which it will be used as a basis for further actions. One can prove that a check has actually been carried out by drawing up a check report, by means of a signature, by initialling, or by entering data into the computer (provided this is accompanied by a unique personal code). The evidence must be retained.

1.2.4 Standards guidelines

These have a fixed structure. First of all, a process description is provided focusing on the actions to be carried out. Thereafter, the product will be stated that is intended to be the result of the actions. This will be followed by references to the actors involved. Finally, any requirements will be stated with regard to the resources necessary to realise the goal of the actions in a qualitatively sufficient manner.

1.2.5 Tables

The standards guidelines relating to the main excavation process are shown in two tables. They contain details of aspects of the standards guidelines.

1.2.6 Project Outline

The Project Outline is the basis on which archaeological work has to be carried out. A format has been created with the components with which the Project Outline has to comply. The Project Outline specifies the framework for the project design and its implementation; it indicates the WHAT and WHY, in specific cases it indicates HOW a project is to be executed.

1.3 Archaeological Content-Related Choices

As regards a number of important aspects of archaeological work, an explanation is given below of the underlying content-related reasoning which constitutes the basis for the choices made.

Maritime archaeology

The land and maritime archaeological quality requirements are included in separate chapters of the KNA 1.0. The chapters on maritime archaeology have not been included in this translated version 2.1.

Maritime archaeology can be divided into two types, namely nautical archaeology and underwater archaeology. Underwater archaeology applies wherever activities are carried out using diving equipment. As far as content is concerned, there are no major differences between land and maritime archaeology. However, with regard to the technical implementation, differences do exist, which means that the standards guidelines are not interchangeable. An obvious example is that the placement of a measuring system underwater requires a different technique than the same activity on land.

The reason for choosing to develop separate process descriptions and standards guidelines for nautical archaeology and, for example, not for urban archaeology is based on the fact that very little has been written about nautical archaeology. In addition, there are still few standards for this branch of archaeology.

Project Outline

The quality standard also comprises standards and guidelines with which the content of the Project Outline (PO) has to comply. The reason for this is that the quality of the project needs to be guaranteed. In addition, some local authorities will wish to subcontract the drawing up of a Project Outline, and this work will, in many cases, be carried out by a commercial agency. This means it is essential that quality requirements be developed. It is for this reason that a format has been prescribed for drawing up the PO, in order to guarantee a minimum degree of quality. This format must, of course, also be used by those sections of (local) governments that draw up PO's independently. The PO also safeguards the involvement of specialists. The PO can include details of the occasions when it is obligatory to involve a specialist. Moreover, it can include exceptions to the requirements formulated in the preliminary project design. In addition to the standard requirements referred to, the PO can also include requirements which are applicable specifically to the project to be carried out.

Work plan

It has been decided that the main processes in the cyclical process of archaeological heritage management, in so far as these are described in the Dutch Archaeology Quality Standard, should start with drawing up a work plan.

The work plan is an internal document in which the executing party indicates how the project is to be organised. The work plan consists of schedules, a safety plan, etc. The work plan is drawn up *after* awarding, as a more detailed description of the plan of approach, or as a supplement to the project design, or possibly the specifications. In the case of large-scale projects, the work plan is to be discussed with the principal or project manager.

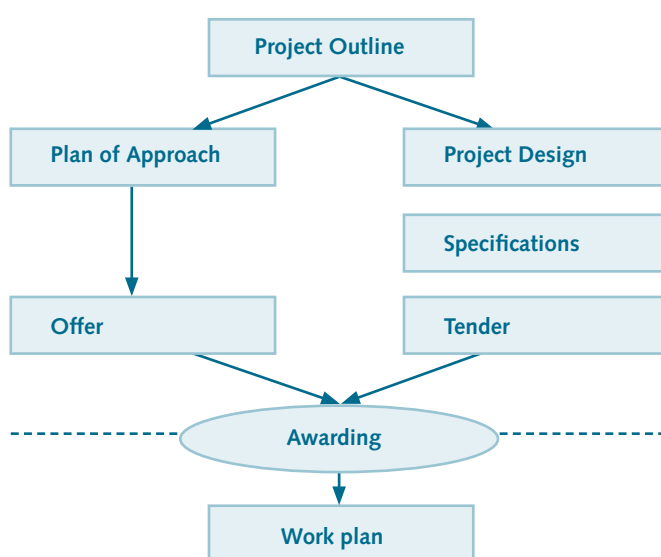


Fig. 3 The process steps leading to awarding

Notification

In order to safeguard the administrative processing, the responsible governmental bodies must be notified of archaeological surveys and excavations both at the start of the fieldwork and at completion of the final report.

National identification number

As of April 2004, a national identification number (CIS-code) is issued for all field projects. This number must be referred to on all finds and documentation material. The idea behind it is that, under new legislation, more archaeological field projects shall be carried out. The expectation is that the number of archaeological contractors will also increase substantially. In order to ensure that the identification systems are optimally organised, a single national system is necessary. Although it continues to be possible for contractors to use their own systems for their own documentation, this practice is strongly advised against.

Standardisation

A great deal of attention has been paid to the way in which finds and samples have to be collected by the field team. To this end a number of summaries have been included containing regulations and instructions as to how certain categories of finds should be dealt with. In the process, as much information as possible has been provided as to how much of each category should be collected as standard.

Analogue or digital

In modern archaeology work, the use of digital instruments is unavoidable. Every survey produces a wide range of digital files which are used as a basis for modern analyses. A lot of analyses are, in fact, not even possible without the use of computers (for example GIS processing). When the Standard was being written and during the consultation process, a great deal of consideration was given to the issue of whether field data should be supplied in analogue or digital form. The discussion focused on two questions:

- are digital information carriers reliable in the long term?
- is the quality of the results from so-called paper-free excavations reliable?

The first problem can be solved quite simply (as long as digital and analogue information carriers co-exist) by demanding an analogue supply of data (on acid-free paper).

The second problem is more difficult to solve. Particular attention was paid to the issue of making field drawings and the form in which they are supplied. For the time being, the preference is for drawings to be made and supplied in analogue form. This preference is based on, among other things, a fear of loss of quality as a result of the unavailability of adequate digital recording systems that a field archaeologist can use to indicate all the nuances which are usual when (colour) pencils and paper are used.

The general requirement is now that, in any event, all primary data have to be supplied in analogue form as well. This compromise means that digital data may be collected but that, in any event, an analogue information carrier must also be available. Digital photos are permitted, for example, provided they have an adequate resolution and prints are supplied in addition to the photo CD. Paper-free excavations are not yet considered possible based on current technology. For more information: the Archaeological Data Service produces *Guides to good practice*. This series provides guidance on how to deal with ICT in archaeology (see <http://ads.ahds.ac.uk>).

Specialists

An excavation is not possible without contributions by specialists. This principally means the use of modern methods and techniques of a specialist nature. In addition to the application of known ecological methods, e.g. remote sensing techniques, all kinds of chemical and physical techniques, etc., it is also very often desirable to call in specialists to assist with the recovery of specific finds in order to safeguard the examination thereof as much as possible. In most cases, it is essential for the specialist to examine phenomena and possibly take samples on site. If this is not possible, the specialist must, in any case, be consulted.

Storing finds during fieldwork

There are conditions that have to be applied on site in order to optimise storage of the finds. It was decided to impose obligatory provisions, with regard to which measures have to be taken in order to ensure finds of different materials are stored in optimal conditions.

Selection moments

Finds have to be selected on the basis of the Project Outline and recognised scientific criteria. It has been decided that three selection moments will apply: during fieldwork, during processing and preceding depositing. The method of selection has to be accounted for in a selection report. Material must be accounted for and controlled in consultation with a specialist.

The following are instructions for dealing with selected material. Material for which depositing is deemed inappropriate, unsuitable or unnecessary, may be removed. The finds are to be removed in a manner which can be monitored and recorded in consultation with the competent authority. Removal may mean that the find is given to a museum or educational institution. It may also be destroyed, subject to the principle that it is made available for destruction so that it does not erroneously end up as an artefact in the archaeological record. In special cases, a decision may be made to sell the find. In all cases, pursuant to the law, finds are the property of the State and a decision on definitive removal is therefore the responsibility of the Secretary of State, who should be consulted.

Post-fieldwork assessment phase

As regards the excavation process, the committee has introduced a new element, namely a post-fieldwork assessment phase. The main aim of this phase between the field activities and the processing of, and reporting on the data collected on site is to determine which part of the material has to be processed in order to answer the research questions posed in the Project Outline. It is unavoidable that during the course of a field campaign, a lot more data have to be collected than are actually required. The processing of these extra data often entails high cost without the results by themselves leading to increased knowledge relevant to the issues referred to in the Project Outline.

The following must be determined during the post-fieldwork assessment phase:

- what has been found during the fieldwork?
- what are the nature and the quality of the collected data?
- which aspects of the finds assemblage have to be processed in more detail in order to answer the research questions referred to in the Project Outline?
- how will eventual unforeseen and unexpected data be used in the analysis of the excavation results (contribution to important research questions discussed in the National Research Agenda that were not included in the Project Outline because no relevant data were expected);
- what are the costs related to this processing and the related reports?

An additional feature of this phase is a detailed account of the financial basis of the part of the tender that relates to the processing of the fieldwork.

Dutch Language

Reports and field documentation must be written in the Dutch language. In addition, the data supplied to the CIS must be in Dutch.

Final reports

The results of each survey and excavation must be described in a final report. In order to ensure that reporting takes place as uniformly as possible, the committee has laid down the requirements for such final reports. In the case of surveys the aim is, on the one hand, to provide the principal with an insight into what may (and may not) be expected. On the other hand, this serves to establish a framework a report has to comply with (as a minimum) if the project is to be relevant for future academic discussion.

This is a contentious issue. As referred to in the Introduction above, the proposed system does not relate to work carried out within the framework of academic research. Nevertheless, results which have been collected within the framework of archaeological heritage management will be of scientific interest, provided they have been collected and described in a scientific manner. It is this proviso that was kept in mind when drawing up the requirements for final reporting. The time that passes between the end of the fieldwork and the completion of the final report must not exceed two years.

Moreover, it was decided that each final excavation report be published (an ISBN or ISSN number must be requested) to make these reports public and accessible to everyone.

Uniform registration

The decision has been made to register the same data for each process. These data will comprise the administrative data, the reference data and a short summary of the project results. Prescribing the method of registration (standardisation) will make the data easier to incorporate into the CIS.

Depositing

Contrary to previous practice, it has been decided that all finds and documentation pertaining to a field project must be stored as a single archive in the Provincial or Municipal Depot concerned. It is expected that this will help (future) researchers by enabling them to consult *all* the data of a survey or excavation in context. At an early stage of the fieldwork, contact must be established with the Depot concerned regarding the expected size of this archive.

No later than 4 weeks after delivery of the final report, finds and documentation must be transferred to the responsible Provincial or Municipal Depot. In case the depot concerned lacks facilities for archiving the documentation and making it accessible, this is to be transferred to the ROB.

No later than 4 weeks after delivery of the final report, documentation in digital form is transferred to the ROB. This must be done in accordance with its guideline "*Aanlevering digitale informatie ROB*".

The transfer of a finds assemblage from a contractor responsible for surveying or excavating to a body responsible for depositing will take place using a *transfer protocol*. If all conditions are complied with, a reference may be made to this effect. However, a number of depots do not yet comply with the set standards. In the event of non-compliance with the set standards by one or both parties, such will be laid down in writing in the protocol. (This concerns, for example, missing finds as well as – as yet – insufficient climate control in the depot, etc.). In addition, if an 'obligation to perform to the best of one's ability' is agreed upon to ensure that the standard is complied with at a later stage, such will be recorded in writing.

Interpretation of the standard for specialists

The Quality Standard does not (yet) have standards for specialist work. The quality of this work is left to their professional know-how. This is partly due to the fact that most specialist work will be done by subcontractors. That means that the archaeological contractor will be responsible for the quality of their work.

Nevertheless, companies providing specialist services need to be certified on parts of the Quality Standard relevant to their work. These companies must organise the following elements of their work process:

They are required to organise the supporting processes in such a way that these meet the requirements of the KNA for support processes (see Appendix II). This includes the obligation for persons who are involved in unsupervised archaeological work to comply with the requirements for actors as indicted above. It also includes the obligation to use calibrated equipment and compliance with health and safety regulations.

Companies that perform analyses indoors must have procedures that will ensure their results can be verified.

In some cases, organisations will either subcontract some specialist tasks, or perform them in surroundings, with equipment or with facilities that the organisation does not possess itself. In these cases it is necessary to have a procedure (e.g. by protocols) that is maintained in a demonstrable way by registration, which ensures the quality of such work.

The descriptions of the main processes of this Quality Standard refer to work by specialists. This can be found under 'actor'. For those parts of the standards guidelines that refer to their work, specialists are required to work according to the guideline.

2 DESK-BASED ASSESSMENT

2.1 Description

2.1.1 Objective

The objective of a desk-based assessment is to acquire information, using existing sources, concerning known or expected archaeological values within a defined area. This covers the presence or absence, the character and the quantity, dating, integrity and preservation and the relative quality of the archaeological values. Supplementary data will have to be collected, depending on the quantity of the planned works, the nature of the reason for conducting the assessment and the research questions. The result will be a final report on the basis of which a decision can be taken.

2.1.2 Process

The desk-based assessment process comprises the following subprocesses:

1. determination of the survey framework;
2. collection of known data;
3. expected archaeological values;

Determination of the survey framework

In order to be able to determine the survey framework, one needs to know what the reason is for the desk-based assessment. In addition, the limits of the area need to be clear.

Collection of known data

Description of current usage

The data to be collected contain information on the nature of the current land use and other processes taking place at the location and in the immediate surroundings. In a number of cases, no further evaluation will be necessary because it can be ascertained that the soil has been (recently) disturbed and, as a result, has lost its archaeological value. The data on current usage are to be collected by consulting the manager/owner of the land and/or the principal and by using the data they supply.

Description of historic usage

Previous forms of land use or the historical development of the area, in so far as such is important for the choice of strategy of a follow-up evaluation. The information will contain: past uses of the location; information on former and current (potentially) soil-threatening activities at the location. Data on historical usage will be collected by consulting historical maps, soil maps, archives and the manager/owner of the land.

Description of known archaeological values

The known archaeological values are to be determined by consulting the CIS (ARCHIS, CMA/CAA), AMK or other relevant archaeological sources and maps, possible literature studies and by asking informants (local amateurs and associations, residents, specialists in the field, etc.).

Expected archaeological values

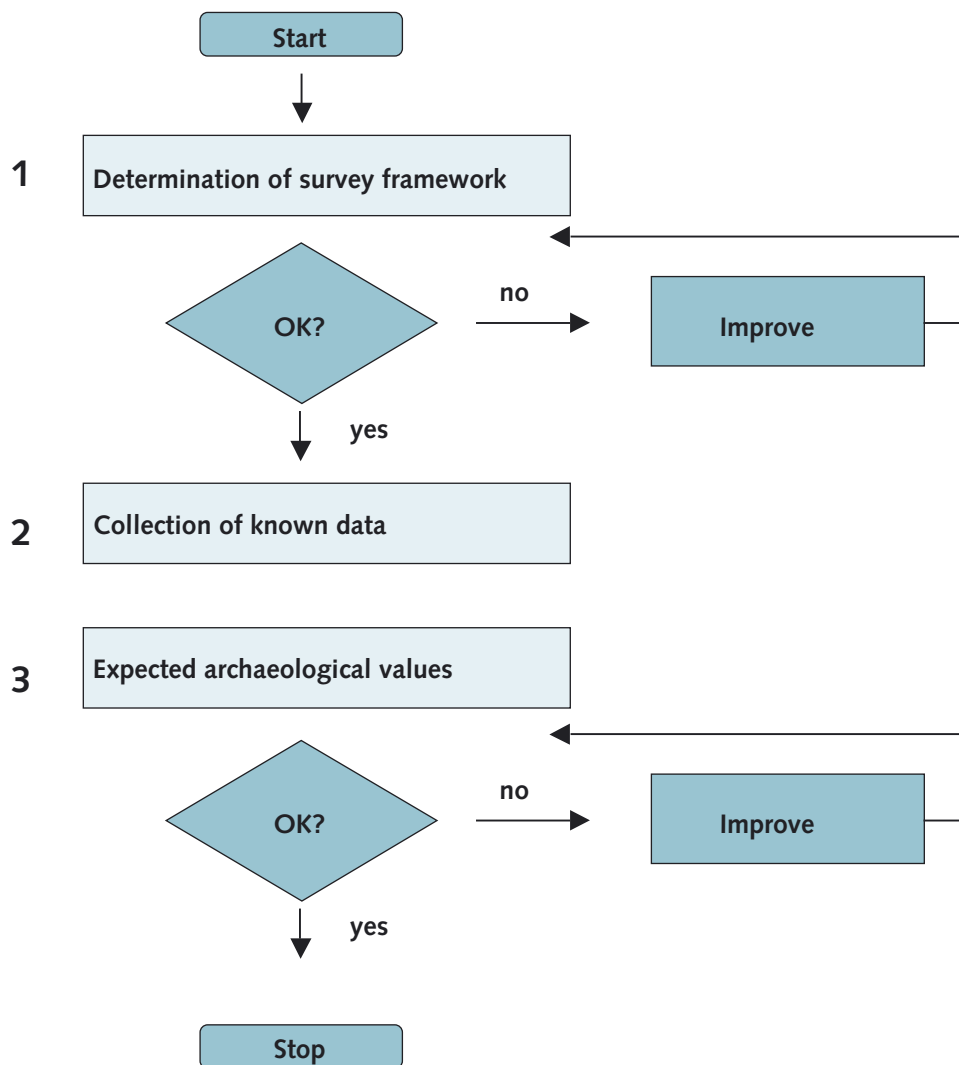
The expected archaeological value is to be determined by an analysis of all the information acquired during the previous steps concerning the area, combined with, among other things, the indicative map of archaeological values (IKAW) and, if available, more detailed predictive maps. This will result in a specified predictive model (archaeological expectation). The findings from all the collected and analysed data are to be recorded in a report. If such is prescribed in the Project Outline, this will be accompanied by recommendations for the competent authority.

2.1.3 Actors

Desk-based assessment
Job
Junior Archaeologist
Medior Archaeologist
Senior Archaeologist
Senior Archaeological Specialist
Non-archaeological Specialist

2.1.4 Process diagram for desk-based assessment and accompanying description

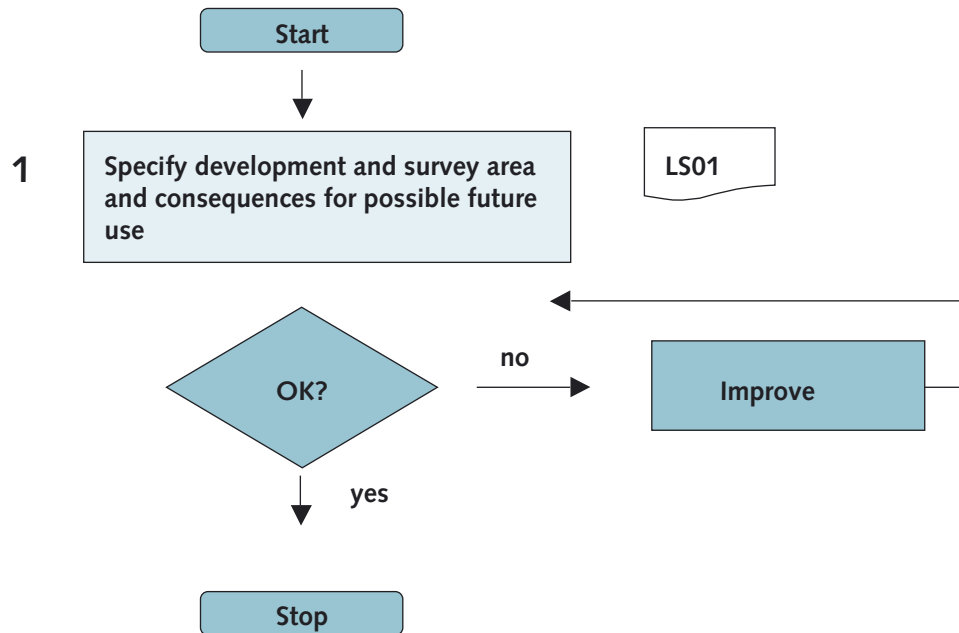
General description of the desk-based assessment process



General description of the desk-based assessment process

No.	Activity	Procedure/description
1	Determination of the survey framework	Determination of the reason for the desk-based assessment and the boundaries of the survey area.
OK	CHECK	
	IMPROVE	
2	Collection of known data	The collection, mapping and description of the current situation, historical usage and known archaeological values (location, character, integrity, preservation, nature, size and dating by consulting available sources, including consulting the CIS.
3	Expected archaeological values	The expected archaeological values are determined by analysing all the information collected in the previous steps regarding the area, combined with the indicative map of archaeological values and, if available, more detailed predictive maps. This results in a report with a specified predictive model and possibly with recommendations on the expected archaeological values for the developer. The developer informs the competent authority.
OK	CHECK	
	IMPROVE	
	STOP	End of the process.

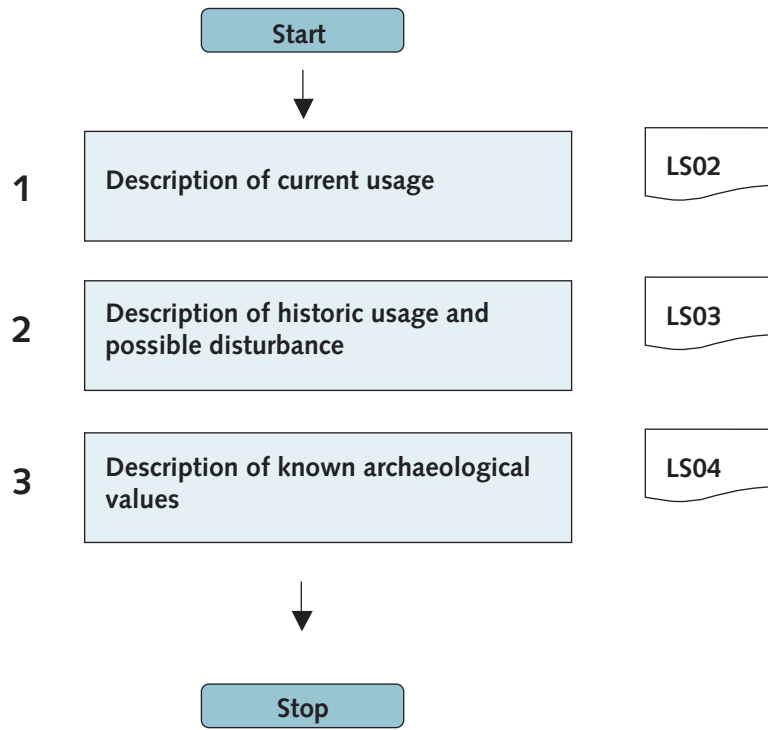
Step 1: Determining the survey framework



Step 1: Determining the survey framework

No.	Activity	Procedure/description	Actor	DOC
1	Specify the development and survey area and the consequences of possible future use	The specification of the <i>development area</i> is issued by the principal. The specification of the <i>survey area</i> takes place per development area and needs to be substantiated in the report of the desk-based assessment. Moreover, the possible future use must be indicated and possible consequences of future use for archaeological heritage.	Senior Archaeologist	LS01
OK	CHECK	Section 1.1 is checked by the Senior Archaeologist; if approved, the Senior Archaeologist will sign/initial the overview map.		
	IMPROVE	Senior Archaeologist		
	STOP	End of the process.		

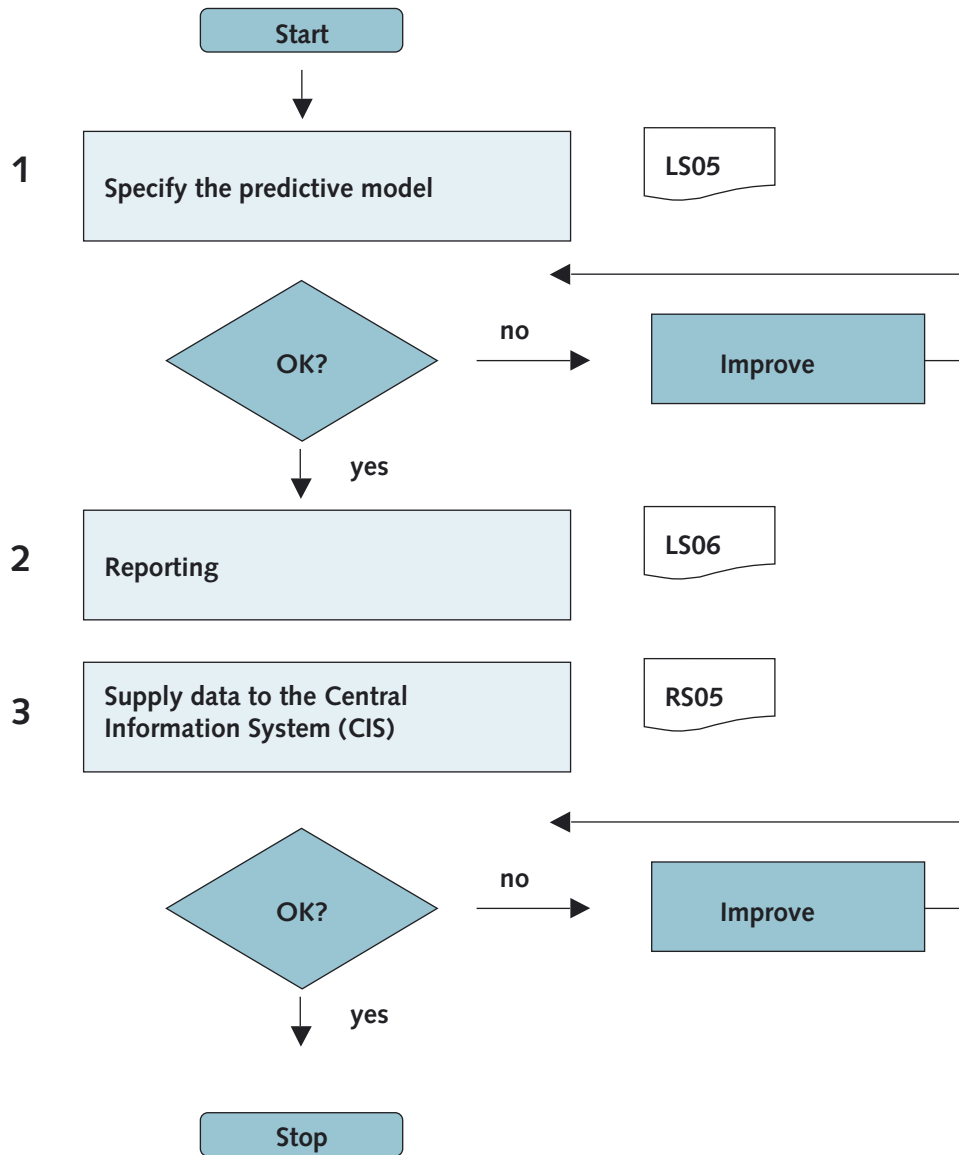
Step 2: Collecting known data



Step 2: Collecting known data

No.	Activity	Procedure/description	Actor	DOC
1	Description of current usage	The available relevant data are used to record the current situation in the survey area and the immediate surroundings; in text in the case of a one-off usage and on a map with a key and clarification in the case of multiple usage.	Junior Archaeologist	LS02
2	Description of historic usage and possible disturbance	The available relevant data (geophysical, physical and historical-geographical) are used to record the historical usage; in text in the case of a one-off usage and on a map with a key and clarification in the case of multiple usage.	Junior Archaeologist Non-archaeological Specialist	LS03
3	Description of known archaeological values	The collection, mapping and description of known archaeological values (location, nature, character, size and dating) by consulting available sources, including the CIS (ARCHIS, CMA/CAA), the archaeological monuments map and other relevant maps.	Junior Archaeologist	LS04
	STOP	End of the process.		

Step 3: Expected archaeological values



Step 3: Expected archaeological values

No.	Activity	Procedure/description	Actor	DOC
1	Specify the predictive model	Making a specified and substantiated predictive model of the expected archaeological values on the basis of existing archaeological, landscape and historical information, combined with newly acquired information (including earth science data) concerning the area. The model has to be substantiated with an indication of the degree of reliability. The data are recorded on a map + explanation + description.	Senior Archaeologist	LS05
OK	CHECK	Section 3.1 is checked by the Senior Archaeologist. If the specified predictive model fulfils all the requirements, the Senior Archaeologist will approve the documents by signing/initialling the predictive map.		
	IMPROVE	Junior & Senior Archaeologists		
2	Reporting	The results of the desk-based assessment are recorded in a report. The general point of departure for the report is that it must be a clear description of the method of working and of the way in which the information was acquired. The report has to be verifiable with regard to the information sources consulted. It also has to be possible to check the way in which archaeological expectation is substantiated. The report will contain recommendations – in accordance with the prevailing policy – for the follow-up process to be pursued: no action, protection, excavation, further evaluation.	Senior Archaeologist	LS06
3	Supply data to the CIS	The relevant result data are supplied to the CIS.	Junior Archaeologist	RS05
OK	CHECK	Sections 3.2 and 3.3 are checked by the Senior Archaeologist. If the report fulfils all the requirements, the Senior Archaeologist will approve the report by signing/initialling the report and the appendices. The Senior Archaeologist checks whether a confirmation or receipt from the CIS is present.		
	IMPROVE	Senior Archaeologist/Junior Archaeologist		
	STOP	End of the process.		

2.2 Standards guidelines for desk-based assessments

2.2.1 Project Outline for desk-based assessments (PS01)

Explanatory notes

The preliminary process consists of two parts: the desk-based assessment and the archaeological field evaluation. Because the desk-based assessment, which aims to collect information and formulate an archaeological expectation, constitutes the first phase, no results are yet available. Only a minimal Project Outline can be drawn up for the desk-based assessment.

Process description

Drawing up a Project Outline based on the available data.

Products

- Project Outline.

Actors

- The Senior Archaeologist compiles the Project Outline with the appropriate specialists being consulted on specific issues.

Requirements with regard to resources

Project Outline

The minimum applicable requirements are:

Introduction

- Administrative data relating to the survey area.

Research questions

- The research questions in relation to the desk-based assessment (specified predictive model).

Operationalisation

- The desk-based assessment has to be implemented as prescribed in the Dutch Archaeology Quality Standard. See paragraph 6.1 and standards guidelines LS01 to LS06 which clarify the standard method of working for the desk-based assessment.
- Selection recommendations, if desired.

Schedule

- Completion deadline.

Provisions relating to quality control

- The executing party is a certified company or a company that is permitted to carry out the intended work in accordance with the prevailing legislation and regulations.
- People involved in the archaeological work must, in accordance with their tasks, meet the requirements for the actors as formulated in chapter 1 of the Quality Standard.

Other provisions and conditions

Results

- Requirements to be imposed on the report form.
- Requirements to be imposed on the transfer of information.

Assessment

- The manner in which the competent authority assesses the results achieved against the Project Outline.

2.2.2 Definition of the development area and consequences of possible future use (LS01)

Explanatory notes

Defining the *development area* means defining the area with regard to which a decision has to be taken. The results of the desk-based assessment are related to that development area. Whether the follow-up process (archaeological field evaluation, physical protection, excavation or watching brief) focuses on all or part of the development area depends on the results of the desk-based assessment and the decision taken.

The definition of the (*desk-based assessment*) *survey area* indicates the area from which the data on historical use, known archaeological values and expectations are to be used in

the desk-based assessment. This area may be larger than the development area. The size of the area is determined and accounted for by the party implementing the desk-based assessment. Guidelines for this cannot be given beforehand. The size depends on the extent and nature of the expected information.

Possible future use of the development area can be a determining factor with regard to the subsequent process (archaeological field evaluation, physical protection, excavation or watching brief). The way in which the area is developed may, for example, mean that known and/or expected archaeological values (can) remain (partly or entirely) unaffected. A decision can always be made to adapt the development in such a way that the known and/or expected archaeological values (can) still remain (partially or entirely) unaffected.

Process description

The specification of the *development area* is issued by the principal. The specification of the *survey area* takes place per development area and needs to be substantiated in the report of the desk-based assessment. In addition, the possible future use has to be indicated.

Products

- Topographical map showing geographic boundaries of the *development area*.
- Topographical map showing the boundaries of the *survey area* whose data are a determining factor for the desk-based assessment.
- A combination of both is also possible.
- A map showing the possible future use.

Actors

- The Senior Archaeologist defines the survey area and collects data on the possible future use.
- The Senior Archaeologist checks whether the survey area has been defined correctly and whether the right data on possible future use have been collected. If correct, the Senior Archaeologist will initial the site plan.

Requirements with regard to resources

Definition of development area

Using the most recent topographical maps (most recent publications by the *Topografische Dienst* [Ordnance Survey]) and/or land registry maps.

Future use

Making use of the most recent and reliable data. The following data have to be requested from the principal:

- the project design or development plan;
- the nature and size of the future disruption:
- is soil to be removed (where, how and to which depth)?
- is soil to be brought in (where and how much, temporary soil depot and where from [with regard to timely signalling of the location of possible disruptions elsewhere in the development area, particularly sand/ gravel extractions])?
- is soil improvement work to be carried out?
- are channels, ditches and/or gullies to be filled?
- where is future infrastructure (underground and aboveground) planned?
- where is future paving planned?
- where are future watercourses/waterways planned?
- will this involve specific activities (culverts, widening of watercourses, etc.)?
- what is the nature of the future use (deep ploughing, crops, residential area, waterway, recreational lake)?
- what will be the water level or soil level in the area concerned and surroundings?
- who is to be the future user (important with regard to protection and/or curatorial management)?

2.2.3 Description of the current situation (LS02)

Explanatory notes

Data on the current situation have to be acquired to enable the results of the desk-based assessment to be assessed and in order to determine a (possible) follow-up to the preliminary

process (archaeological field evaluation). Soil contamination, use, construction as well as the presence of, for example, a high voltage line may affect the survey strategy of follow-up activities. In addition, such can have an effect on the archaeological expectation (for example bulb cultivation as an indication for subsoil ploughing).

Process description

The current situation on-site and in the immediate surroundings is laid down in text using the relevant available data and, in the case of multiple usage, on a map with a key and clarification.

- Text and/or a map of the survey area, with exact data per plot on the current situation with regard to the site, with a key and clarification.
- Photographic records.
- Description of the current use as part of the final desk-based assessment report.

Actors

- The Junior Archaeologist collects the data on current use.
- The Senior Archaeologist checks whether the data have been collected correctly.

Requirements with regard to resources

Use of the most recent data (current zoning plan, latest topographical map, land registry data, etc.).

Data on the current situation will comprise, if known:

- The current use, to be requested from the local authority, principal and/or manager/owner of the land.
- An up-to-date plan of the spatial layout. The current groundwater level is determined, using data already available or data acquired by making enquiries.
- Information on the nature of the current soil use of the development area.
- The presence of constructions, including cellars and other underground constructions (for example foundations), the presence or absence of (and the nature of) paving, tanks, cables and pipelines (aboveground and underground; KLIC notification) as requested from the local authority and/or current user/owner.
- A possible check of the data based on a visit to the location.

2.2.4 Description of the historical use (LS03)

Explanatory notes

The description of historical use serves a number of objectives. First of all, an assessment is made as to whether there are any historical constructions, possible waterways and/or subrecent use, whereby it will be determined whether disruptions have taken place (for example removal of soil, deposits and paving).

Process description

On the basis of the available data, the historical situation (earlier forms of soil use) is recorded as text and, in the event of multiple usage, on a map with a key and clarification.

The list of possible resources is extensive. Resources that are actually relevant for a particular assessment differ per project. This has to do with, among other things, the availability of maps and/or documentation material.

Products

- Text and/or a map of the development area, with exact data per plot on the historical situation, with a key and clarification.
- Description of the historical use as part of the final desk-based assessment report.

Actors

- The Junior Archaeologist and/or the non-archaeological specialist will collect data on the historical situation.
- The Senior Archaeologist checks whether the data have been collected correctly.

Requirements with regard to resources

Collecting data

Knowledge relating to the historical situation can be acquired by consulting all the reference material and photographic records pertaining to the area concerned at different scale levels and from different disciplines, including geophysical, historical-geographical and physical-geographical.

This reference material might include:

- soil map of the Netherlands, scale at least 1:50,000;
- topographical map of the Netherlands;
- if available, historical maps of the Netherlands and other relevant historical maps;
- if available, data on environmental soil surveys;
- area-specific material;
- aerial photos;
- archives;
- data on owner and user.

A substantiated choice needs to be made.

Specification of the historical situation

The substantiation of the details on the historical situation must clearly indicate which sources have been used for which conclusion. In addition, an indication has to be given as to which information has *not* been used, or is not available, or has been discarded.

The following information should be provided, if available:

- the nature of the historical use (construction, agricultural land, historical roads, etc.);
- the nature of the disruption (foundations, cables and pipelines, ditches);
- the nature and extent of contamination;
- dating;
- extent (three-dimensional if possible);
- depth (visible, invisible);
- location on the land registry map.

2.2.5 Description of known archaeological values (LS04)

Explanatory notes

The known archaeological values (whether fully investigated or not) have to be described in order to determine a (possible) follow-up by an archaeological field evaluation. The known archaeological record partly determines the strategy for follow-up activities.

The list of possible resources is extensive. Resources that are actually relevant to a particular assessment differ per project. This has to do with, among other things, the availability of maps and/or documentation material.

Process description

The collection, mapping and description of known archaeological values by consulting the available sources.

Products

- Map of the known archaeological values.
- Description of the known archaeological values.

Actors

- The Junior Archaeologist describes the known archaeological values; if desired an appropriate specialist is consulted for the interpretation of specific sites.
- The Senior Archaeologist checks whether the known archaeological values have been correctly described and mapped.

Requirements with regard to resources

Collecting data

The following must be consulted if available:

- archaeological monuments map (AMK);
- ARCHIS;
- (historical) maps;
- amateur archaeologists.

In addition, a substantiated choice needs to be made from:

- central monuments archive (CMA);
- central archaeological archive (CAA);
- literature;
- specialists in certain fields;
- archives;
- (provincial) depots;
- National Cabinet of Coins and Medals.

The map of known archaeological values will include:

- the boundaries of the archaeological sites (according to existing sources);
- the specific reference numbers of the sites (for references to description);
- observations/stray finds;
- the specific reference numbers of observation(s) or stray find(s) for references to description;
- the map compiler;
- the scale;
- a key;
- the orientation.

The description of known archaeological values will include:

- the specific code (national registration number): ARCHIS observation number or CMA number (in so far as a number has been assigned to the site);
- the status and/or value of the site(s) (in so far as such is known on the basis of the AMK);
- the name of the municipality;
- the place;
- the toponym;
- the topographical map page;
- the coordinates according to existing sources (with a reference to the type);
- form of protection;
- type of site(s);
- dating information on the find-spot(s);
- description/explanatory notes on the site(s) and/or find-spot(s);
- source (incl. the method of collection).

2.2.6 Drawing up a specified predictive model (LS05)

Explanatory notes

Drawing up an archaeological expectation is a complex process. On the basis of the information acquired in the previous steps on the current situation, the historical use and known archaeological values, a process of analysis and interpretation is carried out on which basis a predictive model can be drawn up. Detailed background knowledge is required of the landscape development and the history of the archaeo-region (see Appendix IV).

Process description

Drawing up a specified and substantiated predictive model of the expected archaeological values on the basis of existing archaeological and historical information, combined with newly acquired information (including geological and soil data) concerning the area. The model has to be substantiated, with an indication being given of the degree of reliability.

Products

- Report on expected archaeological values, as part of the report on the desk-based assessment.
- Predictive map with explanatory note as part of the report.

Actors

- The Senior Archaeologist draws up a specified predictive model. If desired, an appropriate specialist will be consulted should specific knowledge be required.
- The Senior Archaeologist checks whether the predictive model has been correctly drawn up. If correct, the Senior Archaeologist will initial the predictive map.

Requirements with regard to resources

Collecting relevant geo- information

When an archaeological expectation is drawn up, extensive use is made of the relationship that exists between the location of the archaeological sites and the landscape, or even specific landscape elements. This relationship (location factors) differs per archaeological period and per type of site. Knowledge of the geology, soil and hydrology of the survey area is essential. This knowledge can be acquired by consulting reference and map material at various scale levels.

The maps that should be referred to, if available, are:

- indicative map of archaeological values (IKAW);
- geographical map of the Netherlands;
- soil map of the Netherlands;
- geomorphologic map of the Netherlands, scale at least 1:50:000;
- contour map (Actueel hoogtebestand Nederland, AHN).

In addition, a substantiated choice needs to be made from.

- remote sensing images (such as aerial photos);
- contour maps and files;
- area-specific geological publications;
- very detailed contour map of the Netherlands.

Drawing up and specifying the archaeological expectation

Drawing up the archaeological expectation is the synthesis of the above process steps. When substantiating the expectation, clear references must be made as to which information from which process step has been used (current use, historical use, known values, landscape genesis and choice of location factors) as well as which information has *not* been used or has been discarded as unreliable.

When choosing a suitable method of investigation, it is important that a detailed specification is made of the expected archaeological values. An obvious point is the difference between archaeological values that are *visible or recognisable* on the surface and archaeological sites which are *invisible*. The first group can be detected by the naked eye (burial mound, settlement in plough zone), while detection of the second group may require advanced techniques.

The following characteristics must be referred to:

- dating; at least in main periods (such as Palaeolithic, Mesolithic, etc.);
- type of site (such as settlement, cemetery, arable land, etc.);
- size;
- depth (visible/invisible);
- location (possibly with an indication as to which sub-area);
- external characteristics (type of indicators);
- possible disturbances (including changes caused by post-depositional processes).

2.2.7 Report of desk-based assessment + recommendations (LS06)

Process description

The various parts of the desk-based assessment are recorded in a report. The report must provide a clear description of the information and of the way in which it was acquired. The report has to be verifiable with regard to the information sources consulted and it also has to be possible to check the way in which the archaeological expectation is substantiated. The report may contain recommendations for the follow-up process: no action, protection, excavation or archaeological field evaluation.

Products

- A report on the desk-based assessment with recommendations and possibly appendices.

Actors

- The Senior Archaeologist draws up the final report himself and, if desired, submits recommendations.
- The Senior Archaeologist checks whether the final report and the recommendations have been correctly drawn up. If correct, the Senior Archaeologist will initial the report and appendices.

Requirements with regard to resources

The report will include administrative data and a report on the following aspects:

Administrative data (General)

- Date.
- Principal (developer).
- Executing party (archaeological contractor).
- Competent authority (municipal, provincial, or national government).
- Name of expert on behalf of competent authority.
- Location of documentation.
- National registration number.
- Location (municipality, place, toponym, at least four x/y coordinates).
- (Digital) map of survey area.
- Land registry data (land registry numbers. Manager/owner of the land and/or contact person).

Assessment framework, objective and compiler of the assessment

This paragraph should include the following:

- introduction (discussion of assignment);
- definition of the development area and details on possible future use;
- reasons for choosing the survey area.

NB: see standards guideline LS01 for the information sources.

The current situation

The current situation can affect the level of accessibility of the site and the choice of assessment strategy or the costs thereof. Moreover, the current use may be detrimental to archaeological values.

NB: see standards guideline LS02 for the information sources.

Historical use

The historical use can provide an insight into (sub)recent disturbances, as a result of which archaeological values may have been lost. In addition, the former use may affect the choice of the survey strategy. This may include the presence of old cables and pipelines, filled in ditches, layers of rubbish, soil contamination, etc.

NB: see standards guideline LS03 for the information sources.

It is important not only to refer to the information sources that have been used, but also to which have *not* been used, for example: "We suspect that soil has been removed in the past by digging but the previous owner has not been contacted to verify this".

Known archaeological values

With regard to the rest of the process it may be important to include data on the rarity, historical significance or relationship with archaeological values in the (close) vicinity in addition to the (standard) data on dating and type of site or find information.

NB: see standards guideline LS04 for the information sources.

Expected archaeological values

The text describes the data as collected in accordance with the standards guidelines concerned. Expected archaeological values may differ considerably with regard to external characteristics, location and depth. In the case of larger or complex survey areas, it may be a good idea to include these values on a map. A map like this is particularly useful if a distinction is made between archaeological periods (dating of the expected values) and types of sites. A substantiation - reasons why certain map areas have been assigned particular expectations - is essential. At this stage it is not sensible to create a large number of maps showing different archaeological indications (high or low indications), because no direct relationship can be established with the survey strategy to be chosen.

NB: see standards guideline LS05 for the information sources.

With regard to the rest of the process it may be important to include data on the expected rarity or historical significance of the expected values in addition to the (standard) data. These data should be taken into account during the valuation and selection.

Recommendations

The above data can be used to formulate recommendations for possible follow-up steps: no action, protection, an excavation or a field evaluation.

2.2.8 Transferring project data – Desk-based assessment (RS05)

Process description

The relevant result data are supplied to the CIS.

Products

- Reference data.
- Additional data.

Actors

- The Junior Archaeologist supplies the relevant result data to the CIS.
- The Senior Archaeologist checks whether the relevant result data have been supplied by checking the CIS confirmation of receipt.

Requirements with regard to resources

Administrative data

- National registration number.
- Date on which the project was completed.
- Boundaries of the project area (at least four x/y coordinates).
- Project depth under ground level.
- Place.
- Municipality.
- Province.
- Principal.
- Executing party.
- Competent authority (national, provincial or municipal government).
- Name of expert on behalf of competent authority.
- Type of project (desk-based assessment, archaeological field evaluation, physical protection, watching brief, excavation).

Data relating to project results

- Textual summary of project results including description of research questions.

Reference data

- Management and location of documentation (reference to archive where documentation is managed, reference to complete report).

3 ARCHAEOLOGICAL FIELD EVALUATION

3.1 Description

3.1.1 Objective

The objective of the archaeological field evaluation is to supplement and verify the specified predictive model that resulted from the desk-based assessment. This is done by fieldwork designed to acquire (additional) information on known or expected archaeological values within a survey area. This covers the presence or absence, the nature and character, the quantity, dating, integrity and preservation and the relative quality of the archaeological values. The result is a report with a valuation and, if prescribed in the Project Outline, (selection) recommendations which can be used to take a policy decision (usually a selection decision). This means that the field activities are carried out to the level at which this decision can responsibly be taken. In other words, the archaeological field evaluation must be carried out in a way that is not more destructive than necessary.

3.1.2 Determining the survey method

In the case of the archaeological field evaluation, a distinction is made between an exploratory, a mapping and a valuating phase. The objective of the exploratory phase is to acquire an insight into the geomorphologic landscape units in so far as these are related to location choices in the past. This can take the form of a visual inspection, as well as a geo-archaeological borehole survey. The objective is to exclude low-potential zones and select high-potential zones for the following phases. If sufficient detail is already known about the landscape, this phase can be omitted. During the mapping phase, the study area is examined systematically for the presence of finds and/or features. Following on from this, a more dense observation grid can be used during the valuating phase in specific parts of the study area, in order to determine the nature, size, conservation and relative quality of sites. Additional methods can be used to collect missing information for a valuation.

A crucial factor for the archaeological field evaluation is the choice of the survey method with which the archaeological expectation arrived at in the desk-based assessment – and the Project Outline based on that expectation – can be tested in the field.

There is no ideal survey method which can provide an answer to *all* questions. A variety of methods is used for the various types of archaeological find-spots which have to be prospected or valued. Sometimes, field walking is sufficient while in other cases boring to a depth of 5 m or a trial trench will be necessary. If the survey method is not prescribed in the Project Outline, the selection of the most effective and efficient method will be left up to the expertise of the executing body (the archaeological contractor). Requirements will have to be imposed on the (scientific) substantiation of this choice:

1. A specification of all the information used on which the choice is to be based.
2. The presumed characteristics of the expected archaeological sites with regard to depth, size, archaeological indicators, spatial distribution within the site.
3. The manner in which the selected survey strategy can demonstrate the presence or absence of archaeological values (or the presumed characteristics) in a sufficiently reliable manner. The basis for the choice has to be that, in relation to the Project Outline, the *least destructive method* is chosen in order to minimise the damage to the values before any decision is taken to protect or excavate. The aim is therefore not a complete *absence of ambiguity* but *sufficient reliability*.

The survey methods are listed below classified according to the extent to which they disrupt archaeological values. The methods can be subdivided into:

a. non-destructive methods:

- geophysical methods: electrical, magnetic and electromagnetic methods, possibly in combination with remote sensing techniques.

b. slightly destructive methods:

- field walking;
- borehole survey;
- test pits (pits of 1 m² max.).

c. destructive methods:

- trial trenches.

3.1.3 Process

The archaeological field evaluation process comprises the following subprocesses:

1. preparation of archaeological field evaluation;
2. implementation of archaeological field evaluation;
3. interpretation of archaeological field evaluation.

A decision can be taken to carry out the entire preliminary process (as a desk-based assessment and archaeological field evaluation together) – in phases and as a single assignment. In this case, the standards and guidelines relating to desk-based assessments and archaeological field evaluations will be combined.

In principle, the desk-based assessment is intended to result in clear and verifiable statements on the above elements in the form of a specified predictive model. Known archaeological values and a specified predictive model constitute the archaeological points of departure of the Project Outline, that must be approved by the competent authority so that the archaeological field evaluation can be put out to tender.

Preparing the archaeological field evaluation

The preparation work relating to the archaeological field evaluation comprises all the work that is necessary in order to be able to implement the archaeological field evaluation. The archaeological field evaluation is, in principle, implemented on the basis of the work plan about which agreement has been reached in the PO or contract.

Implementing the archaeological field evaluation

The implementation of the archaeological field evaluation means executing the fieldwork activities, in so far as such has been agreed in the contract.

Interpretation of the archaeological field evaluation

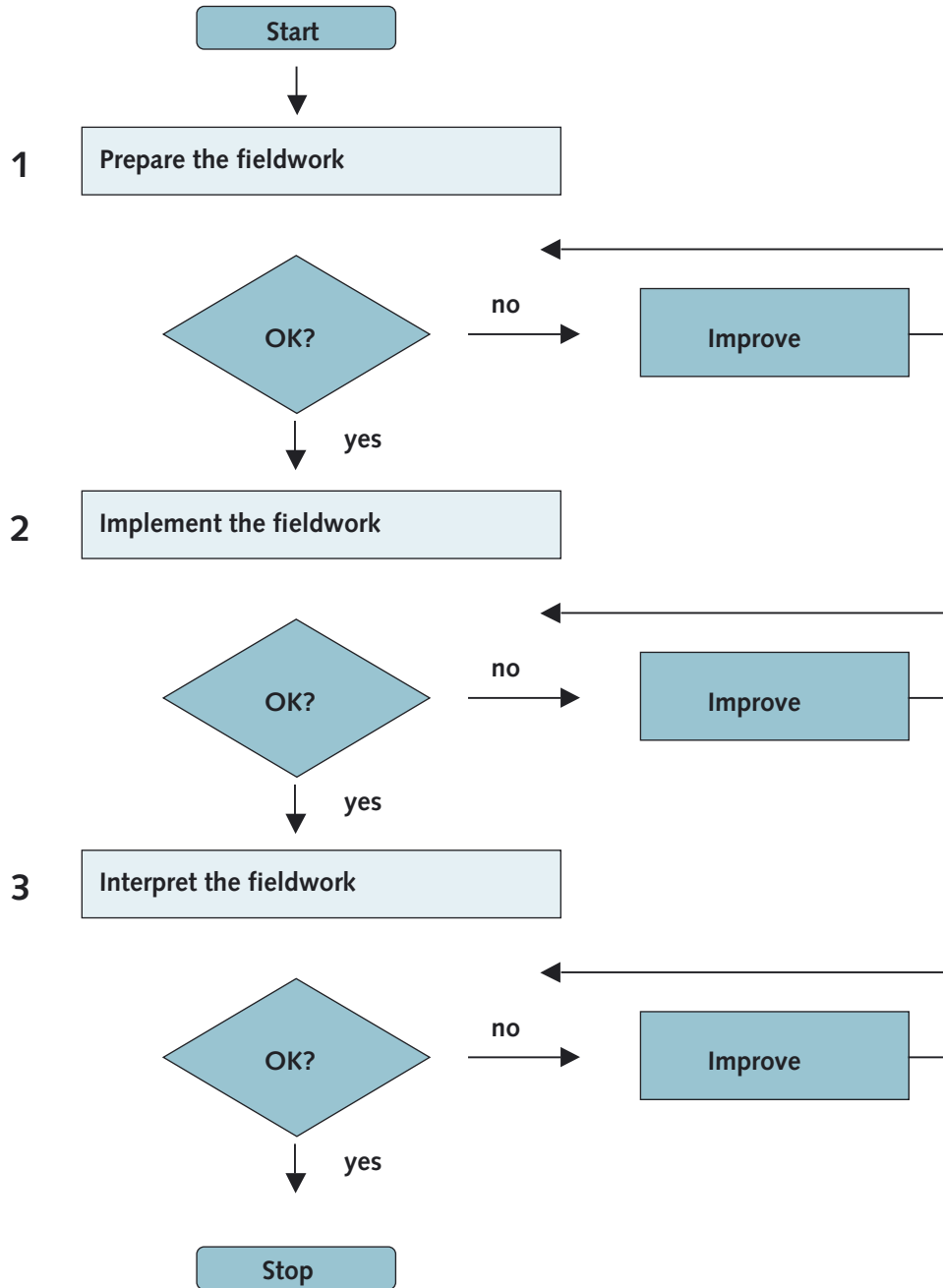
The interpretation of the archaeological field evaluation has to provide answers to the research questions stated in the Project Outline. The findings and the valuation are recorded in a final report that has to be approved, after which the project can be concluded. If prescribed in the Project Outline, recommendations for selection can also be issued.

3.1.4 Actors

Archaeological field evaluation
Job
Junior Archaeologist
Medior Archaeologist
Senior Archaeologist
Junior Specialist
Senior Specialist
Junior Field Technician
Senior Field Technician
Excavation Worker
Non-archaeological Specialist
Land Surveyor
Geophysicist

3.1.5 Process diagram for archaeological field evaluations and accompanying description

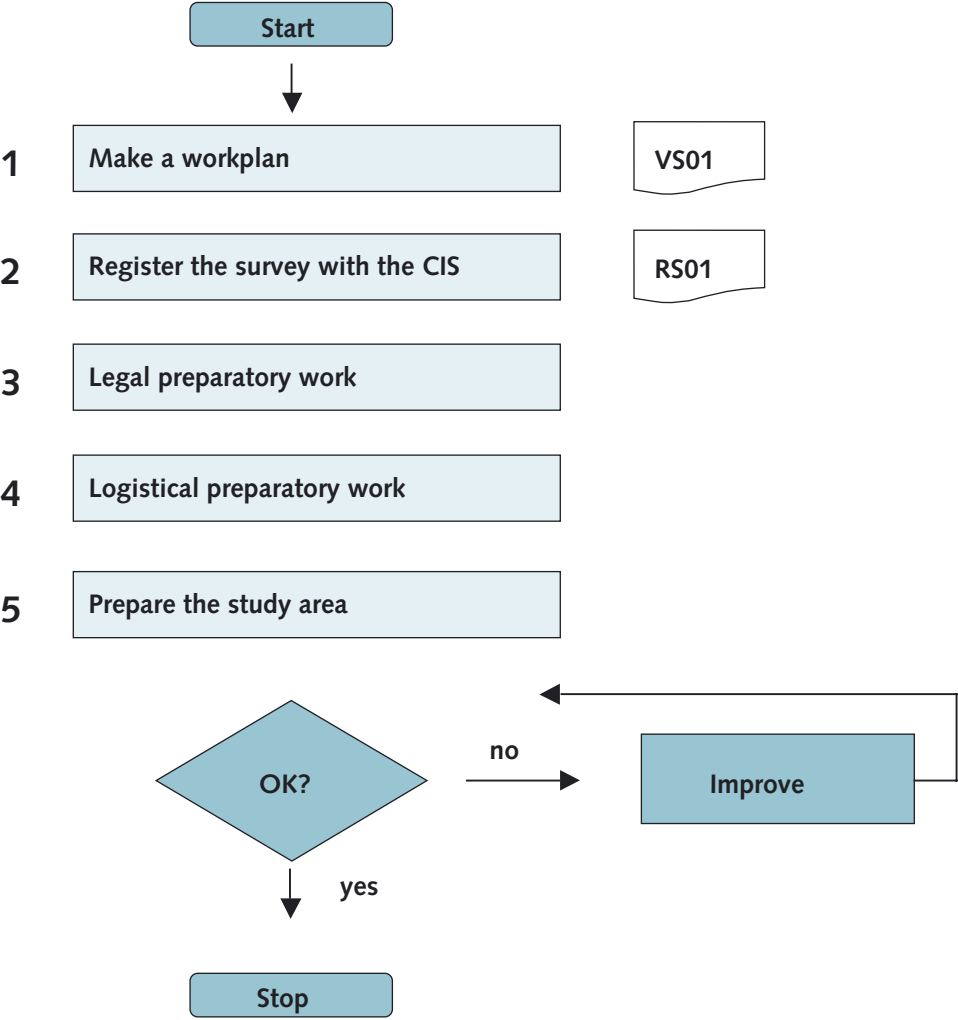
General description of the archaeological field evaluation process



General description of the archaeological field evaluation process

No.	Activity	Procedure/description
1	Prepare the fieldwork	The preparation work relating to the fieldwork comprises all the work that is necessary in order to be able to implement the fieldwork. The fieldwork is carried out on the basis of a Project Outline approved by the competent authority.
OK	CHECK	
	IMPROVE	
2	Implement the fieldwork	The fieldwork covers all activities in the field as prescribed in the Project Outline and agreed with the principal.
OK	CHECK	
	IMPROVE	
3	Interpret the fieldwork	The interpretation of the archaeological field evaluation has to provide answers to the research questions stated in the Project Outline. This is recorded in a final report that has to be approved, after which the field evaluation can be concluded.
OK	CHECK	
	IMPROVE	
	STOP	End of the process.

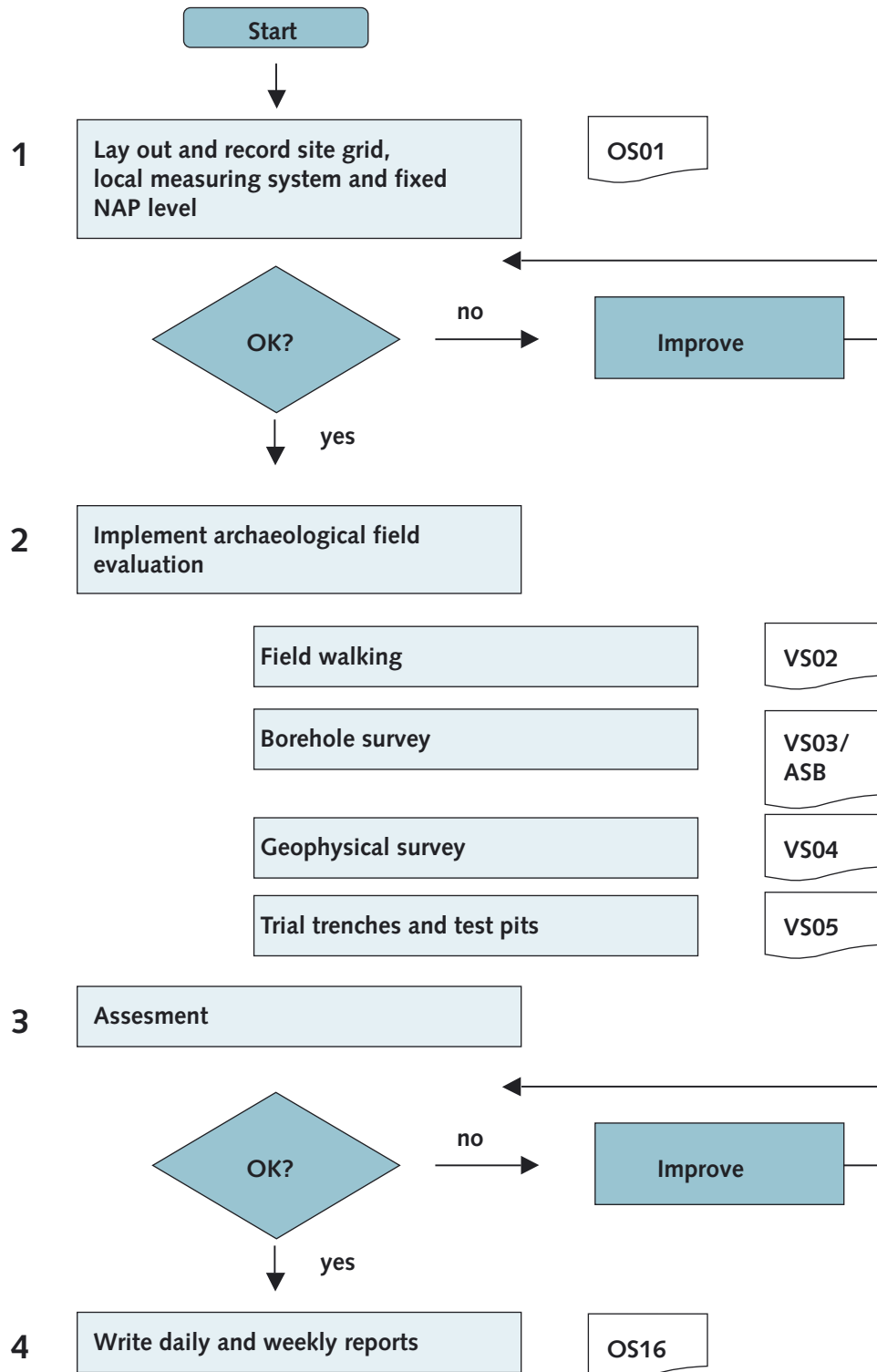
Step 1: Preparing the archaeological fieldwork



Step 1: Preparing the archaeological fieldwork

No.	Activity	Procedure/description	Actor	DOC
1	Make a work plan	The creation of a work plan which serves as an implementation manual. The work plan includes the safety plan. If the tender complies with the requirements imposed on a work plan, no work plan will be required and a reference to the tender will suffice. If no work plan has been drawn up, a separate safety plan is obligatory.	Medior Archaeologist	VS01
2	Register the survey with the CIS	Notification of the start of the survey and application for a national registration number (CIS code). The depot to which the material and documentation go has to be notified of this number.	Senior Field Technician/ Junior Archaeologist	RS01
3	Legal preparatory work	Arrange KLIC notification, organise access/entrance arrangements and all other permits, so that the fieldwork can be started.	Senior Field Technician/ Junior Archaeologist	
4	Logistical preparatory work	Arrange huts and utility provisions such as machines, accommodation, means of transport, fencing and materials, all of which must comply with the safety plan.	Senior Field Technician/ Junior Archaeologist	
5	Prepare the study area	The study area must be organised in such a way that the fieldwork can be started straight away.	Senior Field Technician/ Junior Archaeologist	
OK	CHECK	Section 1.1 is checked by the Senior Archaeologist. If the work plan fulfils all the requirements, the Senior Archaeologist will approve the work plan by signing/initialling it. Sections 1.2 to 1.5 are checked by a Medior Archaeologist.		
	IMPROVE	Senior Field Technician/ Junior & Medior Archaeologist		
	STOP	End of the process.		

Step 2: Implementing the archaeological field survey



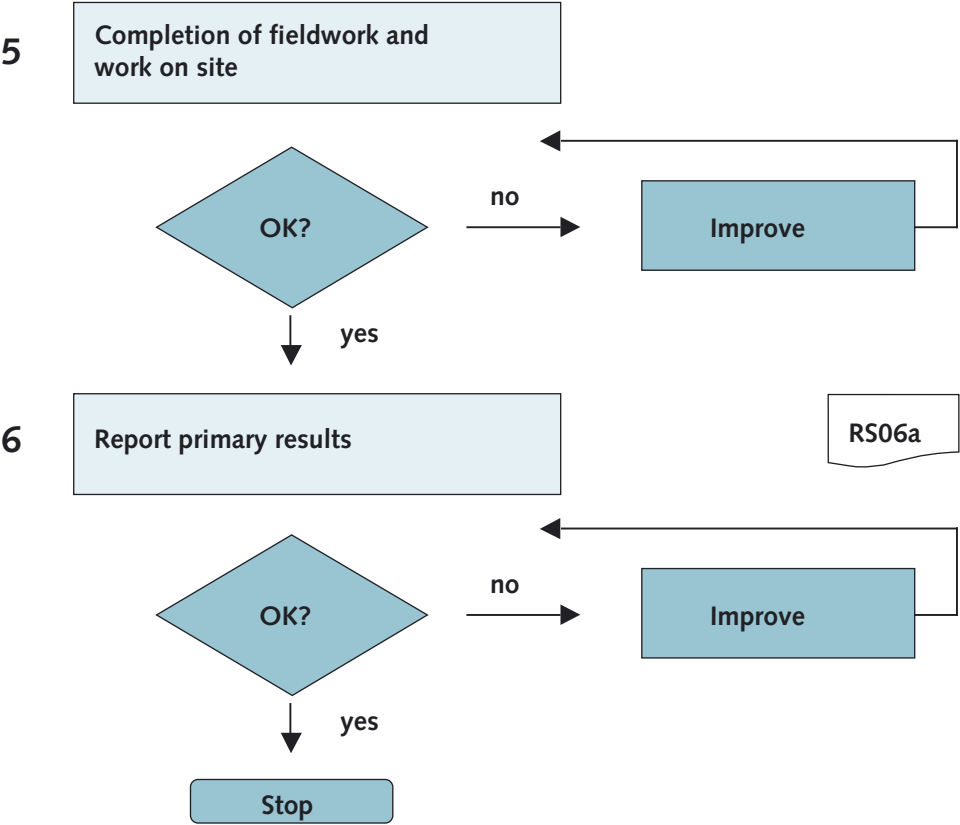
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Step 2: Implementing the archaeological field survey

No.	Activity	Procedure/description	Actor	DOC
1	Lay out and record site grid, local measuring system and a fixed NAP height	The benchmarks are related to the ordnance survey grid. A fixed NAP height has to be established. Calibrated measuring equipment has to be used. Data are recorded in a grid points map, a trenches and site grid map and in a measuring systems report.	Land Surveyor/ Senior Field Technician	OS01
OK	CHECK	Section 2.1 is checked by the Senior Field Technician or Land Surveyor. The Senior Field Technician or Land Surveyor checks whether the local measuring system has been properly arranged by carrying out the measuring again. If correct, the Senior Field Technician or Land Surveyor will approve the measuring system report and maps by signing/initialling the report and maps.		
	IMPROVE	Land Surveyor/Senior Field Technician		
2	Implement the archaeological field evaluation	Implementing the archaeological field evaluation. The following standards guidelines refer to the various surveying methods.		
	<i>Field walking</i>	<i>Collecting and mapping surface finds. Tagging finds, recording on a suitable form. Distribution map showing find concentrations and other phenomena, map/plan showing structures encountered.</i>	Senior Field Technician/ Junior Archaeologist	VS02
	<i>Borehole survey</i>	<i>Implementing a borehole survey. Tagging borehole samples, recording on a suitable form.</i>	Medior Archaeologist	VS03
	<i>Geophysical survey</i>	<i>Implementing a geophysical survey. This results in rough data plots and interpolated data plots.</i>	Non-archaeological Specialist (Geophysicist)/ Junior Field Technician	VS04
	<i>Trial trenches and test pits</i>	<i>Excavating trial trenches or test pits. This results in finds, samples and documentation (drawings, photographic registrations, data files).</i>	Medior Archaeologist	VS05
3	Evaluation	Assessment of the results, to establish whether sufficient reliable data have been collected to make a valuation.	Senior Archaeologist	
OK	CHECK	Sections 2.2 and 2.3 are checked by the Senior Archaeologist. The Senior Archaeologist assesses whether sufficient reliable data have been collected to make a valuation in accordance with standards guidelines.		
	IMPROVE	Junior & Senior Field Technician/ Junior & Medior & Senior Archaeologist/Non-archaeological Specialist (Geophysicist)		
4	Write daily and weekly reports	When test pits and/or trial trenches are dug, the work is recorded in daily and weekly reports.	Medior Archaeologist	OS16

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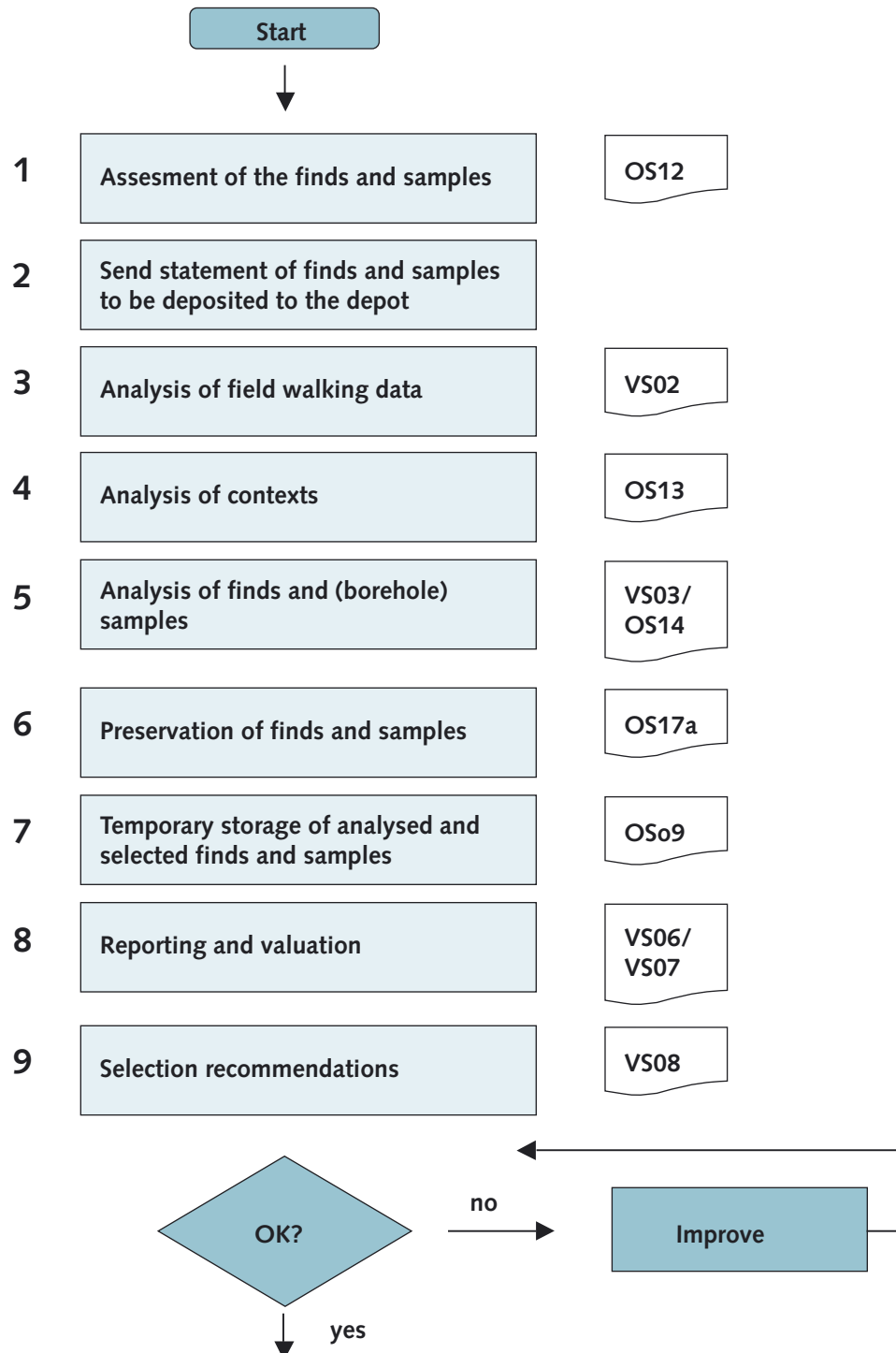
Step 2: Implementing the archaeological field survey (continued)



Step 2: Implementing the archaeological field survey (continued)

No.	Activity	Procedure/description	Actor	DOC
5	Completion of fieldwork and work on site	Inform the competent authority that the archaeological field evaluation has been completed. The fieldwork is ended after the assignment has been carried out and after consultation with the developer. This is recorded in a completion report. The state in which the survey area is left, will be as agreed with the developer.	Senior Archaeologist	
6	Report primary results	The primary results must be recorded in a format to be determined by ROB and sent to the CIS (so called ARCHIS-notification)	Junior Archaeologist	RS06a
OK	CHECK	Sections 2.4 and 2.5 are checked by the Senior Archaeologist. The Senior Archaeologist checks the presence of daily/weekly reports and checks the report. If correct, the Senior Archaeologist approves the report by signing/initialling it.		
	IMPROVE	Medior & Senior Archaeologist		
	STOP	End of the process.		

Step 3: Interpretation of the archaeological fieldwork



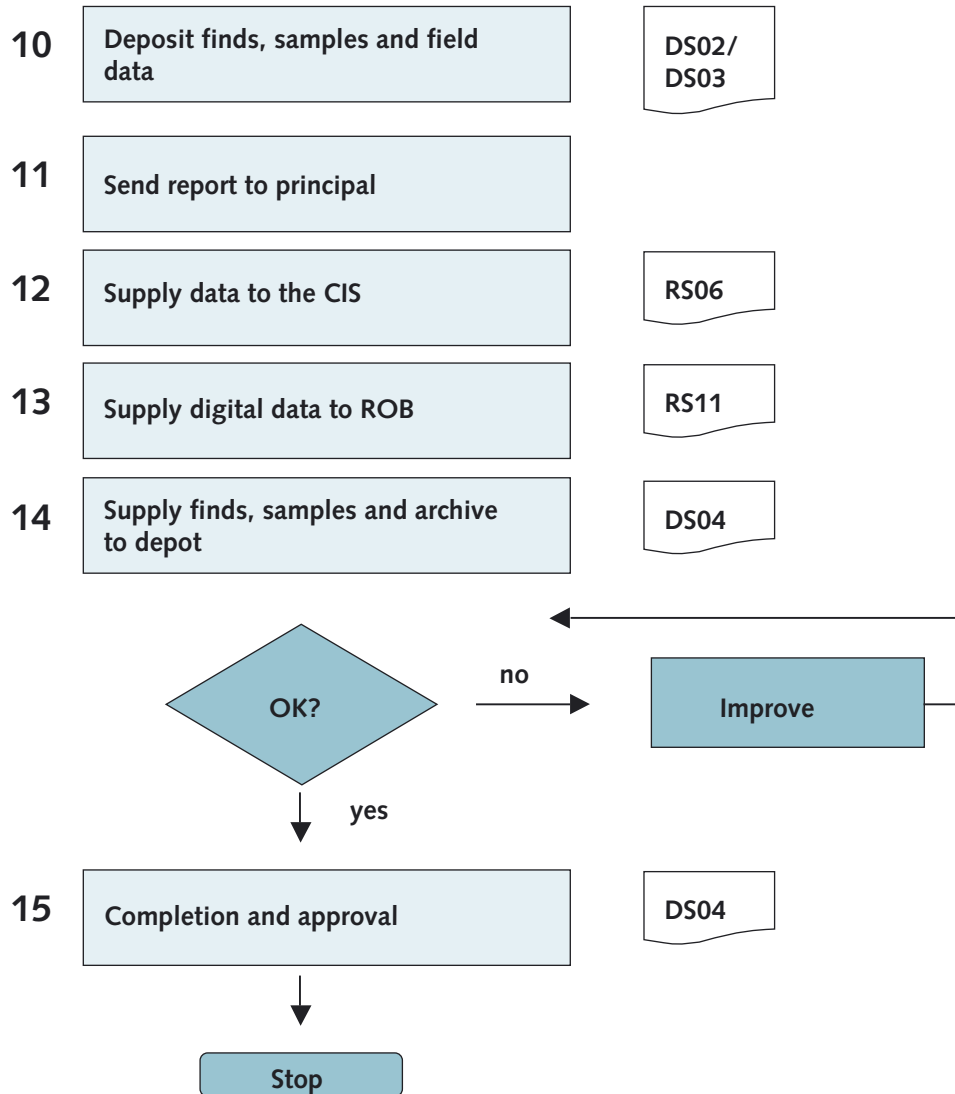
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Step 3: Interpretation of the archaeological fieldwork

No.	Activity	Procedure/description	Actor	DOC
1	Assessment of the finds and samples	The finds and samples are assessed by an appropriate specialist with regard to their suitability for analysis with the assessment being recorded in a report.	Senior Specialist/ Senior Archaeologist	OS12
2	Send statement of finds and samples to be deposited to the depot	An estimate is made of the quantity of samples, finds and corresponding documentation to be delivered to the depot.	Medior Archaeologist	
3	Analysis of field walking data.	The field walking data are analysed, documented and recorded in a file (data file + report).	Medior Archaeologist	VS02
4	Analysis of contexts	The contexts and structures are analysed, documented and recorded in a file (data file + report).	Medior Archaeologist	OS13
5	Analysis of finds and (borehole) samples	The finds and (borehole) samples are analysed and documented by the respective expert/specialist per finds category. The results are analysed, documented and recorded in a file (data file + report). The analysis is carried out in conditions which guarantee the stability of the material.	Medior Archaeologist/ Junior Specialist	VS03 and OS14
6	Preservation of finds and samples	Finds and samples that have been analysed and selected are preserved in such a way that they can be stored in conditions that are as stable as possible in the (transit) depot.	Senior Specialist	OS17a
7	Temporary storage of analysed and selected finds and samples	Finds and samples that have been analysed and selected are packed, sorted and coded in such a way that they can be stored in conditions that are as stable as possible in the (transit) depot.	Excavation Worker	OS09
8	Reporting and valuation	The various parts of the archaeological field evaluation (subreports) are assembled in a report. The report contains a valuation, in accordance with the research questions in the PO.	Medior Archaeologist/ Senior Specialist	VS06/ VS07
9	Selection recommendations	If prescribed in the PO, recommendations are drawn up in accordance with the valuation, the prevailing archaeology policy and the selection criteria currently in force.	Senior Archaeologist	VS08
OK	CHECK	Sections 3.1 to 3.9 are checked by the Senior Archaeologist. The Senior Archaeologist tests whether the valuation described in the report answers the research questions in the Project Outline. If correct, the Senior Archaeologist approves the report and appendices by signing/initialling them. The selection report is part of the archaeological field evaluation report.		
	IMPROVE	Excavation Worker/Medior Senior Archaeologist/ Junior & Senior Specialist		

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Step 3: Interpretation of the archaeological fieldwork (continued)



Step 3: Interpretation of the archaeological fieldwork (continued)

No.	Activity	Procedure/description	Actor	DOC
10	Deposit finds, samples and field data	Finds and samples are packed and coded and the corresponding archive is added, in accordance with the depot guidelines, so that the material can be transferred to the depot. The material must be packed so that the condition it is in remains as stable as possible.	Medior Archaeologist/ Junior Specialist	DS02/ DS03
11	Send report to principal	Send report to developer.	Junior Archaeologist	
12	Supply data to the CIS	The relevant data are supplied to the CIS.	Junior Archaeologist	RS06
13	Supply digital data to the ROB	No later than 4 weeks after the report has been sent to the principal, the digital archive is transferred to the ROB.	Junior Archaeologist	RS11
14	Supply finds, samples and archive to depot	No later than 4 weeks after the report has been sent to the principal, the archive is supplied to the relevant provincial or municipal depot. If this depot lacks facilities to store the archive, this is transferred to the ROB.	Medior Archaeologist	DS04
OK	CHECK	Sections 3.11 to 3.14 are checked by the Senior Archaeologist or Senior Specialist. The Senior Archaeologist/Senior Specialist checks whether data have been supplied to the Depot and CIS by examining the confirmation of receipt of CIS data and the transfer protocol.		
	IMPROVE	Excavation Worker/Junior Archaeologist/Junior Specialist		
15	Completion and approval	The project ends once the final report has been completed, approved and published in accordance with the agreements made with the principal. If the PO prescribes selection recommendations, such must be approved in accordance with agreements with the competent authority as laid down in the PO. Completion and approval take place after acceptance in writing of the material to be deposited by a recognised depot as laid down in a transfer protocol.	Senior Archaeologist Depot Manager	DS04
	STOP	End of the process.		

3.2 Standards guidelines for archeological field evaluations²

3.2.1 Project Outline for archaeological field evaluations (PS02)

Explanatory notes

The Project Outline is prepared by a qualified archaeologist and submitted for approval to the competent authority. The PO for archaeological field evaluations indicates what must be done and, in specific cases, how the field evaluation has to be done. In addition, the PO indicates what information must be collected in order for a policy decision to be made.

It is possible that during the fieldwork new facts or changed views call for a revised research design (incl. analysis, conservation). Such decisions always need the approval of the competent authority that has approved the original Project Outline.

Process description

Drawing up a Project Outline based on the available data.

Products

Project Outline.

Actors

The Senior Archaeologist prepares the Project Outline with appropriate specialists being consulted on specific issues.

Requirements with regard to resources

Project Outline

The minimum applicable requirements are:

Introduction

- Administrative data relating to the area to be evaluated.
- Results of the desk-based assessment.

Research questions

- The research questions of the archaeological field evaluation will always relate to the assessment of the specified predictive model. Because different types of sites may be present in the area to be evaluated, an indication has to be given as to whether the field evaluation should focus on the detection of all archaeological phenomena, or whether a selection is to be made. The field evaluation should focus exclusively on prospecting for archaeological values which are going to be affected, except when the work is undertaken to produce a predictive map.

Operationalisation

The Project Outline provides:

- motives for using the prescribed survey method;
- the required density of observation;
- criteria which are of special importance for the valuation of the sites encountered;
- a statement on eventual restrictions to the size of the survey area;
- requirements to the destructiveness of the chosen method. Sites should be disturbed as little as possible;
- indications concerning the quantity and quality of specialist research needed for the valuation. The research should be as limited as possible;
- a statement if selection recommendations are requested (these are optional, not obligatory).

² The explanatory notes to standards guidelines sometimes include recommendations, assumptions or a discussion of the choices made.

Symbols used on drawings are shown in table 9 and are based on:

Veldhandboek ROB (1996): Procedure voor de registratie en het beheer van veldwerkgegevens [*Procedure for the registration and management of fieldwork data*];

Arnold Carmiggelt (1998): Kruisende sporen, Handleiding voor amateur-archeologen in Nederland. Uitgeverij Matrijs [*a guide for amateur-archaeologists in the Netherlands*].

Codes are referred to in:

Brandt et. al. (1992): Archeologisch Basisregister (ABR), Archeologische begrippen die in het landelijk archeologisch informatiesysteem ARCHIS gehanteerd worden [*Archaeological concepts used in the national archaeological information system ARCHIS*]

Schedule

- Completion deadline, in agreement with the developer, taking into account legal requirements on providing information, depositing, and publication.

Provisions relating to quality control

- The archaeological contractor is a certified company or a company that is permitted to carry out the intended work in accordance with the prevailing legislation and regulations.
- The qualified people involved in the archaeological work must meet the requirements of this Quality Standard (see Chapter 1, table 2)

Other provisions and conditions

Results

- Requirements to be imposed on the report form (report, letter, etc).
- Requirements to be imposed on depositing and the transfer of information.

Assessment

- The manner in which the competent authority assesses the results achieved against the Project Outline.

3.2.2 Drawing up a work plan (VS01)

Explanatory notes

The work plan is a concrete schedule of the fieldwork and a description of the way in which the survey data are analysed. The work plan is used in the field as a survey manual. If the tender complies with the following requirements, no work plan will be required and a reference to the tender will suffice. If no work plan has been drawn up, a separate safety plan is obligatory.

Process description

The creation of a work plan which serves as an implementation manual. The work plan includes the safety plan.

Products

- Work plan.

Actors

- The Medior Archaeologist draws up the work plan.
- The Senior Archaeologist checks whether the work plan complies with the Project Outline. If correct, the Senior Archaeologist will initial the work plan.

Requirements with regard to resources

The work plan should include the following. The agreements and procedures applicable to all the aspects must correspond to the contract in which the Project Outline is included.

Administrative data in accordance with VS06

Introduction

Formulation of the survey objective with a reference to the results (valuation/predictive model) of the desk-based assessment and to the Project Outline.

List of the people and bodies involved in the execution of the survey

- The persons that are intended to implement the survey.
- References to contacts, roles and responsibilities. List of subcontractors.

Plan with regard to consultations between the principal and executing party

- Schedule with regard to consultation structure.

Plan for the implementation of work in the field

- Description of the work, the survey structure and method. The suitability of a survey method is related to the research questions and the characteristics of the expected archaeological values.
- An indication of decision moments with regard to contract variations.

Schedule

The phasing of the survey and the products or services to be provided per phase:

- Staffing.
- Time.
- Resources.

Plan for the taking of samples

- Schedule relating to the taking of samples based on the Project Outline (per relevant category).
- Plan of action in the event of exceptional circumstances (for example consultations with an appropriate specialist).

Permits

Risk analysis

Safety plan

3.2.3 Field walking (VS02)

Explanatory notes

Field walking may be opted for if a reasonable case can be made for the fact that expected finds or contexts are located on or close to the surface and are visible at the time the survey is carried out. Field walking covers the inspecting of ploughed fields, grassland with molehills, cleared ditch sides and other uncovered areas.

If the degree of find visibility upon arrival at the survey area is worse than expected and it can reasonably be assumed that the survey will not produce any reliable results, the principal and possibly the competent authority should be consulted before field walking is started.

Process description

The collection and mapping of surface finds.

Products

- Distribution map.
- Finds.
- Field walking subreport, see also VS06.

Actors

- The Senior Field Technician and/or Junior Archaeologist will carry out the field walking.
- The Medior Archaeologist carries out the analysis of the field walking.
- The Senior Archaeologist checks whether the field walking has been carried out correctly.

Requirements with regard to resources

Implementation requirements relating to field walking

- The work is based on a predictive model (random check with prior knowledge). This means that the entire area in which one suspects archaeological values to be located has to be surveyed.
- During the work, the report must record which fields have been surveyed using which method.
- The location (x, y) of the find-spot, concentrations of finds within it, or exceptional finds or contexts can be determined in a number of different ways, each having its own degree of accuracy. In the report, precise information must be given about the method used to measure the location of find-spots and an indication of its margin of error. In the case of exceptional finds or contexts, the margin of error must not be more than 2m.
- The height in comparison to the Amsterdam Ordnance Datum can be determined in various ways: using a levelling device or a total station or by means of an estimate using topographical or contour maps. Reasons for the choice and registration of the method of working, with an indication of the accuracy, are essential and are to be recorded in the report.

- The distance between the survey lines of direction must be related to the dimensions of the expected site or structures. In the case of combinations of site types with different dimensions, the smallest dimension will be normative.
- Mark finds before collecting. In the case of concentrations, reduce the distance between the survey lines in order to determine the size and location of the site.
- Once measurements have been completed, collect the finds. The collection of material is subject to standards guideline OS03.
- Finds that are part of a concentration do not need to be measured individually, apart from exceptional finds. The degree of accuracy is related to the expected find-spot dimensions or the concentration and has to be substantiated.
- Non-exceptional finds (or dispersals thereof) which cannot be related to a site, should not be measured but must be registered (e.g. at plot level).
- In the case of large quantities of similar finds (type, nature or dating) a selection will be sufficient. The point of departure is nevertheless to collect sufficient material to allow statements on the nature, site type, size and dating of the location.
- Contexts and finds which are part of a concentration must always be measured. The degree of accuracy is related to the expected dimensions of the site or the concentration and has to be substantiated.

Requirements with regard to the distribution map

- The map is made at a suitable scale.
- The map is assigned a form of identification (see OS04).
- The map is assigned an orientation (arrow pointing north).
- The map includes an indication of scale.
- Symbols and abbreviations (see Table 3 and ABR).

3.2.4 Borehole survey (VS03)

Explanatory notes

A borehole survey may be chosen as the survey method if a reasonable case can be made for the fact that expected finds (or, in exceptional cases, contexts) or other indicators will be present and discernible in the borehole at the presumed depth. A borehole survey may entail working with different boring grids, different boring diameters, depths or observation methods (naked eye, sieving, etc). Borehole surveys can therefore be used not only for mapping and valuing archaeological find-spots, but also for landscape genetic surveys to refine the archaeological predictive model. This standards guideline does not apply to this type of survey.

Additional methods can be used to collect missing information for a valuation.

At the moment *Archaeological Guidance no 4* is available, to be used in the description of boring cores. In most cases, this will be sufficient.; in specific cases, the 'standard description of boring cores' (ASB) may be used. Both are based on NEN 5104.

Process description

Implementing a borehole survey.

Products

- Borehole descriptions.
- Borehole samples.
- Distribution map, if relevant.
- Borehole survey subreport (see also VS06).

Actors

- The Medior Archaeologist implements the borehole survey.
- The Senior Archaeologist checks whether the borehole survey has been carried out correctly.

Requirements with regard to resources

Implementation requirements relating to borehole surveys

- The work is based on a predictive model (random check with prior knowledge). This means that the entire area in which one suspects archaeological values to be located has to be surveyed.

- During the work, the report must record which areas have been surveyed using which method.
- The location (x, y) of the find-spot, concentrations of finds within this, or exceptional finds or contexts can be determined in a number of different ways, each having its own degree of accuracy. In the report, precise information must be given about the method used to measure the location of find-spots and an indication of its margin of error. In the case of exceptional finds or contexts, the margin of error must not be more than 2m.
- The height in comparison to the Amsterdam Ordnance Datum can be determined in a variety of ways: using a levelling device or a total station or by means of an estimate using topographical or contour maps. Reasons for the choice and registration of the method of working, with an indication of the accuracy, are essential and are recorded in the daily report.
- The distance between the survey lines and the individual borings must be related to the dimensions of the expected site or structures. In the case of combinations of site types with different dimensions, the smallest dimension will be normative.
- All borings must be assigned unique numbers.
- Measure all borings (maximum margin of error on horizontal plane 30 cm).
- Register in the field which type and diameter of auger has been used.
- Register observation method: naked eye, loupe, sieving (register mesh data).
- Describe boring cores according to the applicable standards (such as ASB). Analogue or digital registration of the description.

Requirements with regard to the distribution map

- The map is made at a suitable scale.
- The map is assigned a form of identification (see OS04).
- The map is assigned an orientation (arrow pointing north).
- The map includes an indication of scale.
- Symbols and abbreviations (see Table 3 and ABR).

3.2.5 Geophysical survey (VS04)

Explanatory notes

In the case of archaeological field evaluations, a choice can be made from different survey methods to test the archaeological expectation and value any archaeological sites. A geophysical survey can be chosen if a reasonable case can be made for the fact that the presence of archaeological material or structures in the soil is causing a measurable contrast. The geophysical method must be in keeping with the expected contrast. This standards guideline does not apply to metal detection.

Process description

Implementing a geophysical survey.

Products

- Rough data plots.
- Interpolated data plots.
- Geophysical survey subreport (see also VS06).

Actors

- The Junior Field Technician and/or Non-archaeological Specialist (geophysicist) will implement the geophysical survey.
- The Medior Archaeologist and/or Junior Specialist will analyse the geophysical survey.
- The Senior Archaeologist checks whether the geophysical survey has been carried out correctly.

Requirements with regard to resources

Implementation requirements relating to geophysical surveys

- The work is based on a predictive model (random check with prior knowledge). This means that the entire area in which one suspects archaeological values to be located has to be surveyed.
- During the work, the report must record which sites have been surveyed using which method.

- The grid spacing must be smaller than the smallest dimension of the structures included in the map.
- The location (local x and y) and the measured value must be recorded for each measurement. If a square grid is used, the coordinates of the corners of the grid must be displayed (national x and y). If lines are used, the coordinates of the starting and finishing points of the lines must be displayed (national x and y). If individual measurements are made, the location of each measurement must be recorded separately (national x and y).
- All the objects which may interfere with the measurements must be included in the map (e.g. cables and pipelines, paths, roads, trees). Moreover, in so far as visible, soil interventions or deposited material must be included in the map.
- The survey area relief must be recorded if this is used for the interpretation of the measurement data (in other words: if differences in height affect the measuring results). A relative height determination is sufficient.

3.2.6 Trial trenches and test pits (VS05)

Explanatory notes

The objective of trial trenches or test pits is to collect sufficient reliable data to be able to test the archaeological expectation and to make a valuation. The required information must be collected with a minimum of interventions.

For a field assessment by means of trial trenches and test pits, see also Archaeological Guidance no 1 (*Archeologische Leidraad 1: veldhandleiding archeologie*).

Process description

Digging trial trenches or test pits.

Products

- Field archive
- Finds and samples

Actors

- The Medior Archaeologist supervises the digging of the trial trenches or test pits and sets out the measuring system.
- The Senior Archaeologist checks whether the trial trenches or test pits have been dug correctly.

Requirements with regard to resources

Creating levels

1. Create level preferably stratigraphically.
2. When relevant the uncovered surface must be searched using a metal detector.
3. Drains should be left alone to avoid flooding of the trench and should be treated like cables and pipelines.
4. Clean the uncovered surface (manually or mechanised) so that it is legible and can be drawn.
5. Outline features before drawing starts.
6. Implement fixed benchmarks in the trenches in such a way that the base lines are no more than 3 metres apart.
7. If features are excavated, such must be done in accordance with OS05.
8. For further standards guidelines relating to excavations, see OS03 to OS11.

3.2.7 Final report (VS06)

Explanatory notes

The different parts of the assessment procedure, from formulating the research questions (archaeological expectation) to analysing the results, are recorded in a report. The report must contain a clear description of the method of working and the way in which the information was acquired. The report has to be verifiable with regard to the sources consulted. It also has to be possible to check how the archaeological expectation has been substantiated and why the chosen survey method was selected. The report should include the aspects mentioned below.

Process description

The compilation of the final report, taking account of the requirements described in the contract, which includes the Project Outline.

Products

- Final report.
- ISBN or ISSN-number.

Actors

- The Medior Archaeologist writes the final report.
- The appropriate Senior Specialists write the subreports relevant to their specialism.
- The Senior Archaeologist checks whether the final report has been written correctly. If correct, the Senior Archaeologist will initial the report and appendices.

Requirements with regard to resources

- Requesting ISBN or ISSN-number.
- The final report on an archaeological field evaluation will, as a minimum, contain:

Administrative data (general)

- Date.
- Principal.
- Executing party.
- Competent authority (municipal, provincial, or national government).
- National registration number (CIS-code).
- Location of survey area (municipality, place, toponym, at least four x/y coordinates).
- Period during which the survey was actually carried out.
- (Digital) map of survey area.
- Management and location of documentation.

Description of the survey assignment.

- A reference to the Project Outline.
- The research questions with regard to the survey area.
- The specified predictive model.
- Objectives and wishes of the principal.
- Preconditions (if applicable).

Method of working

- Description and substantiation of the chosen survey method.
- Accurate description of find visibility when compiling the surface map, using the following terms: good = ploughed and washed out; mediocre = ploughed, not washed out; poor = grassland, molehills, ditch sides.
- Density of the observation grid.
- In the case of a geophysical survey:
- Specification of equipment and software used.
- Equipment settings used:
- resistance meter: potential, voltage, configuration, electrode distance;
- magnetometer: sensor distance, sensitivity;
- EM 30 series: horizontal / vertical, in phase / quadrature, coil distance;
- ground-based radar: frequency and distance between antennas, time window).
- Description of the calculations made using the data.

Results

This section is a report of the survey results or the result of the assessment of the specified predictive model. The following have to be available as a minimum:

- map or maps showing the distribution of finds or indicators relating to field walking or borehole surveys;
- the lithological sections with an interpretation in the case of borehole surveys, in so far as archaeological indicators are present;
- in the case of geophysical surveys, at least a statement of the rough measurement data. These must include a clear indication of the range (minimum and maximum) of the measured values in the right units;
- a catalogue of dated sites and finds;

- a description of the find-spots: location, type of site, dating, depth, in text and map.

Valuation

- The valuation in accordance with the applicable standards guidelines (see VS07).

Selection recommendations, if applicable

- An advice on how to deal with the archaeological values within the set preconditions (Project Outline) (see VS08).

3.2.8 Standards guidelines relating to valuations (VS07)

Explanatory notes

The report of an archaeological field evaluation contains a valuation of the archaeological remains. It *may*, depending on the assignment, also contain selection recommendations but these may also be drawn up separately by an archaeologist from the government body involved.

The valuation is made in the prescribed manner on the basis of the data from an archaeological field evaluation. An assessment is made as to which elements are present which can be used in the valuation of sites and what their quality is. This information is then compared with what is already known on similar sites and/or information on the region and/or the same period.

The valuation as a product is primarily intended to be used by the principal.

Process description

The valuation is made in the prescribed manner on the basis of the data from an archaeological field evaluation.

Products

- Valuation.

Actors

- The Senior Archaeologist performs the valuation.
- The Senior Archaeologist checks whether the valuation has been carried out correctly.

Requirements with regard to resources

Guideline for carrying out a valuation

The valuation forms part of the final report and contains the results of the steps detailed below and the final conclusions concerning the preservation value of find-spots.

Introduction: the phases which make up the valuation process

The valuation process is carried out as a number of steps:

1. *Valuation on the basis of perception aspects*
In this step, monuments are valued on the basis of criteria which are important with regard to their perception value, that is their 'aesthetic value' and 'historical value'.
2. *Valuation on the basis of physical criteria*
This valuation is based on the criteria 'integrity' and 'preservation'.
3. *Valuation on the basis of intrinsic criteria*
In this step, monuments are valued according to their scientific importance. The scientific value is measured on the basis of four criteria: rarity, research potential, context value or group value and representativeness. This criteria are applicable to different spatial scale levels, both at the level of the individual monument and the level of areas in which a number of monuments are located. In addition, the archaeo-region (larger areas within which a certain relation exists in both a genetic and spatial sense between archaeology and landscape) can play an important role.

The following table is a systematic presentation of the criteria. The corresponding reference document describes the groups of steps in the valuation process and the valuation parameters.

Table 4. Valuation criteria and parameters

Values	Criteria	Parameters
Perception	Aesthetic value	- Visibility from the ground level as landscape element. - Form and structure. - Relationship with the environment.
	Historical value	- Connection with actual historical occurrence. - Association with attributed quality or meaning.
Physical quality	Integrity	- Presence of contexts. - Integrity of contexts. - Spatial integrity. - Stratigraphy intact. - Mobilia in situ. - Spatial relationship between mobilia themselves. - Spatial relationship between mobilia and contexts. - Presence of anthropogenic biochemical residue. - Stability of the natural environment.
	Preservation	- Preservation of artefacts (metal/other). - Preservation of organic material.
Intrinsic quality	Rarity	- The number of comparable monuments (assemblage types) of reasonable physical quality from the same period within the same archaeo-region whose presence has been established. - Idem, on the basis of a recent and specific predictive map.
	Research potential	- Excavation/research of comparable monuments within the same archaeo-region (less/more than 5 years ago; complete/partial). - Recent and systematic research in the archaeo-region concerned. - Recent and systematic research of the archaeological period concerned. - Relevance for current research programmes according to the National research Agenda
	Group value	- Synchronic context (presence of monuments from the same period within the micro-region). - Diachronic context (presence of monuments from consecutive periods within the micro-region). - Landscape context (physical and historical-geographic integrity of the contemporary landscape). - Presence of contemporary organic sediments in the immediate surroundings.
	Representativeness	- Characteristic for a certain area and/or period. - The number of comparable monuments of reasonable physical quality from the same period within the same archaeo-region whose presence has been established and whose preservation is guaranteed. - Idem, on the basis of a recent and specific predictive map.

Reference document for the valuation of a site

The valuation process

The following is a short and diagrammatic portrayal of the process that leads to a valuation, first as text and then in a flow diagram (for an earlier publication of this process, see J. Deeben *et.al.*, Proposals for a practical system of significance evaluation in archaeological heritage management, *European Journal of Archaeology* 2.2, 1999, p. 177-199).

In the first place, an assessment is made as to whether monuments can be typified as worth preserving due to their perception value, on the basis of their aesthetic value or historical value.

The physical quality of the monuments is then assessed. A monument is, in principle, designated worth preserving on the basis of physical quality if the criteria of integrity and preservation together produce an above-average score (five or six points).

The assessment of physical quality is related to the archaeo-region in which the site is located, so that the preservation condition can be examined in relation to other relevant sites. For example, an inhumation grave in the Pleistocene part of the Netherlands which does not contain any bone material but in which a corpse silhouette is present will be assigned a high score, while the absence of bone material in such graves in the Holocene part of the Netherlands - where the presence of bone material is to be expected - will result in a low valuation.

In the case of a medium to low score (four points or less), the intrinsic quality criteria will be examined in order to determine whether the plot is worth preserving. If it is expected that a high score will be assigned to one of the intrinsic criteria, the monument will also, in principle, be regarded as being worth preserving. This 'safety net' is intended to ensure that plots with limited physical quality, but which are nevertheless important from the research point of view, score too low and are dropped from further assessment.

Monuments which are designated as worth preserving on the basis of their physical quality are then valued according to their intrinsic quality.

- First of all, an assessment is made on the basis of the first three intrinsic quality criteria; rarity, research potential and group value. In the event of an above-average score of seven points or more, the monument will be designated as worth preserving.
- Once this assessment has been made, a decision will be taken in the case of monuments with a lower intrinsic value (less than seven points) as to whether the criterion of representativeness applies. If so, a proposal will be submitted for a selection of monuments worth preserving to be made per category.
- The other monuments have no preservation value.

Table 5. Valuation score table

Values	Criteria	Scores		
		High	Medium	Low
Perception	Aesthetic value	No score applicable		
Physical quality	Integrity	3	2	1
	Preservation	3	2	1
Intrinsic quality	Rarity	3	2	1
	Research potential	3	2	1
	Group value	3	2	1
	Representativeness	Not applicable		

Despite the fact that in the case of some monuments (e.g. on the basis of perception) the preservation value is determined at an early stage of the valuation process, it is essential to assign scores to the other variables. This is to be able to determine the possible group value of other sites and/or the representativeness.

The assessment procedure can be represented in a flow diagram as follows (the process within the box is the valuation, followed by the selection recommendations):

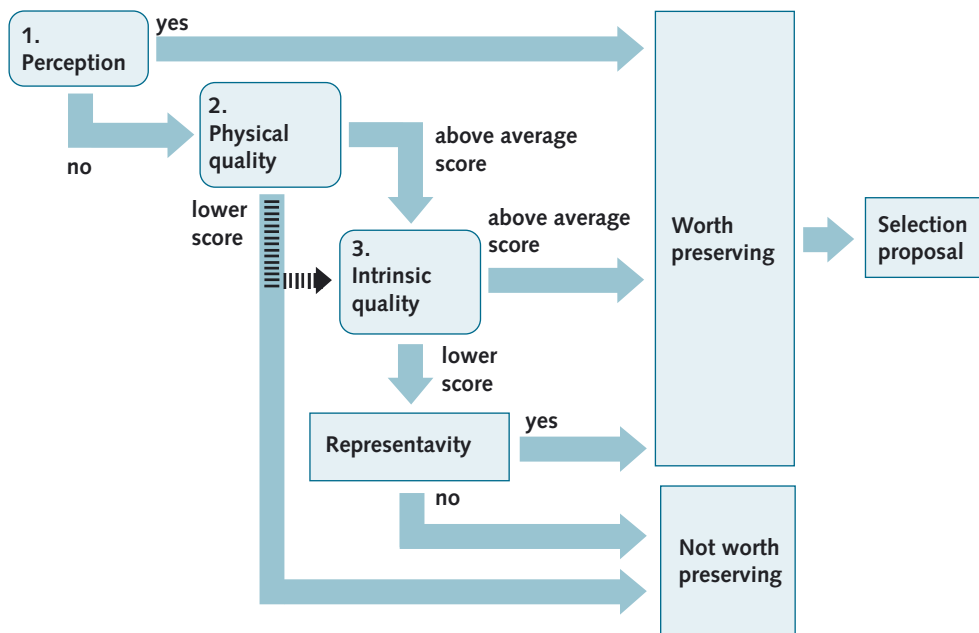


Fig. 4 Valuation criteria

Operationalisation of the valuation criteria

This paragraph explains the operationalisation of the approach shown in the above diagram. All the criteria are defined and discussed in more detail. Thereafter, attention is focused on the valuation, implemented by means of a valuation system. To achieve this, a measurement value is assigned to most of the criteria. In order for an assessment to be made, an interval scale is used whereby measurement values (scores 1, 2 or 3) are assigned to the scores 'low', 'medium' and 'high'.

Valuation on the basis of perception aspects

The perception value of an archaeological monument can be divided into two criteria: 'aesthetic value' and 'historical value'. Both apply primarily to visible monuments.

Aesthetic value The aesthetic-landscape value of an archaeological monument, expressed as the visibility of the monument.

Parameters

- Visibility from the ground level as landscape element.
- Form and structure.
- Relationship with the environment.

Operationalisation

The focus of this criterion is the outward appearance, aspects such as visibility, landscape element, cohesion with other (visible) monuments or landscape elements and the landscape entourage.

In historical town centres, this can be interpreted as structures which form an aboveground reflection of the structure in the 'soil archive' and in effect can be regarded as aboveground archaeology (history of building construction). Examples are historical parcellation, street patterns, etc.

This valuation criterion is especially important because it, in effect, has to do with the visual representation of the otherwise invisible archaeological evidence.

Visually perceptible monuments are a visible reminder of the past and must therefore be preserved wherever possible, even if, in certain cases, the scientific importance is minor. In the Netherlands, visible archaeological monuments, both in the form of 'positive' (above the ground) and 'negative' (dug out) relief, are relatively scarce.

Despite the fact that these monuments should be preserved, it is essential, particularly with a view of making the right decisions, to score the following valuation criteria as well.

Historical value The 'recollection' of the past that an archaeological monument invokes.

Parameters

- Connection with actual historical occurrence.
- Association with attributed quality or meaning.

Operationalisation

There are monuments which are linked to a living memory of the past. The fact that these exist usually indicates that the monument is visible, but this is not, by definition, essential. A location without visible remains can also continue to exist as 'lieu de memoire'. There are a number of different forms:

- There is a category that is directly linked to historical events. These are usually monuments that are not that old, the memory of which is still alive. In a number of cases, these are monuments whose links with earlier historical events have been established through excavation and/or other research.
- A second category concerns monuments that are not linked with actual historical events but which are traditionally associated with folk tales and legends, to which a religious significance is assigned or which, for other reasons, play a role in people's perception of the landscape.

Both categories relate to monuments with regard to which the historical value can be determined explicitly. This can be an argument for preservation. These monuments are also subjected to the various valuation steps during which the physical and intrinsic quality is assessed.

In urban areas, the monuments are valued in the same way.

The creation of public support for the protection of archaeological monuments is generally achieved in practice by presenting the monuments with a high perception value as examples. These monuments are then also symbolic for the many invisible archaeological monuments.

Valuation on the basis of physical criteria

Physical quality The extent to which archaeological remains are still intact and present in their original position. Within this value, a distinction is made between the criteria *integrity* and *preservation*. In the case of the criterion of integrity, the stability of the physical environment also has to be clarified. In particular under water, the integrity of a find-spot can change rapidly due to natural processes (principally currents).

Integrity The extent to which the monument has been disturbed and the stability of the physical environment.

Preservation The extent to which archaeological find material has been preserved.

Parameters

Criteria applicable to integrity:

- Presence of features.
- Integrity of features.
- Spatial integrity.
- Stratigraphy intact.
- Mobilia in situ.
- Spatial relationship between mobilia themselves.
- Spatial relationship between mobilia and contexts.
- Presence of anthropogenic biochemical residue.
- Stability of the natural environment.

Criteria applicable to preservation:

- Preservation of artefacts (metal/other).
- Preservation of organic material.

Operationalisation

An archaeological field evaluation enables data to be collected on the physical condition of monuments. In the process an insight is acquired, on the one hand, into the quality-determining preconditions (for example soil structure, groundwater level, etc.) while, on the other hand, concrete information is acquired on the presence, quantity and quality of archaeological information sources and the size of the monuments concerned.

Valuation on the basis of intrinsic criteria

Once the above-mentioned steps in the valuation process have been completed it will be clear which archaeological monuments are worth preserving on the basis of their visibility or, in principle, on the basis of their physical condition. This is followed by a valuation on the basis of intrinsic quality.

The following criteria are relevant:

- a. Rarity value
- b. Research potential
- c. Group value
- d. Representativeness

Rarity The extent to which a certain type of monument is (or has become) scarce for a period or in an area.

Parameters

- The number of comparable monuments of reasonable physical quality from the same period within the same archaeo-region whose presence has been established.
- Idem, on the basis of a recent and specific predictive map.

Operationalisation

Rarity is a relative concept. The assessment of rarity rests on current insights into the content and composition of the soil archive. Rarity is assessed as 'low' (score 1) if in the region/town concerned, a large number of similar monuments from the same period have been preserved which are in a comparable or better condition. This can be determined on the basis of available data (e.g. an inventory) and on the basis of an expectation, provided such is based on a recent and specific predictive map.

Rarity is assessed as 'high' (score 3) if the monument is unique or if no, or hardly any, comparable monuments have been preserved in the region concerned. In the other cases, the 'medium' score will apply.

Research potential The significance of a monument as a source of knowledge about the past.

Parameters

- Excavation/study of comparable monuments within the same archaeo-region (less/more than 5 years ago; complete/partial).
- Recent and systematic study of the archaeo-region concerned.
- Recent and systematic study of the archaeological period concerned.
- Relevance for current research programmes of university departments or ROB.

Operationalisation

The research potential is determined by *the extent to which* (excavating) the monument may generate new knowledge about the past.

The research potential is partially determined by the group value.

The research potential of a monument is determined by means of a score that is based on an analysis of lacunae in knowledge and current research objectives.

In the first instance, the current state of research relating to comparable monuments from the same period in the same (archaeo-) region is a determining factor. Different types of knowledge lacunae may be distinguished, which may or may not occur in combination:

- 1 geographical knowledge lacunae: white areas on the archaeological map, that is areas about which little evidence is available;
- 2 chronological knowledge lacunae: ages and/or periods about which we still poorly informed;
- 3 intrinsic or thematic knowledge lacunae: these are related to a wide range of aspects relating to the (pre)history of the Netherlands.

If rarity is assessed as 'high', the research potential will generally also be 'high'. The other scores may differ: knowledge lacunae may also occur in the case of common types of monuments while, on the other hand, a monument that is assigned an average score with regard to rarity may belong to a category about which a great deal of information is available.

Group value The added value assigned to a monument on the basis of the extent to which there is an archaeological context and a landscape context.

Parameters

- Synchronic context (presence of monuments from the same period within the micro-region)
- Diachronic context (presence of monuments from consecutive periods within the micro-region)
- Landscape context (physical and historical-geographic integrity of the contemporary landscape)
- Presence of contemporary organic sediments in the immediate surroundings

Operationalisation

Archaeological context relates to the presence and the research potential of other sources of archaeological information present in the vicinity. The emphasis is on the following:

- whether more monuments from the same archaeological period are located in the vicinity which would make inter-site analysis possible;
- whether there are monuments from a number of periods which would make it possible to study development aspects.

In an urban area, there is almost always a strong archaeological context present within the historical centres. The extent to which this is the case in previously outlying areas, that are now incorporated into the urban centre, may vary.

Landscape context is the extent to which the original landscape is still present and/or discernible. In this context, the presence of organic sediments in a monument's vicinity is important. These elements make a substantial contribution to the possibilities for surveying former landscapes and land use.

In the urban area, the landscape context, leaving aside exceptions, is either not applicable or has largely been lost and is therefore of very low value. If this concept is interpreted as urban landscape, the valuable areas are included in the historical town centres.

The group value is determined on the basis of the 'immediate surroundings'. The (archaeo-) region as a whole is not relevant but rather the archaeological landscape structure. A point for attention in this context is the archaeological result of the interaction between the countryside and town (historical town centres). The division of tasks within the archaeological heritage management system means that the archaeological monuments in the urban area are generally valued by the local authority while the surrounding countryside is usually valued by the provincial or national government. One has to be alert to the fact that this may result in the above-mentioned interaction being undervalued.

The group value is determined on the basis of both contexts. In principle, the basis used consists of the results of the archaeological field evaluation (a desk-based assessment may occasionally provide sufficient information). This information is examined in combination with supplementary data on the environment or the expectation thereon, based on the Indicative Map of Archaeological Values (IKAW) and/or other predictive maps. This comparison provides the basis for an assessment of the landscape context and may provide additional points for consideration when assessing the archaeological context. If the two contexts are no longer sufficiently present, the group value is valued as being 'low', if one or both are not, or no longer, present or has been substantially harmed, the assessment will be 'medium' and if both are still available to a large extent, the valuation will be 'high'.

Representativeness The degree to which a certain type of monument is typical of a period or an area.

Parameters

- Characteristic for a certain area and/or period.
- The number of comparable monuments of reasonable physical quality from the same period within the same archaeo-region whose presence has been established and whose preservation is guaranteed.
- Idem, on the basis of a recent and specific predictive map.

Operationalisation

As regards the intrinsic value assessment, the criterion of representativeness is also important although this is only relevant if, during the execution of the valuation, it is suspected that the monument can be sustainably preserved.

The value of the assessment of the representativeness increases as more information becomes available on comparable monuments from the same period and the same area. If there are a lot and quite a lot is known about them, means that such monuments will not usually be considered for selection on the first three intrinsic criteria (rarity, research potential and group value).

In order to make a balanced random selection a valuation must, in principle, take place on the basis of representativeness - using an inventory per archaeo-region/area/town.

Valuation in urban areas

In an urban area there will be circumstances that complicate assessments according to the procedure to be implemented.

- There will usually be no opportunity to proceed in accordance with the steps described in the previous paragraphs. Often there will not be any space for an archaeological field evaluation and the IKAW or other predictive maps will usually not be available for urban areas.
- The economic pressure on the land in an urban area is often high.
- The value of archaeological plots in urban areas is often linked to the historical development of the town. In most instances, monuments (houses, churches, walls, etc.) and structures (squares, canals, streets, etc.) will have been preserved and will be visible from this period which, from the archaeological point of view, is relatively recent. The valuation of the archaeological plots cannot therefore be regarded separately from these simultaneous or successive phenomena, in casu the entire (historical) urban context.

This last point clearly demonstrates that, in an urban area, a distinction has to be made between the historical town centres on the one hand and the rural area that was developed after about 1850 on the other. Despite the additional complications, the valuation of the sites in this last area will be implemented in accordance with the criteria as discussed in the previous paragraphs.

Wherever the focus is on historical town centres, it can be assumed that these areas harbour a coherent conglomerate of archaeological values. In that respect, the historical town centres are, in principle, worth preserving. The AMK can serve as a basis for the location of the historically important town centres.

At a micro level, valuations can also be made within historical town centres as well. Some of the applicable criteria - particularly the physical criteria - will not, in principle, differ from the generally applicable criteria. In the case of the intrinsic criteria, however, extra nuances may apply in towns. It goes without saying that this is only possible if one has a proper insight into the archaeological evidence - including disruptions - at micro level as well as information on the historical development, the location of exceptional buildings, etc. In this way, a map of archaeological monuments worth preserving in a historical city centre can be drawn up.

3.2.9 Standards guideline relating to selection recommendations (VS08)

Explanatory notes

After the site has been valued, selection recommendations can be drawn up if desired.

Government archaeologists should make a strict distinction between the selection recommendations and any other recommendations they are asked to provide. The selection recommendations are intended to be used by the government body concerned.

Process description

After the sites have been valued, the archaeological contractor can, if that was included in the Project Outline, draw up selection recommendations. The selection recommendations will further detail the choices made, based on archaeological arguments.

Products

- Selection recommendations.

Actors

- The Senior Archaeologist draws up the selection recommendations.
- The Senior Archaeologist checks whether the selection recommendations have been correctly drawn up.

Requirements with regard to resources

The selection recommendations must provide reasons for the choices to be made. They may include:

- A description with reasons, in the event that preservation is recommended.
- The research objectives, in the event that an excavation is recommended.
- The recommendations have to take account of the approved archaeological policy (for example, the priorities set) of the government body that grants the permit and of other government bodies (higher or lower) in the area concerned.
- *It is not permitted to take account of other policy choices or priorities:* such a consideration is part of the selection decision and is reserved for the responsible government body itself.

3.2.10 Registering the project - Field evaluation (RS01)

Each project must have a unique registration number that is used in all documents. This should preferably be requested from the CIS at the start of the project.

Process description

The start of the project is reported to the CIS. The system issues a unique registration number (CIS code). This code is reported to the depot where finds, samples and the archive are to be deposited.

Products

- Administrative data.
- Registration number (CIS-code)

Actors

- The Senior Field Technician and/or Junior Archaeologist will register the project with the CIS.
- The Medior Archaeologist checks whether the project has been correctly registered and if a CIS code has been obtained.

Requirements with regard to resources

Administrative data relating to registration

- Date on which project is registered.
- General boundaries of survey area (at least four x/y coordinates).
- Toponym (if applicable).
- Place.
- Municipality.
- Province.
- Principal.
- Executing party.
- Competent authority (national, provincial or municipal government).
- Name of expert on behalf of competent authority.
- Type of project (desk-based assessment, archaeological field evaluation, protection, watching brief, excavating).
- Plan of Approach (if present).
- Topographical map (at least 1:10.000).
- Estimated time reserved for the project.
- Motivation.
- Type of site.

The system issues a unique registration number to the archaeological contractor.

3.2.11 Supply of preliminary data – Field evaluation (RS06a)

Explanatory notes

No more than 2 weeks after completion of the field work, the preliminary result data is reported to the Central Information System on a form as determined by the ROB (so-called Archis-notification). It is possible to do this online.

Process description

The relevant result data is supplied to the central information system no more than 2 weeks after completion of the fieldwork.

Products

- Reference data.
- Observations.

Actors

- The Junior Archaeologist supplies the relevant result data to the central information system.
- The Senior Archaeologist checks whether the relevant result data has been supplied by checking the CIS confirmation of receipt.

Requirements with regard to resources

Project results (if applicable)

- National registration number (previously issued unique registration number).
- Dates on which project was started and completed.
- Outer boundaries of the survey area (at least four x/y coordinates), differentiated into subsurveys according to the survey method used (borehole survey, geophysical survey, trial trenches or test pits).
- (Digital) map of project area.
- Surface area of the project.
- Depth of survey under surface level.
- Observations pertaining to the project (see below).
- Textual summary of the field evaluation results including a description of the research questions.

For separate areas within the survey area

- Surface area of the subsurvey.
- Survey method.
- Number of borings (if applicable).
- Depth of subsurvey under surface level.

Data to be registered per observation (in ARCHIS II format)

- Topographical Map page no.
- x coordinate.
- y coordinate.
- z coordinate.
- Accuracy of coordinates (in m).
- Toponym (if applicable).
- Place.
- Municipality.
- Province.
- Date of find.
- Finder.
- Describer.
- Survey method.
- Find acquisition (e.g. field walking, excavation).
- Depth to which the survey was carried out.
- Description of findspot (from ground level).
- Find distribution.
- Geomorphology/landscape form.
- Land use (condition at ground level).

- Height of ground level (in relation to Amsterdam Ordnance Datum).
- Depth of find with regard to ground level.
- Soil profile (intact/disrupted).
- Texture of finds level.
- Data/documentation storage location.
- Finds/collection storage location.
- Available literature on the find/feature.

- Most important categories of finds, samples and features.
- number of finds per serial number;
- condition of the find;
- material: raw material of the find;
- description of determination, terminology according to ABR;
- dating (see list 1 pertaining to ROB find registration form);
- assemblage (see list 2 pertaining to ROB find registration form);
- clarification: supplementary information.
- Description: summary of excavation data.
- Sketch: topographical or cadastral subsurface.

Reference data

- Management and location of archive and finds (reference to depot at which the finds are stored, reference to the location at which the documentation is archived, reference to the full report).

3.2.12 Transfer of project data – Field evaluation (RS06b)

Process description

The relevant result data are supplied to the CIS.

Products

- Report.
- Reference data.
- Additional data.
- Observations.

Actors

- The Junior Archaeologist supplies the relevant result data to the CIS.
- The Senior Archaeologist checks whether the relevant result data have been supplied by checking the CIS confirmation of receipt.

Requirements with regard to resources

Data relating to project results:

- Report (2 copies).
- National registration number (previously issued unique registration number).
- Date on which project was completed.

Reference data

- Management and location of archive and finds (reference to depot at which the finds are stored, reference to the location at which the documentation is archived, reference to the full report).

3.2.13 Transfer of digital data (RS11)

Process description

The relevant result data are supplied to the CIS (controlled by ROB).

Products

- Digital data.
- Reference data.

Actors

- The Junior Archaeologist supplies the digital data to the CIS.
- The Senior Archaeologist checks whether the digital data have been supplied by checking the CIS confirmation of receipt.

Requirements with regard to resources

Reference data

- Indication of the depot where finds are curated, place where the archive is stored and reference to the full report.

Data at transfer

- National registration number.
- Files archive, to be delivered on CD-rom with an index to the files. High quality CD-rom must be used.

File formats

- | | |
|-------------|---|
| • Texts | MS Word (Windows 95 or higher), ASCII |
| • Databases | MS Access (Windows 95 or higher), ASCII |
| • Images | TIFF or JPEG |
| • Drawings | DXF |
| • GIS | ARC/View shapefile |

4 PHYSICAL PROTECTION

4.1 Description

4.1.1 Objective

The objective of physical protection is to preserve archaeological sites. The aim is to prevent the (further) deterioration of archaeological sites and - if possible - repair any damage caused.

4.1.2 Various methods of protection

There are two different forms of protection, namely administrative protection and physical protection. Ideally, all sites which *can* be preserved will be covered by some form of administrative protection supplemented by physical protection measures. The type of administrative protection depends on political decision-making. The physical protection measures required are determined per site. Sometimes conservation work, curatorial management and monitoring will be necessary. Sometimes adequate management will be all that is required.

Administrative protection

Various forms of administrative protection are:

1. Statutory protection on the basis of the Historic Buildings and Ancient Monuments Act;
On the basis of the Historic Buildings and Ancient Monuments Act, the Minister of Education, Culture and Science, whether requested to do so by interested parties or not, will designate immovable monuments as protected. The consequence of such a designation is that it is forbidden to damage, alter or destroy the monument.
2. Legal protection on the basis of a listed buildings and ancient monuments bye-law;
Local and provincial authorities can designate sites as municipal or provincial monuments by means of a listed buildings bye-law. The consequence of such a designation is that it is forbidden to damage or destroy the monument, or to alter it without a permit.
3. Planning protection.
Planning protection is provided by assigning to the monument a suitable designated use in the zoning plan (thereby also giving it legal status) and by including a construction permit system in the regulations. A site can be designated as an 'archaeological area or archaeologically important place'. More often, a site is protected by means of a so-called double designated use or shared designated use as included in the regulations, for example in the form of the double designated use 'agricultural use' and 'archaeologically important area').

Physical protection

Physical protection is an approach aimed at preventing the (continued) deterioration of archaeological sites and – wherever possible – repair any damage caused. In doing so, measures are taken which have an active/physical bearing on the situation the monument is in. Conservation measures, management measures and monitoring are the physical protection instruments. These measures are based on a Project Outline.

Implementation of a conservation design

The objective of conservation measures is to create the most favourable preconditions for sustainable preservation; they are reversible. The term reversibility indicates the extent to which the physical protection measures implemented can be reversed. The conservation measures may not cause damage to the monument. The aim is maximum reversibility.

Conservation measures are taken to mean all *one-off* protective measures that are necessary to:

- prevent (further) damage to the archaeological site (stabilisation);
- make the archaeological monument more visible/recognisable and accessible (accessible for visualisation, tourism and recreational purposes);
- repair damage to the archaeological monument (restoration);
- create a restricted area (buffer zone around the monument with – or a border zone without – legal restrictions)

Management

Management measures are taken to mean all curatorial measures taken *regularly*, which are necessary to ensure that archaeological sites which are in good condition stay that way. Management comprises field inspecting, maintaining and possibly monitoring.

Field inspecting

Field inspecting is taken to mean the periodical examination, either visually or using simple appliances, of the condition of the monument during the management period.

Maintaining

Maintaining means the expert, judicious and careful execution of small-scale tasks in order to ensure that archaeological monuments remain in a good state of repair.

Monitoring

Monitoring means the measuring of the physical condition of a monument with regard to certain, pre-determined aspects using suitable means and within an agreed period, with the aim of acquiring insight in the effectiveness of the measures taken. Monitoring is scientific research within the framework of archaeological heritage management. It allows more detailed decisions to be taken in the future.

4.1.3 Gaps in knowledge

The knowledge relating to physical protection is primarily based on the experience acquired during recent years with the conservation and the management of a limited number of monument types and principally with regard to visible monuments. This knowledge is as yet insufficient to provide more detailed information relating to the conservation and management of other monument types. A lot more usable data will have to be collected in the future, particularly with regard to the determination of the standards for the permissibility of, for example, subsidence resulting from a monument being used or changes to the groundwater level in the monument's immediate or wider surroundings. These data are to be acquired by, for example, monitoring. It is essential for the protection of the archaeological heritage in the (near) future that the monitoring data are managed and analysed centrally (CIS).

The requirements and guidelines relating to protection should therefore not be regarded as a 'fixed' product, but as provisional and stillweg? underdeveloped indications because our knowledge is still growing.

4.1.4 Process

The protection process comprises the following subprocesses:

1. drawing up the conservation design;
2. drawing up the management plan;
3. implementation of the conservation design;
4. implementing curatorial management.

In most cases, all the process steps will apply. In some cases, implementation of a conservation design will not be required and management tasks can be started immediately. Process steps 1 and 3 can then be omitted.

In most cases, drawing up the conservation design and the management plan will be two separate process steps. However, in some cases, drawing up both may constitute a single stage in the process, whereby the conservation design and the management plan will be connected and attuned to each other. This is represented by the loop in the process diagram.

Preparing the conservation design

A conservation design is drawn up by a (civil) designer on the basis of the Project Outline (established by the competent authority) and supplementary preconditions. The supplementary preconditions are necessary in order to guarantee the archaeological quality. The (civil) designer submits the conservation design to the principal who passes it on to the competent authority.

Preparing the management plan

A management plan is drawn up by a Senior Archaeologist on the basis of the Project Outline (established by the competent authority), supplementary preconditions and (if available) the conservation design. The Senior Archaeologist submits the management plan to the principal who passes it on to the competent authority.

Implementation of the conservation design

The conservation design is implemented on the basis of the approved conservation design. The implementation work will have been completed once the conservation design has been implemented in accordance with the Project Outline and the supplementary preconditions, and after consultations have been held with the principal and the competent authority.

Implementing curatorial management

The curatorial management, field inspection, maintenance and, if relevant, monitoring tasks will be implemented on the basis of the approved management plan. The management plan may possibly be adjusted on the basis of results from the monitoring and inspection tasks. These results may also lead to requirements of additional conservation measures.

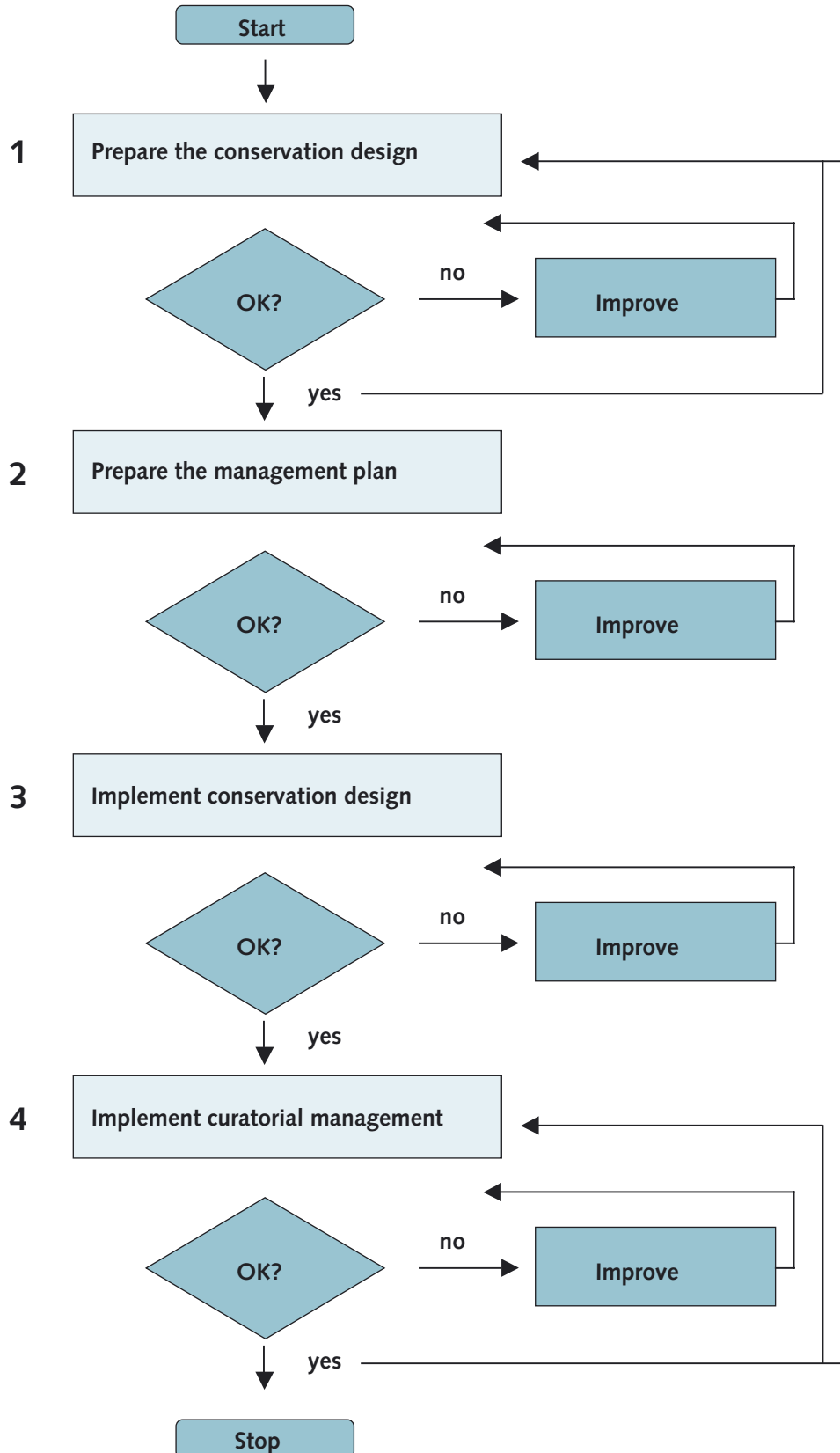
4.1.5

Actors

Physical protection
Job
Junior Archaeologist
Medior Archaeologist
Senior Archaeologist
Junior Specialist
Senior Specialist
Senior Field Technician
Excavation Worker
Non-archaeological Specialist
Land Surveyor
(Civil) Designer
Site Manager

4.1.6 Process diagram for physical protection and accompanying description

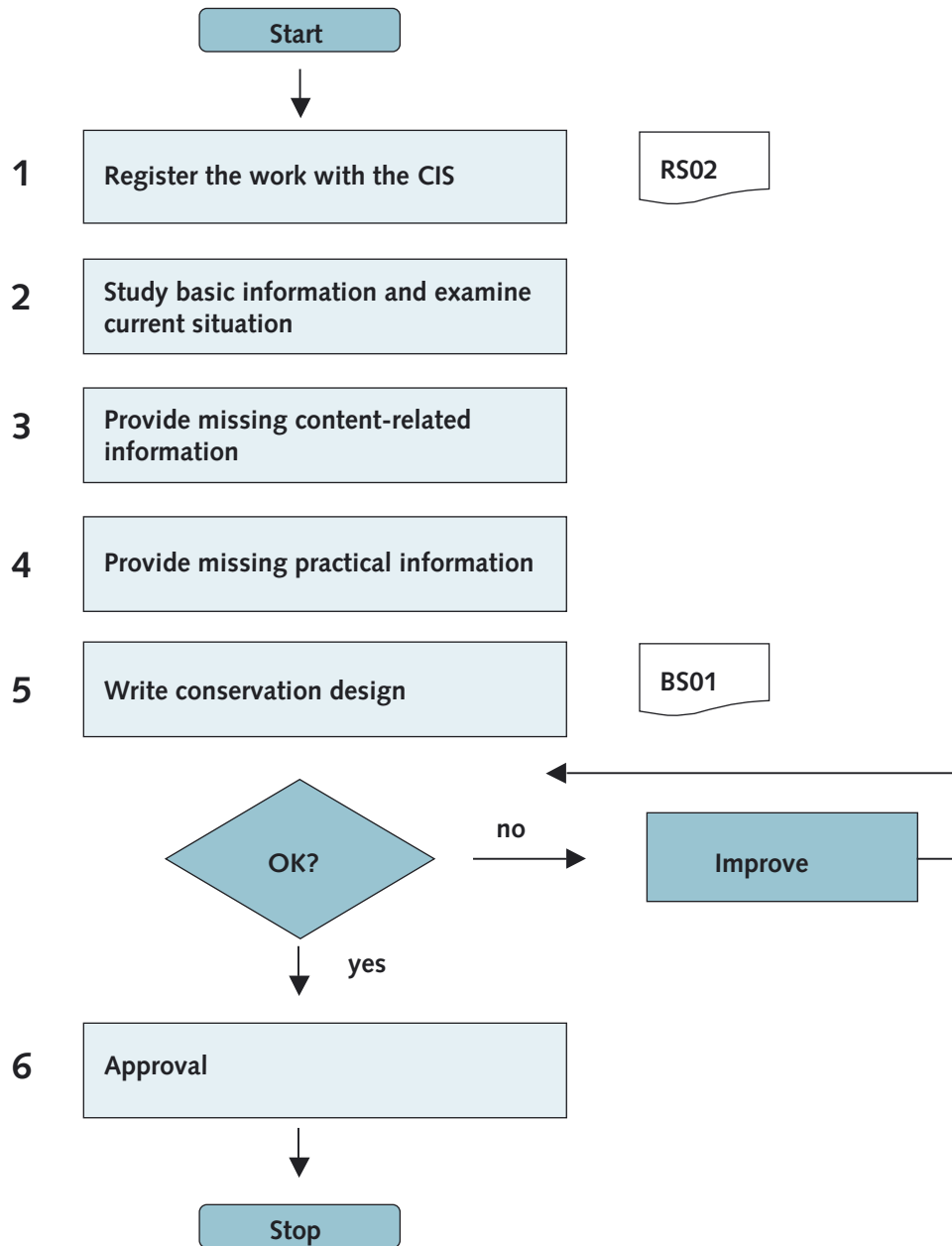
General description of the protection process



General description of the protection process

No.	Activity	Procedure/description
1	Prepare the conservation design	A conservation design is drawn up by a (civil) designer on the basis of the Project Outline, the preliminary process and supplementary preconditions.
OK	CHECK	
	IMPROVE	
2	Prepare the management plan	A management plan is drawn up by a Senior Archaeologist on the basis of the Project Outline, supplementary preconditions and (if available) the conservation design. Monitoring may be included as an aspect of the management plan. A check will be carried out as to whether the conservation design and management plan correspond.
OK	CHECK	
	IMPROVE	
3	Implement the conservation design	The approved conservation design is applied to the monument. This will involve the execution of work in accordance with the conservation design, the documenting of work carried out and of stray finds, and completion.
OK	CHECK	
	IMPROVE	
4	Implement curatorial management	The regular field inspection and maintenance of the monument on the basis of the management plan that has been drawn up and, for the period provided for, the execution of monitoring tasks. Monitoring and field inspection may lead to adjustment of the management plan or to additional conservation work. <i>Step 4 will be repeated until the monument no longer exists.</i>
OK	CHECK	
	IMPROVE	
	STOP	End of the process.

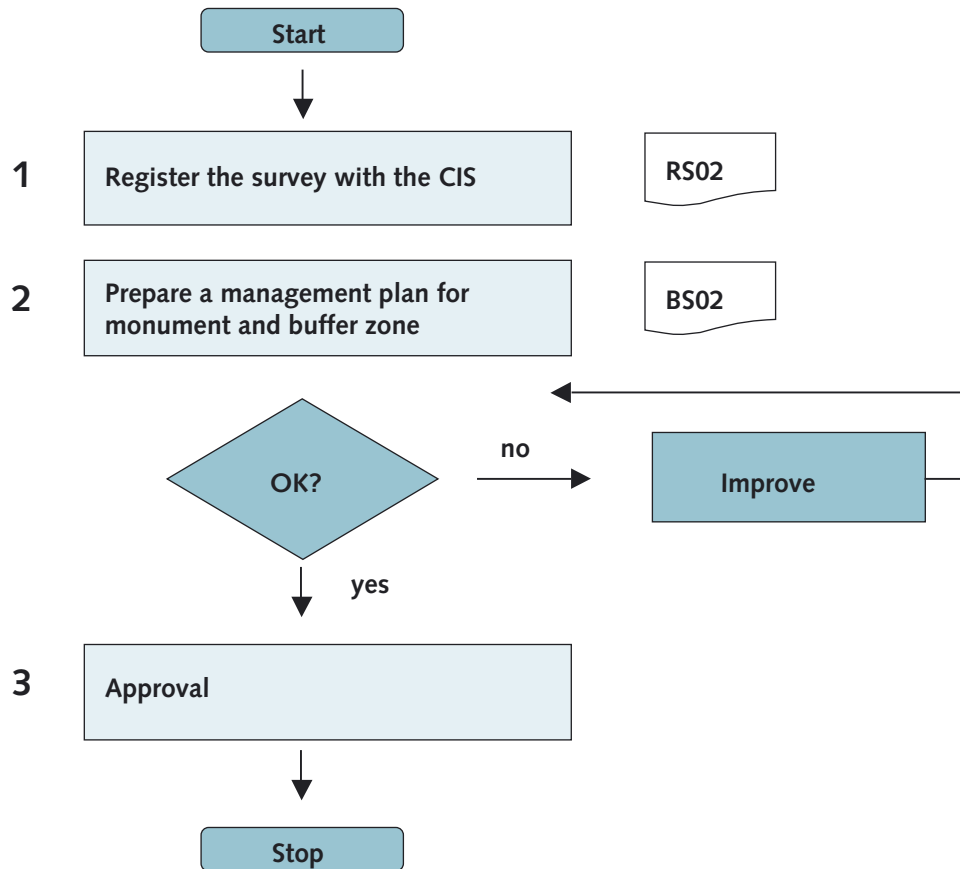
Step 1: Prepare a conservation design



Step 1: Prepare a conservation design

No.	Activity	Procedure/description	Actor	DOC
1	Register the work with the CIS	Notification of the start of the conservation work and application for a registration number at the CIS	Senior Field Technician/ Junior Archaeologist	RS02
2	Study basic information and examine current situation.	The data and basic information acquired during the preliminary process are studied. Examining the current situation by means of a field visit designed to acquire insight into the landscape context.	(Civil) Designer	Project Outline and pre-conditions
3	Provide missing content-related information	Fill gaps in content-related knowledge as required for the drawing up of a conservation design. For example, a limited field evaluation.	Senior Archaeologist	Arch. field evaluation guidelines
4	Provide missing practical information	Fill gaps in practical knowledge as required for the drawing up of a conservation design in accordance with the guidelines to be developed. For example subsidence, load-bearing capacity, etc.	Non-archaeological Specialist	National guidelines specialism
5	Write a conservation design	Writing the conservation design for monument and buffer zone on the basis of the Project Outline and supplementary preconditions.	(Civil) Designer/ Senior Archaeologist	BS01
OK	CHECK	Section 1.1 is checked by a Medior Archaeologist. Sections 1.2 to 1.5 are checked by a Senior Archaeologist. The Senior Archaeologist checks whether the conservation design complies with the Project Outline and supplementary preconditions. If correct, the Senior Archaeologist approves the conservation design by signing/initialling it.		
	IMPROVE	(Civil) Designer/Junior & Senior Archaeologist/ Senior Field Technician/Non-archaeological Specialist		
6	Approval	The conservation design is submitted for approval to the competent authority. The conservation design is assessed against the Project Outline.	Senior Archaeologist	Project Outline and agreements
	STOP	End of the process.		

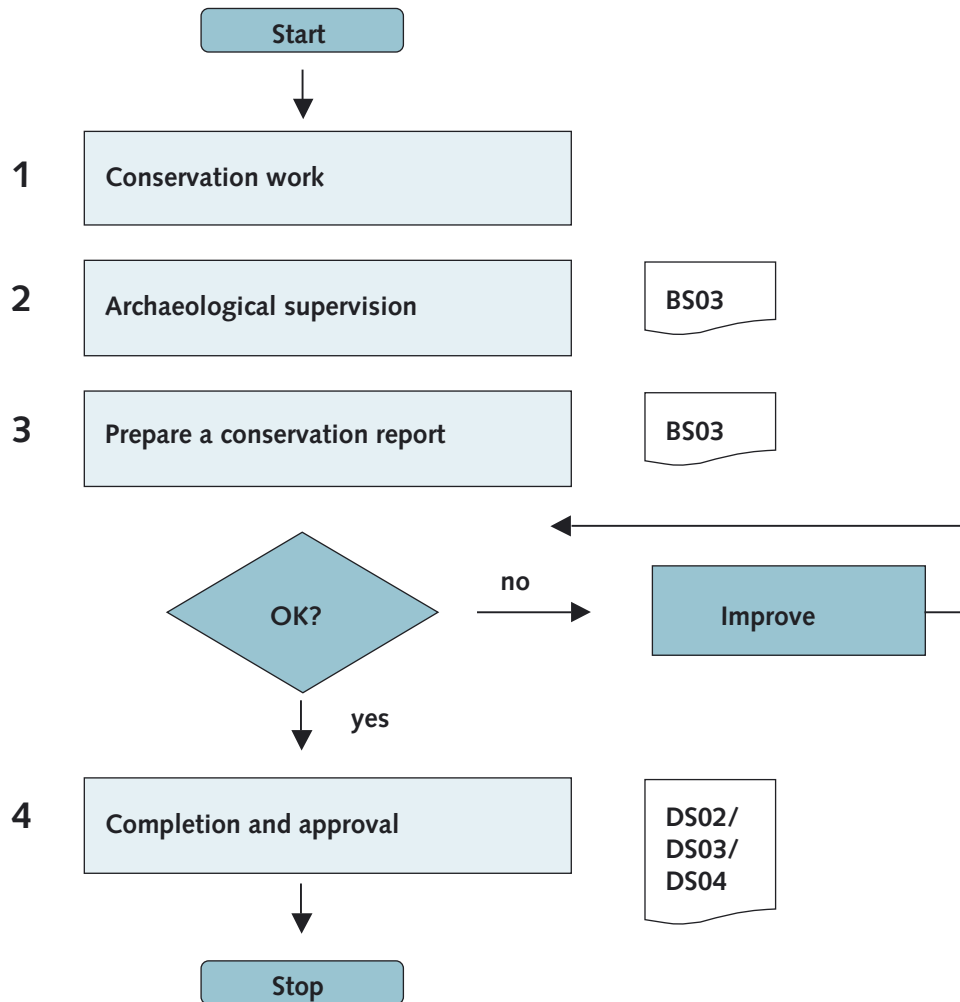
Step 2: Prepare a management plan



Step 2: Prepare a management plan

No.	Activity	Procedure/description	Actor	DOC
1	Register the work with the CIS	If no conservation design has been made, notification of the start of the work and application for a registration number from the CIS	Senior Field Technician/ Junior Archaeologist	RS02
2	Prepare a management plan for the monument and the restricted area/buffer zone.	Writing the management plan for the monument and restricted area/buffer zone based on the Project Outline, supplementary preconditions and conservation design. If indicated in the Project Outline, this will include a monitoring plan. In the event that a conservation design also has to be applied to the monument, an assessment will be made as to whether the conservation design and management plan correspond with each other. The conservation design is adjusted if necessary.	Senior Archaeologist Senior Specialist	BS02
OK	CHECK	Section 2.1 is checked by the Medior Archaeologist. The Medior Archaeologist checks whether notification has been given of the start of the project and whether the registration number has been applied for from CIS. If correct, the Medior Archaeologist will initial the appropriate form. Section 2.2 is checked by the Senior Archaeologist or Senior Specialist. The Senior Archaeologist or Senior Specialist check whether the management plan corresponds with the Project Outline and the requirements referred to in the conservation design. If correct, the Senior Archaeologist or Senior Specialist approves the management plan by signing/initialling it.		
	IMPROVE	Junior & Senior Archaeologist/Senior Field Technician/Senior Specialist		
3	Approval	The management plan is submitted for approval to the competent authority. The management plan is assessed against the Project Outline.	Senior Archaeologist Senior Specialist	In accordance with the PO and agreements
	STOP	End of the process.		

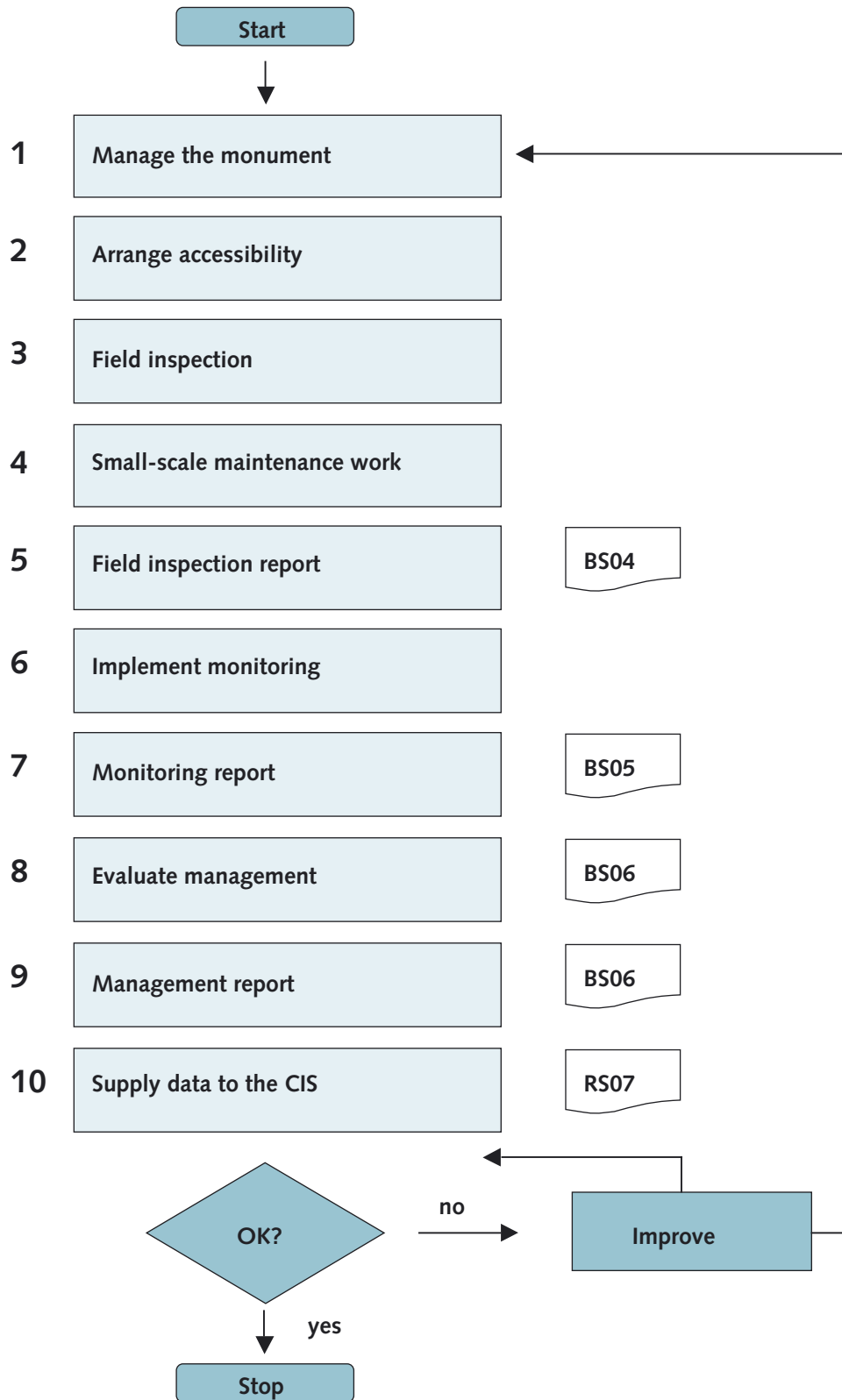
Step 3: Implementing the conservation design



Step 3: Implementing the conservation design

No.	Activity	Procedure/description	Actor	DOC
1	Conservation work	The conservation of the monument will be carried out in accordance with the conservation design.		in accordance with conservation design
2	Archaeological supervision	The implementation of the conservation design will be supervised in an archaeologically responsible manner. The work carried out during the conservation process is recorded in writing and images. Actions that differ from those referred to in the conservation design are recorded in a revised report that is part of the conservation report.	Senior Archaeologist	BS03
3	Prepare a conservation report	The conservation report is drawn up. The conservation report records the various implementation work carried out during the conservation process.	Senior Archaeologist	BS03
OK	CHECK	Sections 3.1 to 3.3 are checked by the Senior Archaeologist. The Senior Archaeologist checks whether the conservation design has been implemented in accordance with the conservation design. If correct, the Senior Archaeologist approves the conservation design report by signing/initialling it.		
	IMPROVE	Senior Archaeologist		
4	Completion and approval	The work on the monument and the conservation work are completed in accordance with the conservation design, with the (stray) finds being deposited in accordance with the standards guidelines. A written notification of completion is submitted to the competent authority.	Senior Archaeologist Depot Manager	in accordance with conservation design DS02/ DS03/ DS04
	STOP	End of the process.		

Step 4: Implementing curatorial management



Step 4: Implementing curatorial management

No.	Activity	Procedure/description	Actor	DOC
1	Managing the monument	Implementing the management measures.	Manager	in accordance with management plan
2	Arranging accessibility	Arranging accessibility for curatorial management purposes.	Manager	in accordance with management plan
3	Field inspection	Inspections in accordance with the management plan.	Medior Archaeologist	in accordance with management plan
4	Small-scale maintenance	The implementing of small-scale maintenance work on the monument and/or restricted area.	Manager	in accordance with management plan
5	Field inspection report	The field inspection findings and the inspection work carried out are recorded in an inspection report.	Medior Archaeologist	BS04
6	Implement monitoring	If indicated in the Project Outline, monitoring will be implemented in accordance with the management plan.	Medior Arch. Junior Specialist/ Non-archaeol. Specialist	In accordance with management plan
7	Monitoring report	The monitoring results are recorded in a monitoring report.	Medior Arch. Senior Specialist	BS05
8	Evaluate management	Two years after the conservation has been completed, a curatorial management evaluation will take place, whereby the actors involved (manager, field inspection/monitoring agents) will consult as to the condition of the monument and the measures to be taken. If inspections and/or monitoring give reason for doing so, the curatorial management or the monitoring frequency will have to be adjusted. In some cases new conservation measures may be required.	Senior Archaeologist/ Senior Specialist	BS06
9	Management report	The management measures and the results of the post-fieldwork assessment are recorded in a management report, if necessary with proposals for adjusting the management plan or the drawing up of a new conservation design.	Senior Archaeologist Senior Specialist	BS06
10	Supply data to the CIS	The relevant result data are supplied to the CIS.	Junior Archaeologist	RS07
OK	CHECK	Sections 4.1 to 4.10 are checked by the Senior Archaeologist or Senior Specialist. The Senior Archaeologist or Senior Specialist checks whether inspections, monitoring and curatorial management have taken place in accordance with (regulations in) the management plan. If correct, the Senior Archaeologist or Senior Specialist approves the inspection report, monitoring report or management report by signing/initialling the document in question. The Senior Archaeologist/Senior Specialist checks whether data have been supplied to CIS by examining the confirmation of receipt of CIS data.		
	IMPROVE	Medior Senior Archaeologist/Junior & Senior Specialist/Non-archaeological Specialist.		
	STOP	End of the process. <i>Curatorial management implementation tasks will have to be repeated until the monument no longer exists.</i>		

4.2 Standards guidelines for physical protection³

4.2.1 Project Outline for physical protection (PS03)

Explanatory notes

The objective of physical protection is to preserve archaeological find-spots. The aim is to prevent the (further) deterioration of archaeological sites and - if possible - repair any damage caused. In doing so, measures are taken which have an active/physical bearing on the condition the monument is in.

Physical protection can include the following:

- Taking conservation measures which are intended to create the most favourable preconditions for the sustainable preservation of the monument. Conservation measures are always reversible.
- Taking curatorial management measures required to ensure that archaeological sites worth preserving are, or remain, in a good condition. Curatorial management comprises field inspecting, maintaining and possibly monitoring.

Process description

Drawing up a Project Outline for the conservation and/or curatorial management of an archaeological monument on the basis of the data collected during the preliminary process and on the basis of the selection decision taken by the competent authority.

Products

- Project Outline.

Actors

- The Senior Archaeologist compiles the Project Outline with the appropriate specialists being consulted on specific issues.

Requirements with regard to resources

Project Outline

The minimum applicable requirements are:

Introduction

- Administrative data on the site to be protected;
- Period and type of monument;
- Results of preliminary process;
- Selection recommendations;
- Legal status of monument.

Selection decision

Research questions

- Objective of protection of the site/monument.
- Nature of threat.

Operationalisation

General requirements

- The implementation of the conservation design must be followed by curatorial management.
- Statutory requirements imposed by the competent authority (on the basis of the Monuments and Historic Buildings Act/Listed buildings bye-law) on the conservation and curatorial management of the monument.

Specific requirements

It has to be determined whether the competent authority wishes to impose specific

³ The explanatory notes to standards guidelines sometimes include recommendations, assumptions or a discussion of the choices made. Symbols used on drawings are shown in table 9 and are based on:

Veldhandboek ROB (1996): Procedure voor de registratie en het beheer van veldwerkgegevens [*Procedure for the registration and management of fieldwork data*];

Arnold Carmiggelt (1998): Kruisende sporen, Handleiding voor amateur-archeologen in Nederland. Uitgeverij Matrijs [*a guide for amateur-archaeologists in the Netherlands*].

Codes are referred to in:

Brandt et. al. (1992): Archeologisch Basisregister (ABR), Archeologische begrippen die in het landelijk archeologisch informatiesysteem ARCHIS gehanteerd worden [*Archaeological concepts used in the national archaeological information system ARCHIS*]

requirements on the conservation and/or the curatorial management of the monument with regard to:

- accessibility;
- visibility;
- monitoring.

Schedule

- Completion deadline – in accordance with conditions from the permit and legal requirements concerning Archis, depositing and publication.

Provisions relating to quality control

- The executing party is a certified company or a company that is permitted to carry out the intended work in accordance with the prevailing legislation and regulations.
- The qualified people involved in the archaeological work must meet the requirements of this Quality Standard (see Chapter 1, table 2).

Other provisions and conditions

Results

- Requirements to be imposed on the type of reports.
- Requirements to be imposed on depositing and the transfer of information.

Assessment

- The manner in which the competent authority deals with assessing the protective measures.
- The manner in which the competent authority assesses the results achieved against the Project Outline.

4.2.2 Conservation design (BS01)

Process description

Drawing up a conservation design for the monument and the buffer zone on the basis of a Project Outline, preliminary process and supplementary preconditions.

Products

- Conservation design.

Actors

- The (civil) Designer and/or Senior Archaeologist will write the conservation design.
- The Senior Archaeologist checks whether the conservation design has been drawn up correctly and complies with the Project Outline. If correct, the Senior Archaeologist will initial the conservation design.

Requirements with regard to resources

Conservation design

The conservation design will include as a minimum:

- Requirements of the competent authority;
- Administrative data (General);
- Date;
- Principal.
- Executing party;
- Competent authority (municipal, provincial, or national government);
- Name of the archaeological expert on behalf of the competent authority;
- National registration number;
- Location (municipality, place, toponym, at least four x/y coordinates).

Supplementary administrative data on the monument

- Boundaries (site plan scale at least 1:10,000; detailed map at least 1:2,500);
- Site surface area in m²;
- (Digital) map of project area;
- Location of documentation;

Description of monument's current situation

- Type(s);
- Geomorphologic and landscape location;
- Groundwater level and -flow;
- Thickness and physical characteristics of the archaeological layer/layers;
- Geochemical state of soil;

- Depth of archaeological layer/layers;
- Nature of the archaeological features;
- Physical condition of the material (quality of the monument);
- Current land use;
- Accessibility.

Objective of the conservation design

An indication has to be given as to how the following conservation preconditions are to be fulfilled:

- Facilitate sustainable preservation;
- Measures have to be reversible;
- The conservation measures may not cause damage to the monument.

Preservation strategy

- Proposal(s) for achieving the result desired by the competent authority;
- methods and techniques to be applied;
- reasons for applying the proposed methods and techniques;
- equipment and materials to be used;
- reasons for using the equipment and materials;
- Indication of possible restricted area;
- extent of restricted area;
- description of non-permitted interventions;
- reasons;
- [in the case of large plots] A projection of future situation in comparison with current situation (photo montage or sketch);
- The assessment as to whether monitoring is required is related to:
 - the type of conservation;
 - the nature of the intervention;
 - siting.

Description of procedures

- Record authorities and responsibilities;
- Record period and duration of conservation work;
- Arrange permits and dispensations.

External conditions

- Permits and dispensations partly in connection with the protection measures to be taken.

4.2.3 Management plan (BS02)

Process description

Writing the management plan for the monument and restricted area/buffer zone based on the Project Outline, preliminary process and conservation design. If monitoring is prescribed in the Project Outline, this will be part of the management plan. If no management plan has been drawn up and monitoring has to take place, a separate monitoring plan will be drawn up (see BS05).

Products

- Management plan - if prescribed in the Project Outline, this will include monitoring.

Actors

- The Senior Archaeologist and/or appropriate Senior Specialist will write the management plan;
- The Senior Archaeologist or appropriate Senior Specialist checks whether the management plan has been drawn up correctly and complies with the Project Outline. If correct, the Senior Archaeologist or Senior Specialist will initial the management plan.

Requirements with regard to resources

Management plan

Requirements of the competent authority

Administrative data (General)

- Date.
- Principal.
- Executing party.
- Competent authority (municipal, provincial, or national government).

- Name of the archaeological expert on behalf of competent authority.
- National registration number.
- Location (municipality, place, toponym, at least four x/y coordinates).

Supplementary administrative data on the monument and any restricted area

- Boundaries (site plan scale at least 1:10,000 and detailed map at least 1:2,500).
- Site surface area in m².
- (Digital) map of area.
- Location of documentation.

Description of current situation

This description must include the following elements:

- Type of monument.
- Geomorphologic and landscape location of the monument.
- Groundwater level and flow.
- Thickness and physical characteristics of archaeological layer/layers.
- Geochemical state of soil.
- Depth of archaeological layer/layers.
- Character of archaeological features.
- Physical condition of the material (quality of the monument).
- Current land use.
- Accessibility.

Description of situation after implementation of the conservation design

- Conservation and protection measures taken, if applicable.
- Extent of any restricted area.

Objective of curatorial management, field inspection, maintenance and monitoring, if prescribed in the Project Outline

Management strategy

- Proposal(s) for management tasks for a certain period (including field inspections and possible monitoring):
- methods/techniques to be used in connection with the proposed management measures;
- reasons for applying these methods/techniques;
- equipment and materials to be used in connection with the proposed management measures;
- reasons for using the equipment and materials.
- Proposal(s) for management measures for possible restricted area/buffer zone (= safety zone around monument):
- description and reasons for non-permitted interventions.
- Determining frequency of field inspections.
- Carrying out small-scale maintenance.
- Determining the frequency of small-scale maintenance.
- Determining the evaluation moment 2 years after the conservation design has been implemented (description of effects of curatorial management in past period).

Monitoring, if prescribed in the Project Outline

- Proposal(s) for arranging monitoring for a certain period:
- methods/techniques to be used in connection with the proposed monitoring;
- reasons for applying these methods/techniques;
- equipment and materials to be used in connection with the proposed monitoring;
- reasons for using the equipment and materials.
- Proposal(s) for monitoring possible restricted area/buffer zone:
- description of non-permitted interventions;
- reasons.
- Determining evaluation moment after a certain time.

Description of procedure

- Description of non-permitted interventions.
- Recording authorities and responsibilities with regard to the above activities.
- Determination of duration of management plan.

External conditions

- Permits and dispensations partly in connection with the protection measures to be taken.

4.2.4 Conservation report (BS03)

Explanatory notes

Conservation work must be done on the basis of an approved conservation design. The various tasks carried out in order to implement the conservation design are recorded in word and image. Actions that deviate from the conservation design are to be recorded in the revisions report.

Process description

Draw up a conservation design in which the various phases of the conservation process are recorded in word and image. Actions that differ from those referred to in the conservation plan are recorded in a revisions report that is part of the conservation report.

Products

- Conserved monument.
- Conservation report, including the revisions report.
- Possible finds and documentation.

Actors

- The Senior Archaeologist supervises the work during implementation of the conservation design.
- The Senior Archaeologist writes the conservation report.
- The Senior Archaeologist checks whether the conservation report has been correctly drawn up. If correct, the Senior Archaeologist will initial the conservation report.

Requirements with regard to resources

Conservation report

Administrative data (general)

- Date.
- Principal.
- Executing party.
- Competent authority (municipal, provincial, or national government).
- Name of the archaeological expert on behalf of competent authority.
- National registration number.
- Location (municipality, place, toponym, at least four x/y coordinates).

Additional data

- (Digital) map of project area.
- Management and location of documentation.

Conservation data

- Description of work carried out in accordance with the conservation design.
- Documentation of the work in accordance with the standards guidelines relating to excavation (OS08/OS10).
- Changes to the conservation design considered essential during implementation are recorded in daily and/or weekly reports and the revisions report.
- The method of implementation and supervision (extensive/intensive).

4.2.5 Field inspection report (BS04)

Process description

The field inspection results are recorded in a field inspection report.

Products

- Field inspection report.

Actors

- The Medior Archaeologist writes the field inspection report.
- The Senior Archaeologist checks whether the field inspection report has been correctly drawn up. If correct, the Senior Archaeologist will initial the field inspection report.

Requirements with regard to resources

Field inspection report

Administrative data (General)

- Date of field inspection.
- Principal.
- Executing party.
- Competent authority (municipal, provincial, or national government).
- Name of the archaeological expert on behalf of competent authority.
- National registration number.
- Location (municipality, place, toponym, at least four x/y coordinates).
- Changes relating to references to number and/or status of monument.

Additional data

- (Digital) map of area
- Photo documentation.
- Location of documentation.

Field inspection data

- Name of person who carries out the field inspection (executing party).
- Type of monument

Condition of monument

- Condition of restricted area/buffer zone.
- Land use.

Report on maintenance work

- Preventive maintenance (emergency measures during field inspection).
- Additional recommendations pertaining to maintenance.
- Contact (poss. agreements) with manager/owner of the land.

Conclusions

- Conclusions and recommendations relating to maintenance work considered to be essential.

4.2.6 Monitoring report (BS05)

Process description

The monitoring results are recorded in a monitoring report.

Products

- Monitoring report.

Actors

- The Medior Archaeologist and/or Senior Specialist will write the monitoring report.
- The Senior Archaeologist and/or Senior Specialist will check whether the monitoring report has been drawn up correctly. If correct, the Senior Archaeologist will initial the monitoring report.

Requirements with regard to resources

Monitoring report

Administrative data (General)

- Date of monitoring.
- Principal.
- Executing party.
- Competent authority (municipal, provincial, or national government).
- Name of the archaeological expert on behalf of competent authority.
- National registration number.
- Location (municipality, place, toponym, at least four x/y coordinates).

Additional data

- (Digital) map of area.
- Location of documentation.

Objective of monitoring

- Specific objective in accordance with the monitoring plan or Project Outline.
- Nature of the work to be carried out and the resources to be used.

Monitoring data

- Type of monument

- Condition of monument.
- Condition of restricted area/peripheral zone.
- Land use.

Analysis of the data

- Photo documentation.
- Site grid map.
- Analysis report of measurements and samples.

Conclusions

- Conclusions and recommendations.

4.2.7 Management report (BS06)

Process description

The management measures and the results of the post-fieldwork assessment are laid down in the management report.

Products

- Management report.

Actors

- The Senior Archaeologist and/or appropriate Senior Specialist will write the management report.
- The Senior Archaeologist and/or appropriate Senior Specialist will check whether the management report has been drawn up correctly. If correct, the Senior Archaeologist will initial the management report.

Requirements with regard to resources

Management report

Administrative data (General)

- Date of evaluation moment.
- Principal.
- Executing party.
- Competent authority (municipal, provincial or national government).
- Name of the archaeological expert on behalf of competent authority.
- National registration number.
- Location (municipality, place, toponym, at least four x/y coordinates).

Additional data

- (Digital) map of area.
- Location of documentation.

Management data

- Evaluation period.
- Basic data used such as field inspection and monitoring report.
- Description of development of monument's condition (improvement/deterioration).
- Effect of curatorial management.
- Minutes of consultation meetings.

Conclusions.

- Conclusions and recommendations.

4.2.8 Registering the project – Physical protecting (RS02)

Process description

The project is registered with the CIS. The system issues a unique registration number (CIS-code).

Products

- Administrative data.
- Registration number (CIS-code).

Actors

- The Senior Field Technician and/or Junior Archaeologist will register the project with the CIS.
- The Medior Archaeologist checks whether the project has been correctly registered.

Requirements with regard to resources

Administrative data relating to registration

- Date on which project is registered.
- General boundaries of project area (at least four x/y coordinates).
- Toponym (if applicable).
- Place.
- Municipality.
- Province.
- Principal.
- Executing party.
- Competent authority (national, provincial or municipal government).
- Name of expert on behalf of competent authority.
- Type of project (desk-based assessment, archaeological field evaluation, physical protection, watching brief, excavation).

The system issues a unique registration number to the contractor.

4.2.9 Transfer of project data - Protecting (RS07)

Process description

The relevant result data are supplied to the CIS.

Products

- Reference data.
- Additional data.

Actors

- The Junior Archaeologist supplies the relevant result data to the CIS.
- The Senior Archaeologist checks whether the relevant result data have been supplied by checking the CIS confirmation of receipt.

Requirements with regard to resources

Administrative data when transferring, only if modified

- Date on which project is registered.
- General boundaries of project area (at least four x/y coordinates).
- Toponym (if applicable).
- Place.
- Municipality.
- Province.
- Principal (developer).
- Executing party.
- Competent authority (national or provincial government, local authority).
- Name of expert on behalf of competent authority.

Data related to project results (if applicable)

- National registration number (CIS-code).
- Dates on which project was started and completed.
- Definitive outer boundaries (at least four x/y coordinates).
- Extent of restricted area.
- Site surface area in m².
- Depth of subsurface work.
- Observations pertaining to the project (see below).
- (Digital) map of project area.
- Geomorphologic and landscape location.
- Groundwater level and flow.
- Thickness and physical characteristics of the archaeological layers.
- Geochemical state of soil.
- Depth of archaeological layers.
- Nature of archaeological features (using key words).
- Condition of the material (quality monument).
- Current land use.
- Accessibility.

Project data, if relevant

- Conservation design (text field).
- conservation objective;
- conservation measures taken (text field).
- Management plan or monitoring plan (text field).
- objective of curatorial management and monitoring;
- management measures taken (text field).
- Summary of conservation report (text field).
- work carried out;
- changes to conservation design;
- revised report;
- method of implementation.
- Summary of field inspection report (text field).
- preventative maintenance;
- supplementary advice relating to maintenance;
- agreements with owner.
- Summary of monitoring report (text field).
- analysis of measurements report;
- conclusions and recommendations.
- Summary of management report (text field).
- description of condition of monument;
- effect of curatorial management;
- conclusions and recommendations.

Reference data

- Management and location of documentation and find material (reference to depot at which the finds are managed, reference to archive at which the documentation is managed, reference to the complete report).

5 WATCHING BRIEF

5.1 Description

5.1.1 Objective

The aim of a watching brief is to provide an insight into the presence or absence of archaeological values within the framework of a non-archaeological soil-destructive activity. A distinction is made between two types of results:

1. Insight into the archaeological significance of the area.
2. Registration of the archaeological values encountered.

5.1.2 Place in the archaeological process

The watching brief is always preceded by the preliminary process, comprising desk-based assessment and possibly an archaeological field evaluation. These processes can be carried out separately or as a single procedure. The preliminary process results in selection recommendations on which basis the competent authority takes a selection decision. This can be a decision leading to: protection, excavation or implementation of a watching brief. A watching brief is intended to be an alternative in situations in which problems occur during the preliminary process. It may be essential: 1. if the preliminary process has generated insufficient information to produce a reliable valuation and 2. in situations in which it is impossible to carry out an archaeological field evaluation. Implementation of a watching brief is therefore not intended to take the place of an archaeological field evaluation or an excavation. Recommendations to carry out a watching brief may therefore *only* be given in the two situations referred to above.

If the competent authority, as a result of the watching brief, decides that follow-up activities, such as excavation or protecting, are needed, these activities will be subject to the appropriate quality requirements. The watching brief is implemented on the basis of a Project Outline.

A watching brief can be described as follows:

An inventory, characterisation and documentation of the presence and absence of archaeological values in an area to be disturbed by a non-archaeological activity that will disturb the soil. A characterisation is given of the archaeological values which will feature, as a minimum, the following aspects: an indication of period, the geological context, nature (typification) and valuation aspects.

5.1.3 Process

The watching brief process comprises the following subprocesses:

1. preparing the watching brief;
2. implementing the watching brief;
3. analysing the results of the watching brief.

Preparing the watching brief

In order to be able to determine the research framework, one needs to know what the reason is for the watching brief. Moreover, the spatial limits and the work restrictions within which the watching brief has to be implemented have to be clear.

Implementing the watching brief

The implementation and registration of observations during non-archaeological soil-destructive activities, aimed at determining the presence and absence of archaeological values. The competent authority is informed immediately if archaeological values that are potentially worth preserving are encountered. The competent authority can decide that more observations or follow-up activities are required. Depending on the duration of the project, the competent authority must be notified of the results of the watching brief immediately after the fieldwork has been completed or, at the latest, within a period of 13 weeks, by means of an interim report on the archaeological values.

Analysing the results of the watching brief

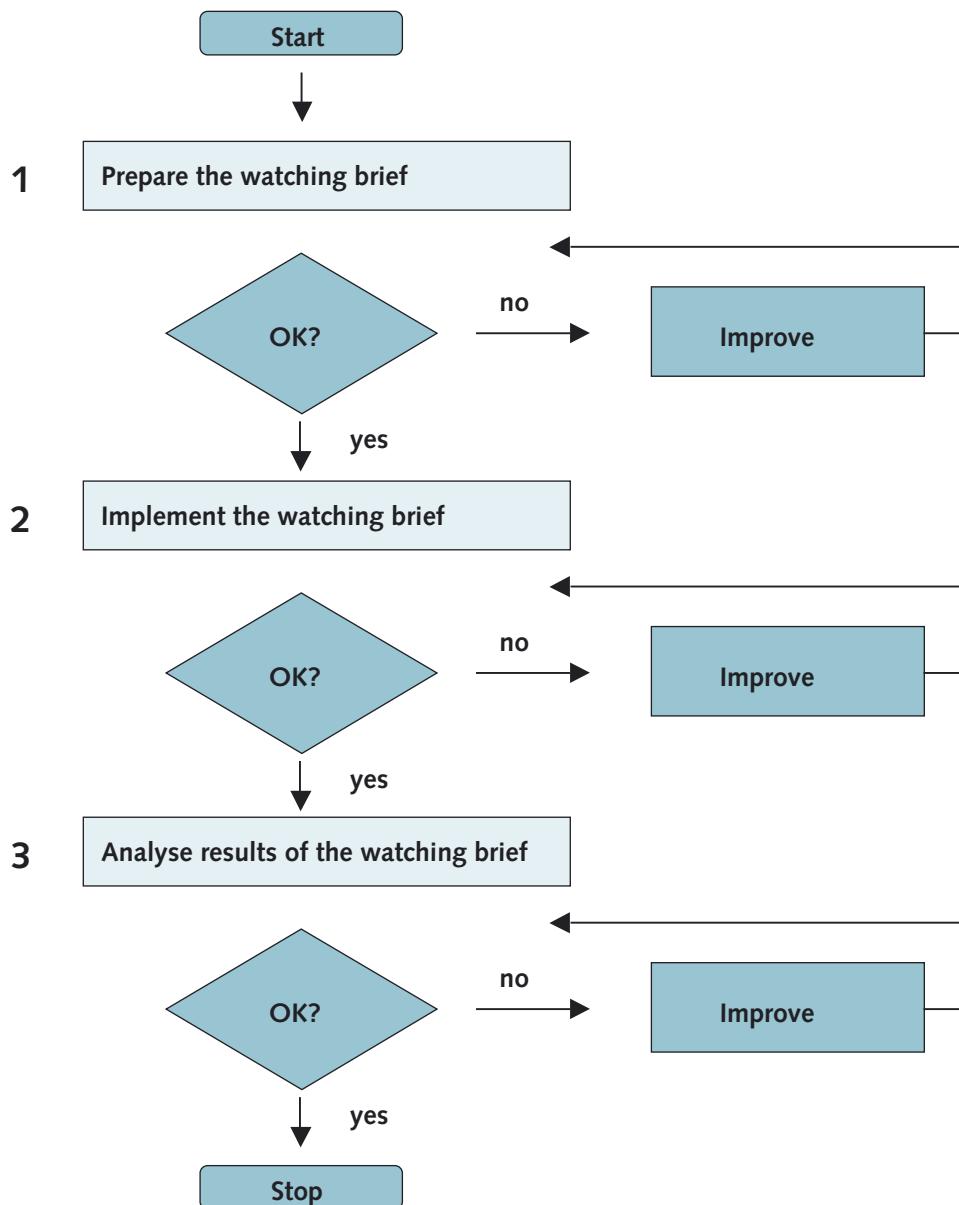
The watching brief project will be concluded by the results being laid down in a final report.

5.1.4 Actors

Watching brief
Job
Junior Archaeologist
Medior Archaeologist
Senior Archaeologist
Junior Specialist
Senior Specialist
Junior Field Technician
Senior Field Technician

5.1.5 Process diagram for watching brief and accompanying description

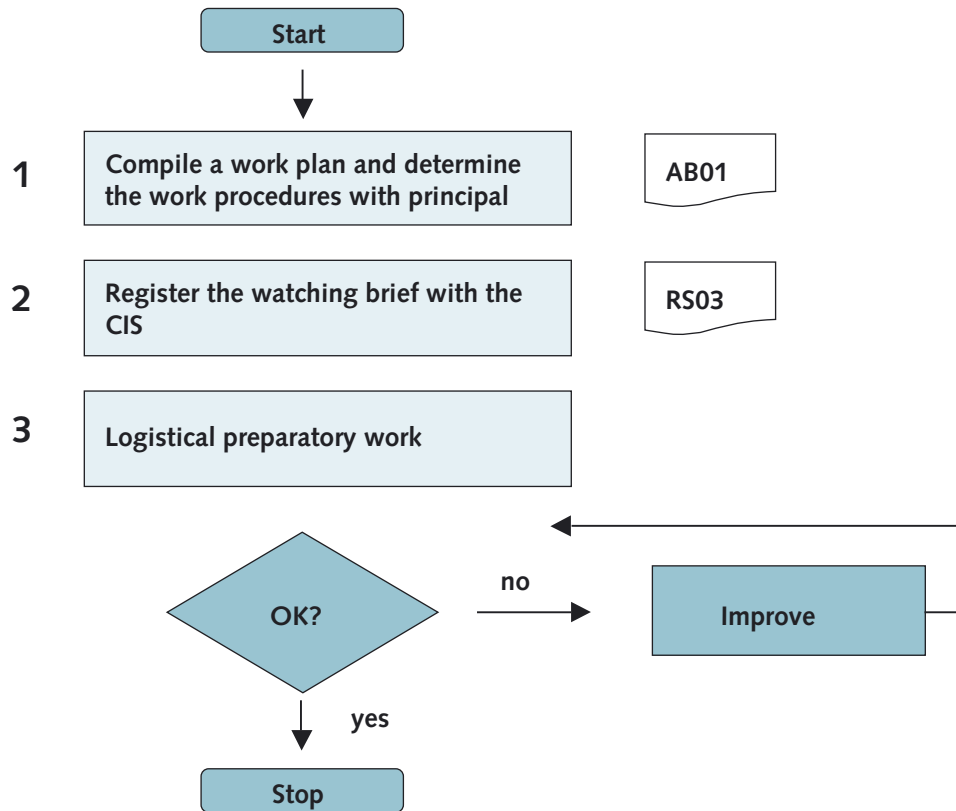
General description of watching brief



General description of watching brief

No.	Activity	Procedure/description
1	Prepare the watching brief	The preparation work relating to the watching brief comprises all the work that is necessary in order to be able to implement the watching brief.
OK	CHECK	
	IMPROVE	
2	Implement the watching brief	The implementation and registration of observations during non-archaeological soil-destructive activities, aimed at determining the presence and absence of archaeological values. The competent authority is informed immediately if archaeological values that are potentially worth preserving are encountered. Follow-up activities may be initiated by the competent authority.
OK	CHECK	
	IMPROVE	
3	Analyse the results of the watching brief	As a conclusion to the watching brief project, the results will be laid down in a final report, that has to be approved.
OK	CHECK	
	IMPROVE	
	STOP	End of the process.

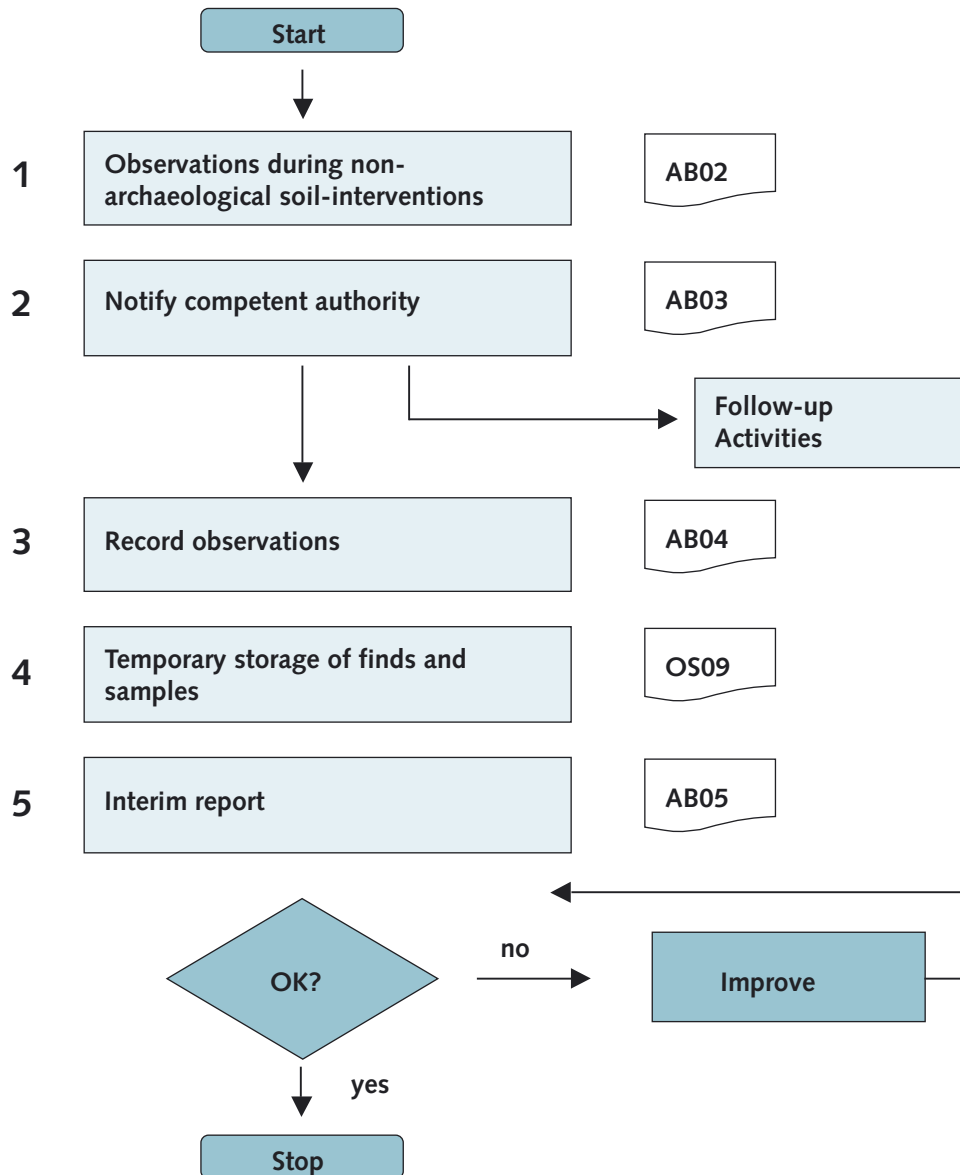
Step 1: Preparing the watching brief



Step 1: Preparing the watching brief

No.	Activity	Procedure/description	Actor	DOC
1	Compile a work plan and determine the work procedures with the principal	Compiling a work plan based on the PO, the project design if any, and information from the preliminary process. The safety plan is part of the work plan. If no work plan has been drawn up, a separate safety plan is obligatory. Arranging responsibilities and authorities with the principal. The agreements with the principal concerning the implementation of the watching brief are laid down in a contract.	Medior Archaeologist	AB01
2	Register the watching brief with the CIS	Notification of the start of the watching brief and application for a registration number (CIS-code). The depot to which finds and documentation go has to be notified of this number.	Senior Field Technician/ Junior Archaeologist	RS03
3	Logistical preparatory work	Arranging facilities, machines and materials that comply with the safety plan.	Senior Field Technician/ Junior Archaeologist	
OK	CHECK	Section 1.1 is checked by the Senior Archaeologist. If the work plan fulfils all the requirements, the Senior Archaeologist approves the work plan by signing/initialling it. Sections 1.2 to 1.3 are checked by a Medior Archaeologist.		
	IMPROVE	Senior Field Technician/ Junior & Medior Archaeologist		
	STOP	End of the process.		

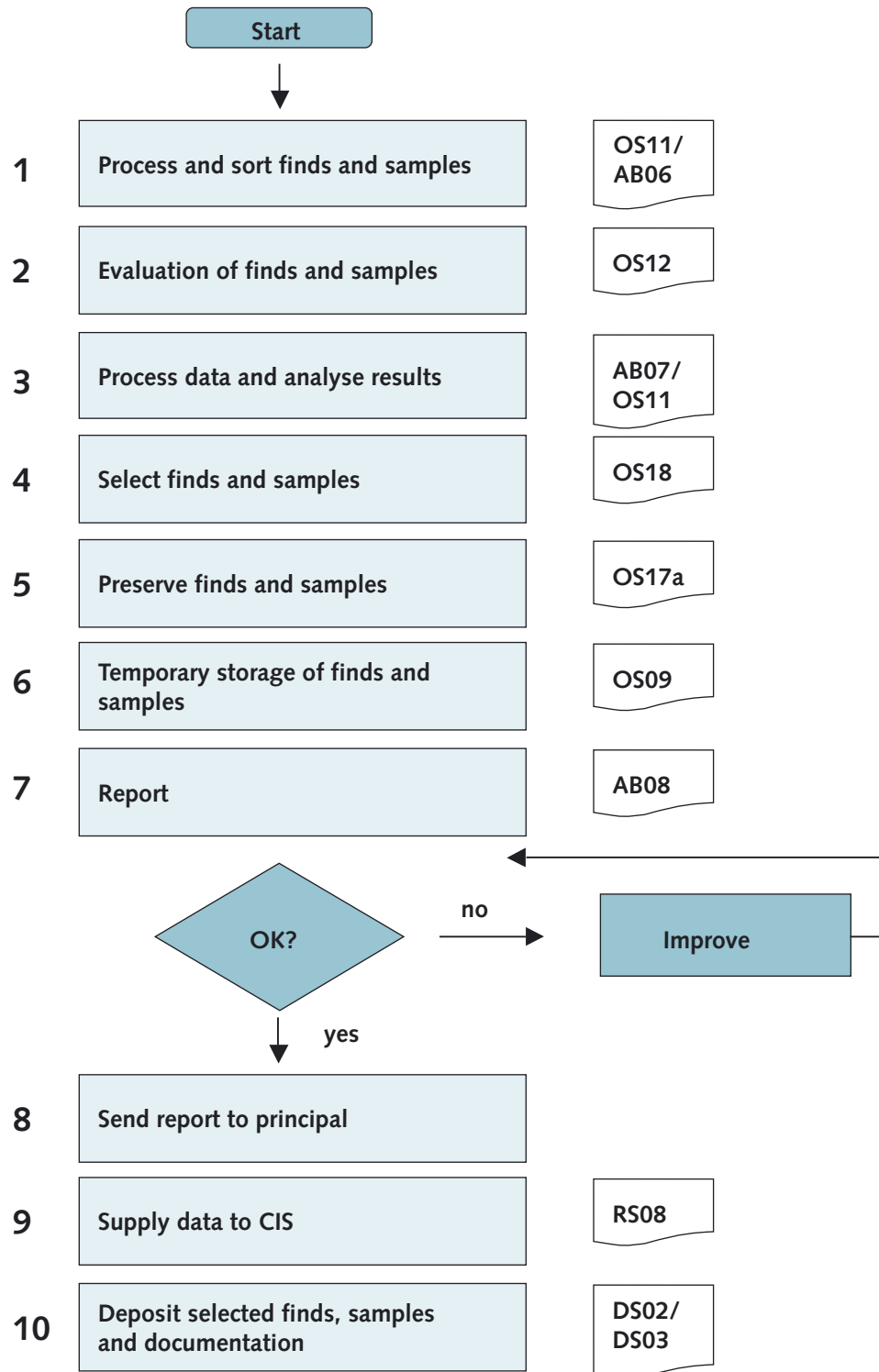
Step 2: Implementing the watching brief



Step 2: Implementing the watching brief

No.	Activity	Procedure/description	Actor	DOC
1	Observations during non-archaeological soil-interventions	Carrying out observations during non-archaeological soil-interventions.	Medior Archaeologist	AB02
2	Notify of competent authority	The competent authority is informed immediately, if archaeological values that are potentially worth preserving are encountered, with a view to possible essential follow-up activities. If the work has to be halted, actions should be carried out in accordance with the agreements laid down in the work plan.	Senior Archaeologist	AB03
	FOLLOW-UP ACTIVITIES		The competent authority decides if follow-up activities (archaeological field evaluation or excavation) have to be carried out.	
3	Record observations	The recording of observations made in accordance with the appropriate method and using the appropriate forms.	Medior Archaeologist	AB04
4	Temporary storage of finds and samples	The finds and samples are stored temporarily in such a way that the quality of the material does not deteriorate during the period of storage.	Excavation Worker	OS09
5	Interim report	Reporting of the findings acquired during the observations in a provisional report to the principal and the competent authority.	Medior Archaeologist	AB05
OK	CHECK	Sections 2.1 to 2.5 are checked by the Senior Archaeologist. The Senior Archaeologist checks whether an interim report has been compiled. If the report fulfils all the requirements, the Senior Archaeologist approves the report by signing/initialling it.		
	IMPROVE	Excavation Worker/Medior & Senior Archaeologist		
	STOP	End of the process.		

Step 3: Analysing the results of the watching brief



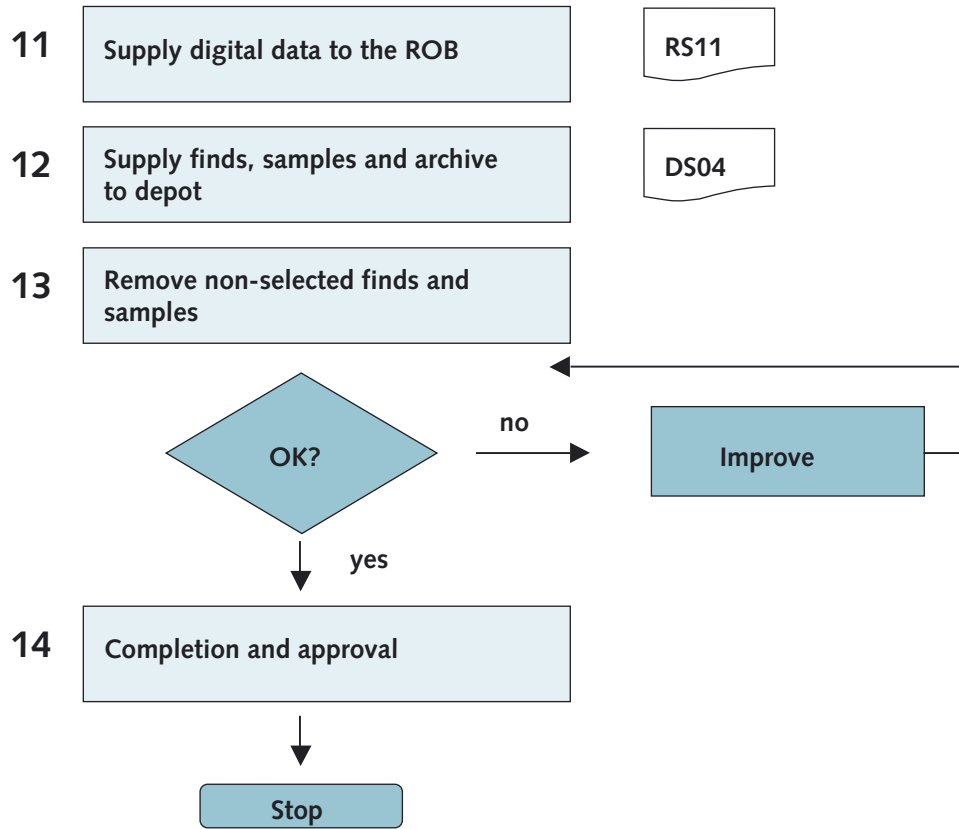
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Step 3: Analysing the results of the watching brief

No.	Activity	Procedure/description	Actor	DOC
1	Process and sort finds and samples	The finds and samples are processed and sorted in conditions that optimally safeguard their condition and stability. The finds and samples must be coded, sorted and packed in such a way that the condition remains as stable as possible, and that an analysis can be carried out after processing.	Junior Field Technician/ Junior Specialist	OS11/ AB06
2	Evaluation of finds and samples	The finds and samples are evaluated by an appropriate specialist on the basis of the Project Outline	Senior Specialist	OS12
3	Process data and analyse results	Data are processed and treated in such a way that analysis can take place. The finds, samples and data collected are analysed. With regard to the finds and samples, guidelines are added to the analysis report with a view to possible further research.	Medior Archaeologist Junior Specialist	AB07/ OS11
4	Select finds and samples	The finds and samples are selected on the basis of the Project Outline and scientific criteria. The selection choices are recorded in a selection report.	Medior Archaeologist/ Senior Specialist	OS18
5	Preserve finds and samples	The finds and samples are preserved in such a way that they can be stored under the most stable conditions as possible in the (transit) depot.	Senior Specialist (Archaeological Curator)	OS17a
6	Temporary storage of finds and samples	The finds and material are packed and coded in such a way that they can be stored temporarily under the most stable conditions as possible in the (transit) depot.	Excavation Worker	OS09
7	Report	The various sections of the process are recorded in a final report.	Medior Archaeologist Senior Specialist	AB08
OK	CHECK	Sections 3.1, 3.3, 3.5 and 3.6 are checked by a Medior Archaeologist. Sections 3.2, 3.4 and 3.7 are checked by the Senior Archaeologist or Senior Specialist. The Senior Archaeologist/Senior Specialist assesses whether the evaluation report, analysis report, selection report and final report answers the Project Outline. If so, the Senior Archaeologist/Senior Specialist approves the reports and appendices by signing/initialling them.		
	IMPROVE	Excavation Worker/Junior Field Technician/Medior & Senior Archaeologist, Junior & Senior Specialist		
8	Send report to the principal	Sending the final report to the principal.	Junior Archaeologist	
9	Supply data to the CIS	The relevant result data are supplied to the CIS.	Junior Archaeologist	RS08
10	Deposit selected finds, samples and documentation	The selected finds and samples are packed and coded and the corresponding documentation and field data are added, in accordance with the depot guidelines, so that all can be transferred to the depot. The finds and samples must be packed, so that the condition they are in remains as stable as possible.	Medior Archaeologist Junior Specialist	DS02/ DS03

Continued on the next page

Step 3: Analysing the results of the watching brief (continued)



Step 3: Analysing the results of the watching brief (continued)

No.	Activity	Procedure/description	Actor	DOC
11	Supply digital data to the ROB	No later than 4 weeks after the report has been sent to the principal, the digital archive is transferred to the ROB	Junior Archaeologist	RS11
12	Supply finds, samples and archive to depot	No later than 4 weeks after the final report has been sent to the principal, the archive is supplied to the relevant provincial or municipal depot. If this depot lacks facilities to store the archive, this is transferred to the ROB	Medior Archaeologist/ Depot Manager	DS04
13	Removing non-selected finds and samples	Non-selected finds and samples will have to be removed.	Excavation Worker	
OK	CHECK	Sections 3.7 to 3.14 are checked by the Senior Archaeologist or Senior Specialist. The Senior Archaeologist/Senior Specialist checks whether data have been supplied to the Depot and CIS by examining the confirmation of receipt of CIS data and the transfer protocol. The Senior Archaeologist or Senior Specialist checks whether non-selected finds and samples have been removed.		
	IMPROVE	Excavation Worker/Medior Senior Archaeologist/ Junior Specialist		
14	Completion and approval	The project ends once the final report has been completed, approved and published in accordance with the agreements made with the principal. The finds and samples to be deposited are supplied and approved after written acceptance of the finds and samples and documentation by an authorised depot has been recorded in the transfer protocol.	Senior Archaeologist	
	STOP	End of the process.		

5.2 Standards guidelines for watching brief⁴

5.2.1 Project Outline for watching brief (PS04)

Explanatory notes

It is possible that during the fieldwork new facts or changed views call for a revised research design (incl. analysis, conservation). Such decisions always need the approval of the competent authority that has approved the original Project Outline.

Process description

Drawing up a Project Outline based on the available data.

Products

- Project Outline.

Actors

- The Senior Archaeologist compiles the Project Outline with the appropriate specialists being consulted on specific issues.

Requirements with regard to resources

The *minimum* applicable requirements are:

Introduction

- Administrative data.
- Selection recommendations (which state, among other things, known archaeological values, predictive model).

Selection decision.

Research questions

- Specific questions which have to be answered by the project.
- Relation with existing research programmes: possibilities for cooperation.

Operationalisation

The Project Outline must also indicate a number of practical implementation guidelines. The Project Outline provides:

- details on the reasons for using the prescribed method of working in connection with the method of operation used for the planned soil-destructive activity;
- a description of the planned intervention (size and depth);
- the exact limit of the area to be monitored (including a map in the event of multiple usage);
- a description of the method of working and research strategy to be used, in so far as these differ from the standard procedures;
- indications with regard to quality and quantity of the specialist research;
- the size of the field team;
- explicit information on how the executing party has to act as soon as the presence of find-spots worth preserving is determined (procedure).

Schedule

- Completion deadline, in agreement with the developer, taking into account legal requirements on providing information, depositing, and publication

Provisions relating to quality control

- The executing party is a certified company or a company that is permitted to carry out the intended work in accordance with the prevailing legislation and regulations.
- The qualified people involved in the archaeological work must meet the requirements of this Quality Standard (see Chapter 1, table 2)

⁴ The explanatory notes to standards guidelines sometimes include recommendations, assumptions or a discussion of the choices made.

Symbols used on drawings are shown in table 9 and are based on:

Veldhandboek ROB (1996): Procedure voor de registratie en het beheer van veldwerkgegevens [*Procedure for the registration and management of fieldwork data*];

Arnold Carmiggelt (1998): Kruisende sporen, Handleiding voor amateur-archeologen in Nederland. Uitgeverij Matrijs [*a guide for amateur-archaeologists in the Netherlands*].

Codes are referred to in:

Brandt et. al. (1992): Archeologisch Basisregister (ABR), Archeologische begrippen die in het landelijk archeologisch informatiesysteem ARCHIS gehanteerd worden [*Archaeological concepts used in the national archaeological information system ARCHIS*]

- Supervisor: the relevant competent authority, the developer or a managing body acting on behalf of the developer (or on behalf of both). Names of manager(s) and supervisor(s).

Other provisions and conditions

The Project Outline indicates whether, in the event that a site worth preserving is discovered, the competent authority wishes to take a new selection decision, or states, in advance, which follow-up activities (excavation, protecting, rescue procedure) the developer should take into account.

Results

- Answering the research questions.

Assessment

- The manner in which the competent authority assesses the results achieved against the Project Outline.

Literature and documentation list

- Literature and files consulted when drawing up the Project Outline.

5.2.2 Compiling a work plan and determining the work procedure with the principal (AB01)

Explanatory notes

The work plan is a concrete schedule for the implementation of the fieldwork and is used by the archaeological contractor as a scenario for the implementation of the watching brief in the field. If the tender complies with the following requirements, no work plan will have to be drawn up. Instead, the tender can function as a work plan and be referred to as such.

Process description

Compiling a work plan and corresponding safety plan based on the Project Outline and, if present, the project design or specifications. The arrangement of responsibilities and authorities with the principal.

Products

- Work plan.
- Work procedures.

Actors

- The Medior Archaeologist draws up the work plan.
- The Senior Archaeologist checks whether the work plan has been correctly drawn up. If correct, the Senior Archaeologist will initial the work plan.

Requirements with regard to resources

Work plan

The agreements and procedures applicable to all the aspects must correspond to the Project Outline or possibly the project design and specifications if available.

Administrative data

Formulation of the research questions

List of the people and bodies involved in the execution of the watching brief

List of the people involved in the implementation (competent authority, principal, archaeological contractor) showing functions, responsibilities, authorities and contacts.

Agreements relating to the consultations between the principal and the archaeological contractor

- Schedule with regard to consultation structure.

Plan for the implementation of work in the field

- Description of the work, the project structure and method.
- Indication of decision moments as regards follow-up activities and/or contract variations.

Work procedure

The work procedure must include the following items:

- Regulations referring to site access.
- Implementation procedure.
- Schedule of work to be carried out and arrangements for the implementation of the watching brief, incl. times at which meetings are to be held with the principal and a statement of 'critical moments'. Moments at which decisions have to be taken in

- consultation with the competent authority.
- Public information procedure on behalf of different parties involved concerning the nature and method of implementation of the watching brief.
- References to decision-making procedure in the case of unforeseen archaeological values, incl. references to people with authority to decide (name, job, location, telephone numbers) and these people's deputies in the event of their being absent.
- Method of reporting to the competent authority and principal.
- Arrangements for stopping non-archaeological operations.
- Method of reporting to the competent authority, see AB03.

Schedule

- Staffing.
- Time.
- Resources.

Permits

Risk analysis

Safety plan

Conservation design for the archaeological basis

5.2.3 Observations during non-archaeological soil-interventions (AB02)

Explanatory notes

A programme of formal observations is conducted for non-archaeological soil-interventions. Uncovering any archaeological remains present, with the exclusion of work which is strictly essential for the acquisition of the data referred to under AB03, is not included in the watching brief objective. Finds and sample material must only be collected on an indicative basis, that is as much as is necessary for the acquisition of the information referred to below.

Process description

Carrying out a programme of formal observations during non-archaeological soil-interventions.

Products

- Conclusions about the presence or absence of archaeological values within the framework of a specific soil-intervention.

Actors

- The Medior Archaeologist is responsible for observations during non-archaeological soil-destructive activities.
- The Senior Archaeologist checks whether the observations have been carried out properly and completely.

Requirements with regard to resources

When carrying out observations during the implementation of a watching brief, a distinction can be made between the way in which any archaeological remains present have to be observed and a general spatial classification of the observations carried out.

As far as the implementation of the observations is concerned, the general spatial classification comprises five categories:

1. Archaeological values observed in situ.
2. No archaeological values observed in situ.
3. No archaeological values observed as a consequence of the fact that the soil-intervention or part thereof could not be monitored.
4. No archaeological values observed as a consequence of the fact that the soil-intervention was not monitored.
5. Stray find. For example, when examining a dump in an area which is subject to a watching brief, mobilia may be encountered which are no longer in situ and whose origin is therefore unclear.

When observing archaeological values, a distinction is made between four categories:

1. Isolated feature.
2. Group of features.

3. A single find or sample.
4. An (arbitrary) collection unit of finds.

5.2.4 Notification of competent authority (AB03)

Process description

The competent authority is informed immediately if archaeological values that are potentially worth preserving are encountered, with a view to follow-up activities which might be required as a result.

Products

- Notification of the competent authority.

Actors

- The Senior Archaeologist notifies the competent authority and records this.
- The Senior Archaeologist checks whether the notification has been carried out and recorded correctly.

Requirements with regard to resources

- If archaeological values worth preserving are discovered, this must be reported immediately.
- The way in which notification takes place and the proof of receipt must be recorded.

5.2.5 Recording observations (AB04)

Explanatory notes

The data are recorded in order to allow a judgement to be made concerning the nature, extent, period and quality of the observed archaeological values. Deliberately, no standards guidelines are formulated concerning the method of registration, for example by means of drawings or in any other way. The possibilities are determined by the nature, extent and speed of the non-archaeological operation and the possibilities for the implementation of a watching brief.

Process description

Recording archaeological observations during the implementation of a watching brief.

Products

- Recorded observations.

Actors

- The Medior Archaeologist records the observations.
- The Senior Archaeologist checks whether the observations have been recorded correctly.

Requirements with regard to resources

When recording observations, a distinction has to be made between the way in which the observation categories described under AB03 are registered and the archaeological values that might be present.

1. Archaeological remains observed in situ

- In this case, the X/Y/Z value of the monitored non-archaeological soil-intervention is at all times indicated to a maximum degree of accuracy of 5 metres for the X and Y value and 0.1 metres for the Z value of the find level. The X/Y/Z values must eventually be related to the national grid system and the Amsterdam Ordnance Datum.
- The method used for the soil-intervention must be described, with an indication of the depth and nature of the intervention. The X/Y/Z values must eventually be related to the national grid system and the Amsterdam Ordnance Datum.
- A description of the geological structure of the part of the area concerned, including the oxidation/reduction zone within that area.
- When registering archaeological remains, the following data must be recorded as a minimum:

1. method used to register the observations;
 2. interpretation of the archaeological remains;
 3. possible relationship between observed archaeological remains;
 4. the valuation observations (see Table 6, valuation observations score list).
- 2. No archaeological remains observed in situ**
- In this case, the X/Y/Z value of the monitored soil-intervention is at all times indicated to a maximum degree of accuracy of 5 metres for the X and Y value and 0.1 metres for the Z value. The X/Y/Z values must eventually be related to the national system of coordinates and the Amsterdam Ordnance Datum.
 - The method used to implement the soil-intervention must be described.
- 3. No archaeological remains observed – activity could not be monitored**
- In this case, the X/Y/Z value of the non-monitored soil- intervention is at all times indicated to a maximum degree of accuracy of 5 metres for the X and Y value and, if possible, 0.1 metres for the Z value. The X/Y/Z values must eventually be related to the national grid system and the Amsterdam Ordnance Datum.
 - The method used to implement the soil- intervention must be described.
 - State reasons why implementation of the watching brief was not possible.
- 4. No archaeological remains observed – activity was not monitored**
- In this case, the X/Y/Z value of the non-monitored soil-destructive activity is at all times indicated to a maximum degree of accuracy of 5 metres for the X and Y value and, if possible, 0.1 metres for the Z value. The X/Y/Z values must eventually be related to the national grid system and the Amsterdam Ordnance Datum.
 - The method used to implement the soil-destructive activity must be described.
 - State reasons why the watching brief was not implemented.
- 5. Stray find**
- In this case, the X/Y value of the non-monitored soil-intervention is at all times indicated to a maximum degree of accuracy of 5 metres for the X and Y value. The X/Y values must eventually be related to the national grid system and the Amsterdam Ordnance Datum.
 - The method used to implement the soil-intervention must be described.

For the collection and processing of material in the field see OS03 and OS11.

Valuation observations score list

Valuation observations cover ten aspects whereby, if possible, a number of questions have to be answered per aspect. The higher the number of questions answered positively, the higher the valuation of the location/find-spot in question. Cf. also the reference document for the valuation of a find-spot (VS07).

The areas for special attention and an example of the related questions concern:

Table 6. Valuation observations score list

Aspects	Corresponding questions
rarity	- has a limited study taken place of this type of site from this period within the Netherlands? - has a limited study taken place of this type of site from this period within the archaeo-region? - does the site fill any gaps in current knowledge?
archaeological context	- has information been published on sites from around the same time for inter-site analysis?
landscape biotic context	- is ecological material available near the find-spot? - is the soil potentially rich in paleo-ecological information? - can paleo-ecological information be dated by means of the stratigraphy? - can paleo-ecological information be linked to occupancy/usage?
landscape abiotic context	- can the surroundings largely be mapped? - are the surroundings free of large disturbances? - are dating structures/elements present in the soil? - is landscape reconstruction at the time of occupancy/usage possible?
vertical integrity	- are occupancy/usage periods stratigraphically separated on the find-spot? - is it possible to study the occupancy/usage periods present? - is the layering free of stratigraphic hiatuses? - is the archaeological layer free of serious erosion? - have surface features been noted?
horizontal integrity	- is the find-spot free of drastic disruptions? - is the core of the find-spot free of drastic disruptions?
preservation potential	- is/are the archaeological layer/contexts in the permanently reduced zone? - is/are the archaeological layer/contexts in the oxidation/reduction zone? - is/are the archaeological layer/contexts calcareous and/or covered by a calcareous layer? - have soil chemical residues been noted in/under the archaeological layer?
preservation of artefacts	- is the pottery largely undamaged/uneroded? - can the pottery be determined? - are the stone artefacts weathered? - has the small flint fraction (<4mm) been noted? - are the working sides of flint artefacts free of natural patina? - can the metal artefacts be determined?
preservation of botanical remains	- has uncarbonised wood been noted in the archaeological layer/contexts? - have uncarbonised seeds been noted in the archaeological layer/contexts? - have carbonised seeds been noted in the archaeological layer/contexts? - can the botanical material be properly determined?
preservation of zoological remains	- has unburned bone been noted in the archaeological layer/contexts? - has burned bone been noted in the archaeological layer/contexts? - can the bone material be properly determined?

The above questions should be answered as much as possible in the field. Sections of the list, which can only be filled in after the data have been processed, should be added to while the data are being processed.

5.2.6 Interim report (AB05)

Explanatory notes

The presence of archaeological remains must be reported to the competent authority so that this knowledge can be taken into account in policy decisions.

Process description

Reporting of the findings acquired during the observations in a provisional report to the principal and the competent authority.

Products

- Interim report.

Actors

- The Medior Archaeologist submits an interim report to the competent authority.
- The Senior Archaeologist checks whether the interim report has been drawn up correctly. If correct, the Senior Archaeologist will sign/initial the interim report.

Requirements with regard to resources

- If the watching brief covers a period less than 13 weeks, the report must be completed immediately after the work in the field has finished and be sent within 14 days to the competent authority and the principal.
- If the watching brief covers a period longer than 13 weeks, an interim report must be compiled after 13 weeks. This interim report must be submitted to the competent authority and the principal within 14 days. In the event of long-term projects, interim reports will have to be compiled after every 13 weeks.

Reporting

The report must contain, as a minimum:

- the archaeological remains registered in the field;
- an amended monitoring map (see description AB08);
- list of valuation observations.

5.2.7 Details of processing finds and samples (AB06)

Process description

The finds and samples are processed and sorted in conditions that optimally safeguard their condition and stability. The material must be coded, sorted and packed in such a way that the condition remains as stable as possible and that further analysis can be carried out.

Products

- Processed and packed materials.

Actors

- The Junior Archaeologist and/or appropriate Junior Specialist will process the finds and samples.
- The Medior Archaeologist checks whether the finds and samples have been correctly processed.

Requirements with regard to resources

- Refer to OS11 for the processing and sorting of finds and samples. In addition to an indication of archaeological period in accordance with the Archaeological Basic Register, only the categories of finds and the number have to be registered. In the case of plant and animal remains, it has to be recorded whether the material is burned or unburned.
- With regard to the temporary storage and preservation of finds and samples, refer to OS09.

5.2.8 Processing data (AB07)

Process description

Data are processed and treated in such a way that a follow-up analysis can take place.

Products

- Processed data.

Actors

- The Medior Archaeologist and/or appropriate Junior Specialist will process the data.
- The Medior Archaeologist checks whether the data have been correctly processed.

Requirements with regard to resources

- OS11 must be taken into account as regards the processing of data.
- Additions/changes to the processing of the data may take place if there is an established link between the monitoring map and the registered information with regard to the observed archaeological remains.

5.2.9 Reporting (AB08)

Process description

The various sections of the process are recorded in a final report.

Products

- Final report.
- ISBN or ISSN number.

Actors

- The Medior Archaeologist writes the final report. The appropriate Senior Specialist writes the relevant subreport.
- The Senior Archaeologist and/or appropriate Senior Specialist will check whether the final report has been drawn up correctly. If correct, the Senior Archaeologist will initial the report and appendices.

Requirements with regard to resources

- Requesting ISBN or ISSN number.

The final report must comprise at least the following:

Administrative data

- Date.
- Principal.
- Archaeological contractor.
- Competent authority (municipal, provincial or national government).
- Name of the archaeological expert working on behalf of the competent authority.
- National registration number (CIS code).
- Location (municipality, place, toponym, at least four x/y coordinates).
- Map of project area.
- Location of documentation.

Introduction

- Information on the project within whose framework the monitoring takes place, the organisation of the observation work and the principal.

The assignment

- The research questions with regard to the monitoring area.

Method of working

- A description of the method and techniques used.
- Reasons for choices with regard to the selection of material.

Historical summary

A report of all the activities carried out during the implementation of the watching brief and of activities which have resulted in adaptation of the activities with regard to which data are missing in the final report.

Results of the implementation of a watching brief

- Results of implementation of watching brief described on the basis of the main categories

referred to under AB02.

- This section must be accompanied by a map showing the different main categories (scale at least 1:2,000) and a map on which these have been projected onto the soil-intervention (scale at least 1:25,000).

Results of the archaeological registration

A presentation of the results acquired with regard to the observed archaeological remains. The presentation must comply with the following criteria:

- every archaeological value described is assigned a registration number that refers to the various main categories with regard to the spatial arrangement of the observations carried out;
- a description of the archaeological values (remains), typification, determination of period, geological context and size (within the area affected by the soil-intervention);
- data on finds and samples related to the archaeological remains described;
- valuation observation of registered archaeological values using the 'score list' (AB04);
- image references (nature, number, registration number).

Interpretation of the results

This should cover, at least, the following items:

- grouping of observed archaeological find-spots into archaeological sites with a valuation of the individual find-spots on the basis of the registered data;
- relating the results to the find-spots acquired from the preliminary process and the archaeological expectation based thereon. This section must be accompanied by a map showing a combination of the watching brief results, previously known archaeological values and archaeological expectation (at a scale of at least 1:10,000).

Conclusion and recommendations.

- Here, the data from the previous chapters are analysed with answers being given to the research questions in the Project Outline. If prescribed in the Project Outline, an evaluation of the preliminary process can be added.

Appendices

- List of illustrations and justification.
- Bibliography.
- (Digital) information carrier with basic data and summary of the relevant material groups and the corresponding files.
- Subreports or list of subreports with references to author and subject.

5.2.10 Registering the project - Watching brief (RS03)

Process description

The project is registered with the CIS. The system issues a unique registration number (CIS-code).

Products

- Administrative data.
- National registration number (CIS-code).

Actors

- The Senior Field Technician and/or Junior Archaeologist will register the project with the CIS.
- The Medior Archaeologist checks whether the project has been correctly registered and a CIS-code was obtained.

Requirements with regard to resources

Administrative data relating to registration

- Date on which project is registered.
- General boundaries of project area (at least four x/y coordinates).
- Toponym (if applicable).
- Place.
- Municipality.
- Province.
- Principal.
- Executing party.
- Competent authority (national, provincial or municipal government).

- Name of expert on behalf of competent authority.
- Type of project (desk-based assessment, archaeological field evaluation, protection, watching brief, excavation).
- Project Outline or plan of Approach.
- Topographical map (at least 1:10.000).
- Estimated time reserved for the project.
- Motivation.
- Type of site.
- Start and end date of project.

The system issues a unique registration number to the contractor.

- National registration number (CIS-code).

5.2.11 Transfer of project data – Watching brief (RS08)

Process description

The relevant result data are supplied to the CIS.

Products

- Reference data.
- Additional data.
- Observations.

Actors

- The Junior Archaeologist supplies the relevant result data to the CIS.
- The Senior Archaeologist checks whether the relevant result data have been supplied by checking the CIS confirmation of receipt.

Requirements with regard to resources

Data relating to project results

Project results (if applicable):

- National registration number (previously issued CIS-code).
- Dates on which the project was started and completed.
- Definitive outer boundaries of the pits dug (at least four x/y coordinates).
- (Digital) map of project area.
- Surface area of area monitored.
- Depth of works under surface level.
- Observations pertaining to the project (see below).
- Textual summary of project results including description of research questions.

Reference data

- Management and location of documentation and find material (reference to depot at which the finds are managed, reference to archive at which the documentation is managed, reference to the complete report).

Data to be registered per observation

- Map page no.
- x coordinate.
- y coordinate.
- z coordinate.
- Accuracy of coordinates (in m).
- Toponym (if applicable).
- Place.
- Municipality.
- Province.
- Date of find.
- Finder.
- Describer.
- Watching brief method.
- Find acquisition (e.g. field walking, excavation).
- Depth to which project was carried out.
- Description of find-spot (from ground level).

- Find distribution.
- Geomorphology/landscape form.
- Land use (condition at ground level).
- Height of ground level (in relation to Amsterdam Ordnance Datum).
- Depth of find with regard to ground level.
- Soil profile (intact/disrupted).
- Data/documentation storage location.
- Finds/collection storage location.
- Available literature on the find/feature.
- Most important categories of finds, samples and features.
- number of finds per serial number;
- condition of the find;
- material: raw material of the find;
- description of determination, terminology according to ABR;
- dating (see list 1 pertaining to ROB find registration form);
- assemblage (see list 2 pertaining to ROB find registration form);
- clarification: supplementary information.
- Description: summary of monitoring data.
- Sketch: topographical or cadastral map.

5.2.12 Transfer of digital data (RS11)

Process description

The relevant result data are supplied to the CIS (controlled by ROB).

Products

- Digital data.
- Reference data.

Actors

- The Junior Archaeologist supplies the digital data to the CIS.
- The Senior Archaeologist checks whether the digital data have been supplied by checking the CIS confirmation of receipt.

Requirements with regard to resources

Data at transfer

- National registration number.
- Files archive, to be delivered on CD-rom with an index to the files. High quality CD-rom must be used.

File formats

- Texts MS Word (Windows 95 or higher), ASCII
- Databases MS Access (Windows 95 or higher), ASCII
- Images TIFF or JPEG
- Drawings DXF
- GIS ARC/View shapefile

6 EXCAVATION

6.1 Description

6.1.1 Objective

The objective of excavation is to document data and to recover finds from sites in order to retain information which is important for scientific research of the past.

6.1.2 Process

Excavation comprises the following subprocesses:

1. preparing the fieldwork;
2. implementing the fieldwork;
3. post-fieldwork assessment phase;
4. post-excavation research after the fieldwork.

Preparing the fieldwork

The preparation of the fieldwork comprises all the work that is necessary in order to be able to implement the fieldwork.

Implementing the fieldwork

The implementation of the fieldwork is carrying out the excavation work. The fieldwork is ended after the assignment has been completed and after consultations with the developer. Unless agreed otherwise, the work area will be completed in accordance with the Project Outline.

Within 2 weeks after the end of the fieldwork, the primary results must be recorded in a format determined by ROB and sent to the CIS (so called ARCHIS-notification).

The process description is not intended to describe every possible type of excavation work. Such details are generally recorded in the Project Outline and the project design. The focus below is purely on processes or stages which are a feature of (almost) every excavation.

Post-fieldwork assessment phase

Evaluation of the research questions and post-excavation research. Post-fieldwork assessment will take place after the fieldwork has been carried out. A qualified archaeologist assesses the results based on the Project Outline. Finds and samples have to be evaluated. A post-excavation research design will be developed on the basis of these findings and a selection advice which, if desired, can also serve as a basis for a (re-)estimation of the post-excavation research phase. The post-fieldwork assessment phase is primarily intended to determine whether the estimated quantities of finds and samples to be investigated and the proposed method are, in fact, considered sufficient or perhaps too broad. At this point in time the expected quantities and categories of finds and samples and the work schedule should be discussed with the depot in connection with the reserving of depot space.

Post-excavation research

The excavation is concluded by the results being recorded in a final report. The project will be completed once the final report has been approved. The final report has to be made available as determined in the Project Outline, but in any case no later than 2 years after the fieldwork has been completed (this is also required by all excavation permits since 2002).

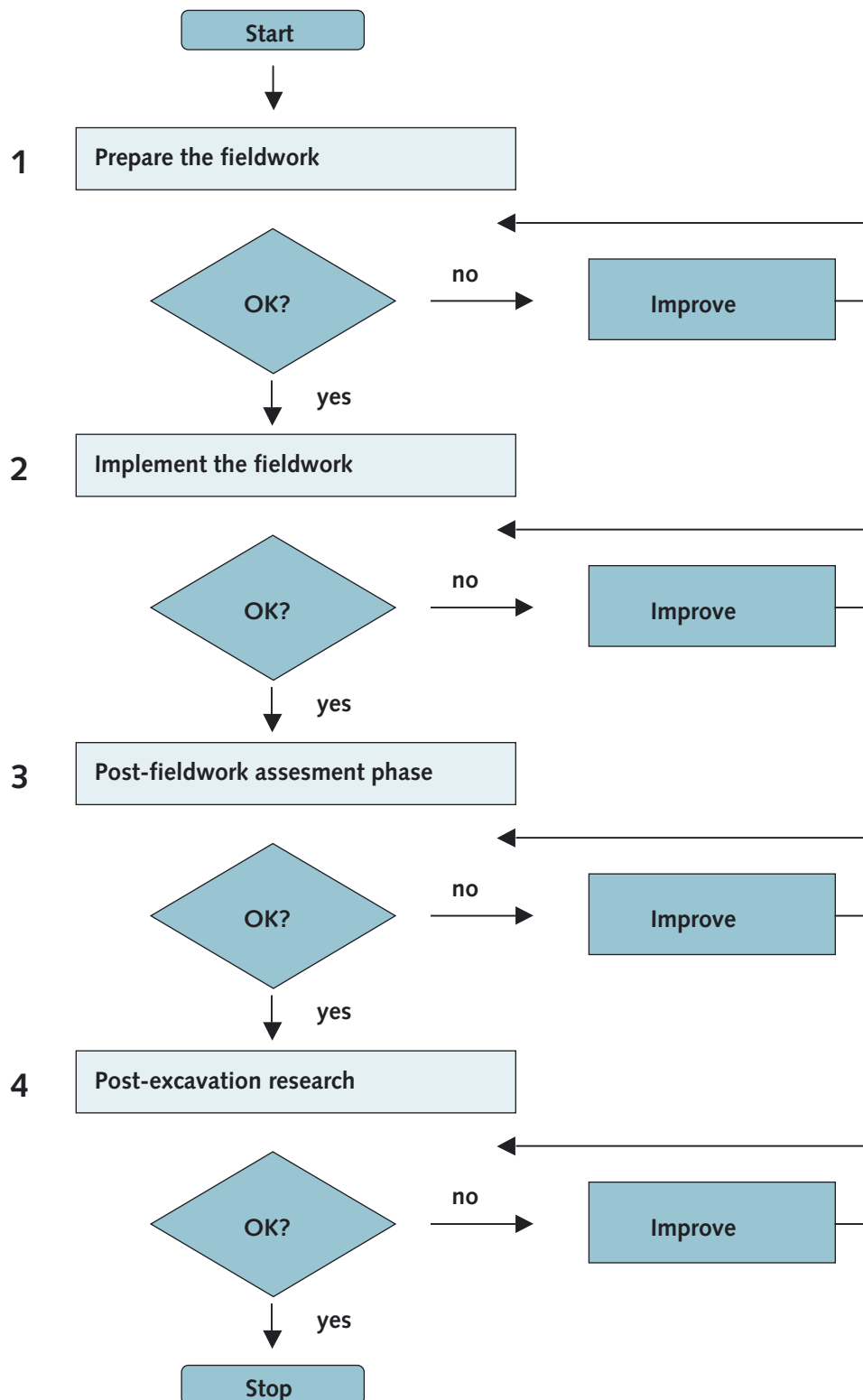
No later than 4 weeks after delivery of the final report, finds and archive are transferred to the relevant provincial or municipal depot and digital data are transferred to the CIS at the ROB.

6.1.3 Actors

Excavation	
Job	Senior Specialist
Junior Archaeologist	Junior Field Technician
Medior Archaeologist	Senior Field Technician
Senior Archaeologist	Excavation Worker
Junior Specialist	Land Surveyor

6.1.4 Process diagram for excavations and accompanying description

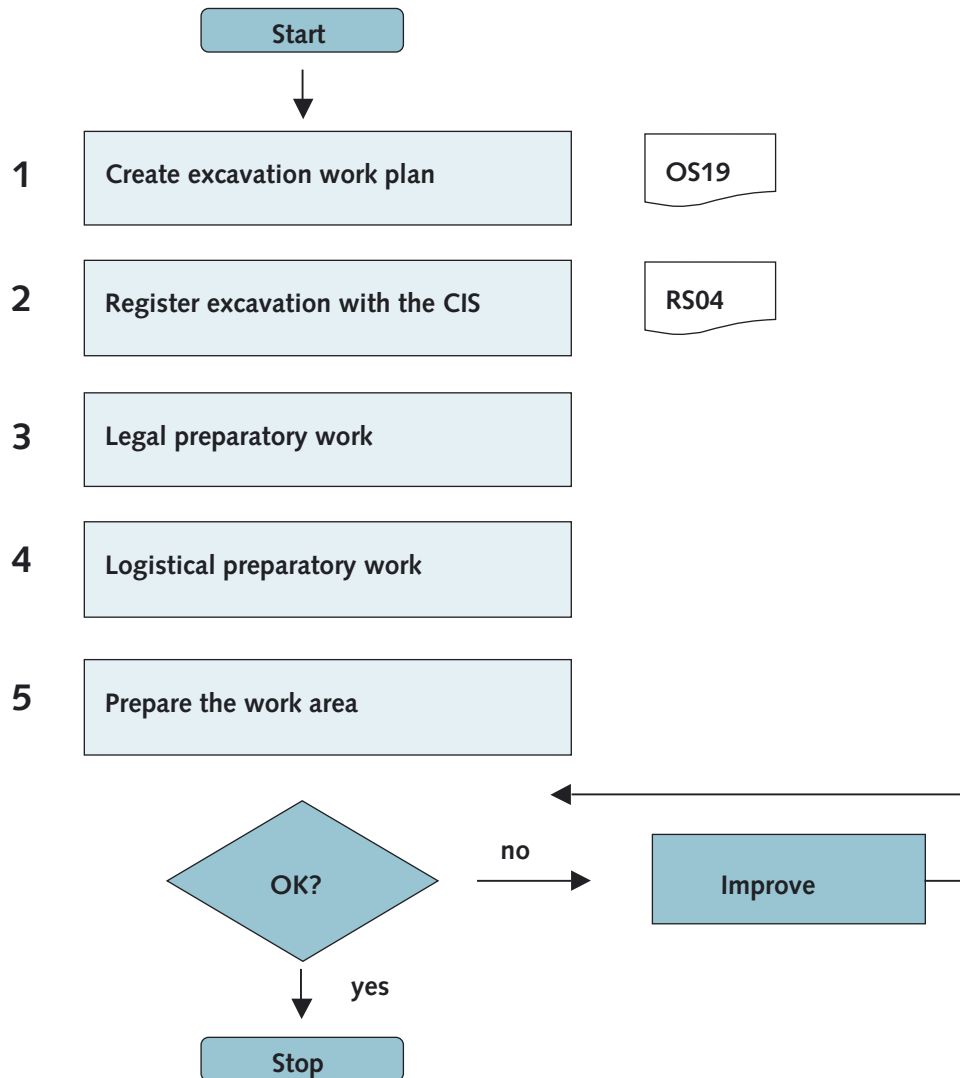
General description of the excavation process



General description of the excavation process

No.	Activity	Procedure/description
1	Prepare the fieldwork	The preparation relating to the fieldwork comprises all the work that is necessary in order to be able to implement the fieldwork.
OK	CHECK	
	IMPROVE	
2	Implement the fieldwork	The fieldwork comprises all excavation work. For example: the recording of various parameters in the field, the collecting, registering and processing of finds and samples, and the finishing of the fieldwork.
OK	CHECK	
	IMPROVE	
3	Post-fieldwork assessment phase	During the post-fieldwork assessment phase the research questions are used to adjust the post-excavation research design and selection plan, based on recommendations given by a specialist.
OK	CHECK	
	IMPROVE	
4	Post-excavation research	The excavation is concluded by laying down the results in a final report which has to be approved and published. Thereafter, the project is concluded.
OK	CHECK	
	IMPROVE	
	STOP	End of the process.

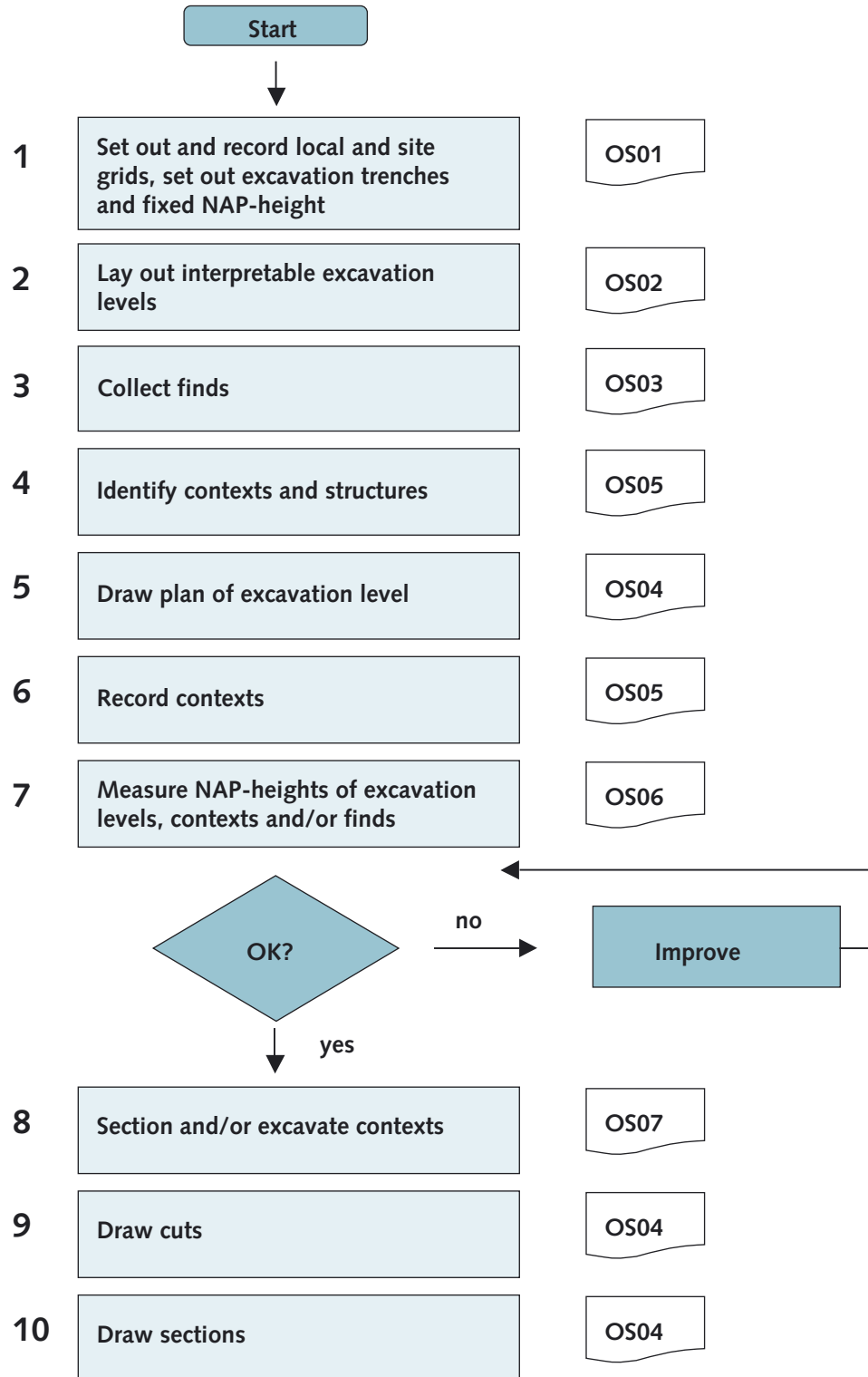
Step 1: Preparing the fieldwork



Step 1: Preparing the fieldwork

No.	Activity	Procedure/description	Actor	DOC
1	Create excavation work plan	Drawing up an excavation work plan based on the Project Outline and possibly on the corresponding project design or specifications. The safety plan is part of the work plan. If the tender meets the requirements of a work plan, no work plan is needed, reference to the tender will suffice. If no work plan has been drawn up, a separate safety plan is obligatory.	Medior Archaeologist	OS19
2	Register the excavation with the CIS	Reporting the start of the excavation (article 41-report) in analogue but preferably in digital form to, and requesting the registration number from, the CIS. The depot to which the finds and samples and documentation go has to be notified of this registration number.	Senior Field Technician/ Junior Archaeologist	RS04
3	Legal preparatory work	KLIC notification, arranging for access entry and all necessary permits before the fieldwork can be started.	Senior Field Technician/ Junior Archaeologist	
4	Logistical preparatory work	Arranging huts, accommodation, means of transport, fencing and public utility provisions. Arranging machines and materials which have to comply with the safety plan.	Senior Field Technician/ Junior Archaeologist	
5	Prepare the work area	The work area must be organised in such a way that the fieldwork can be started straight away.	Senior Field Technician/ Junior Archaeologist	
OK	CHECK	Section 1.1 is checked by the Senior Archaeologist. If the work plan and the safety plan fulfil all the requirements, the Senior Archaeologist approves the work plan and the safety plan by signing/initialling the work plan. Sections 1.2 to 1.5 are checked by a Medior Archaeologist.		
	IMPROVE	Senior Field Technician/ Junior & Medior Archaeologist.		
	STOP	End of the process.		

Step 2: Implementing the fieldwork



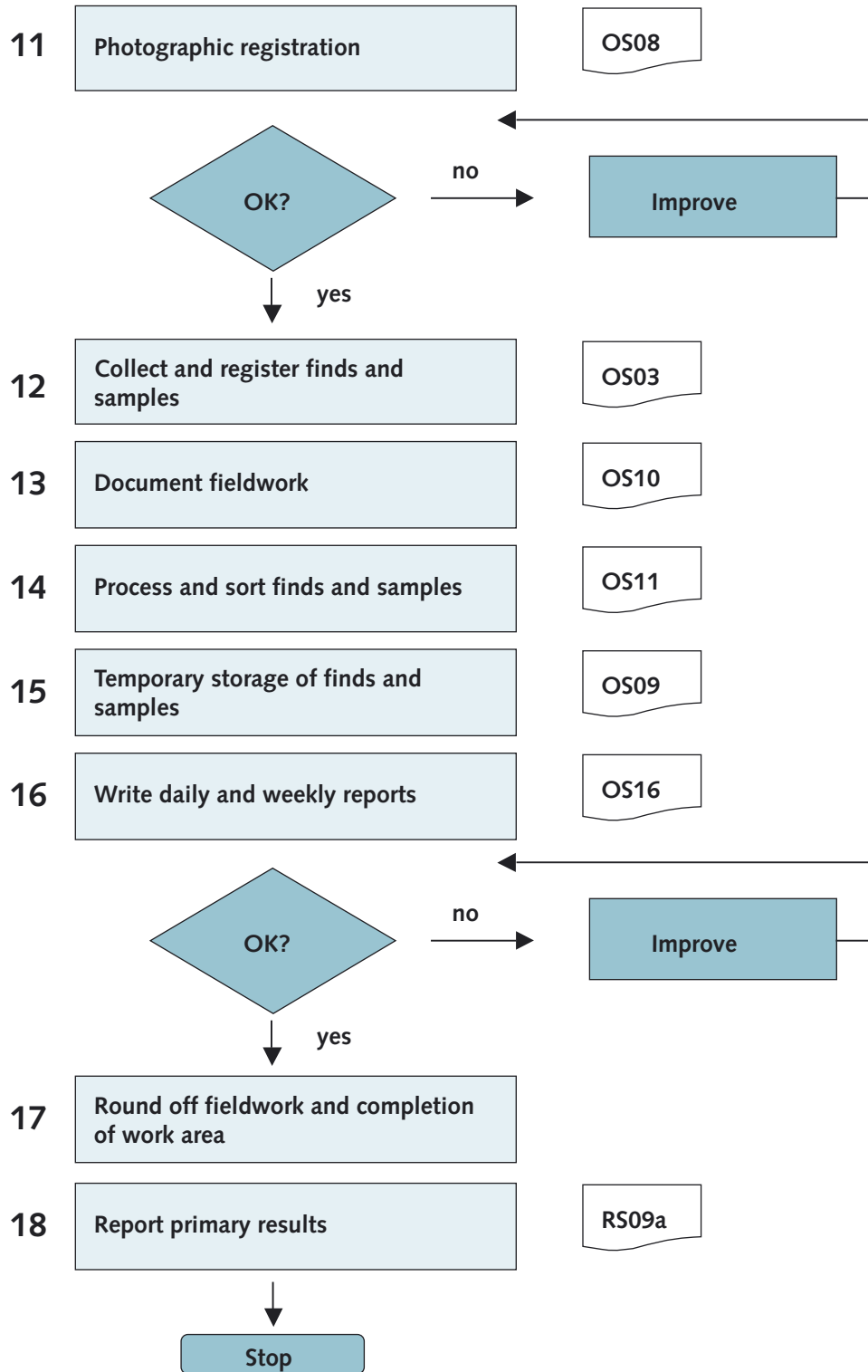
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Step 2: Implementing the fieldwork

No.	Activity	Procedure/description	Actor	DOC
1	Set out and record local and site grids and set out the excavation trenches and a fixed NAP height	Local and site grids (including stakes with grid references) have to be set out and recorded on a map. The list of measuring points has to be laid down with national coordinates. Excavation trenches have to be marked out and a fixed NAP height (Amsterdam Ordnance Datum) determined. Calibrated measuring equipment has to be used.	Land Surveyor/ Senior Field Technician	OS01 SUF standard NEN 1878 Technical operations manual
2	Lay out of interpretable excavation levels	An interpretable excavation level is laid out.	Senior Field Technician/ Junior Archaeologist	OS02
3	Collect finds	Collecting finds found when lowering a level and identifying these and recording the details on the appropriate form.	Junior Archaeologist/ Senior Specialist	OS03
4	Identify contexts and structures	The contexts identified are described and recorded in daily and weekly reports and on the appropriate forms.	Medior Archaeologist	OS05
5	Draw a plan of an excavation level	A level drawing is made.	Senior Field Technician/ Junior Archaeologist	OS04
6	Record contexts	Contexts have to be recorded on an appropriate form.	Senior Field Technician/ Junior Archaeologist	OS05
7	Measure the NAP heights of levels, contexts and/or finds	The height of levels, contexts and finds is measured in comparison to the NAP, indicated on a map, recorded on the appropriate form and stored in a file.	Junior Field Technician	OS06
OK	CHECK	Section 2.1 is checked by the Senior Field Technician or Land Surveyor. The Senior Field Technician or Land Surveyor checks whether the local measuring system has been properly arranged by carrying out the measuring work again. If correct, the Senior Field Technician or Land Surveyor will approve the report measuring system and maps by signing/initialling the report and maps. Sections 2.2 to 2.7 are checked by a Medior Archaeologist. The Medior Archaeologist checks whether the maps and forms comply with the standards guidelines and the Project Outline. If correct, the Medior Archaeologist approves the maps and forms by signing/initialling them.		
	IMPROVE	Surveyor/ Junior & Senior Field Technician/ Junior & Medior Archaeologist.		
8	Section and/or excavate contexts	The contexts are sectioned and excavated and the data recorded on an appropriate form.	Junior Field Technician	OS07
9	Draw cuts	Drawings are made of the cuts.	Junior Field Technician	OS04
10	Draw sections	Drawings are made of the sections.	Senior Field Technician/ Junior Archaeologist	OS04

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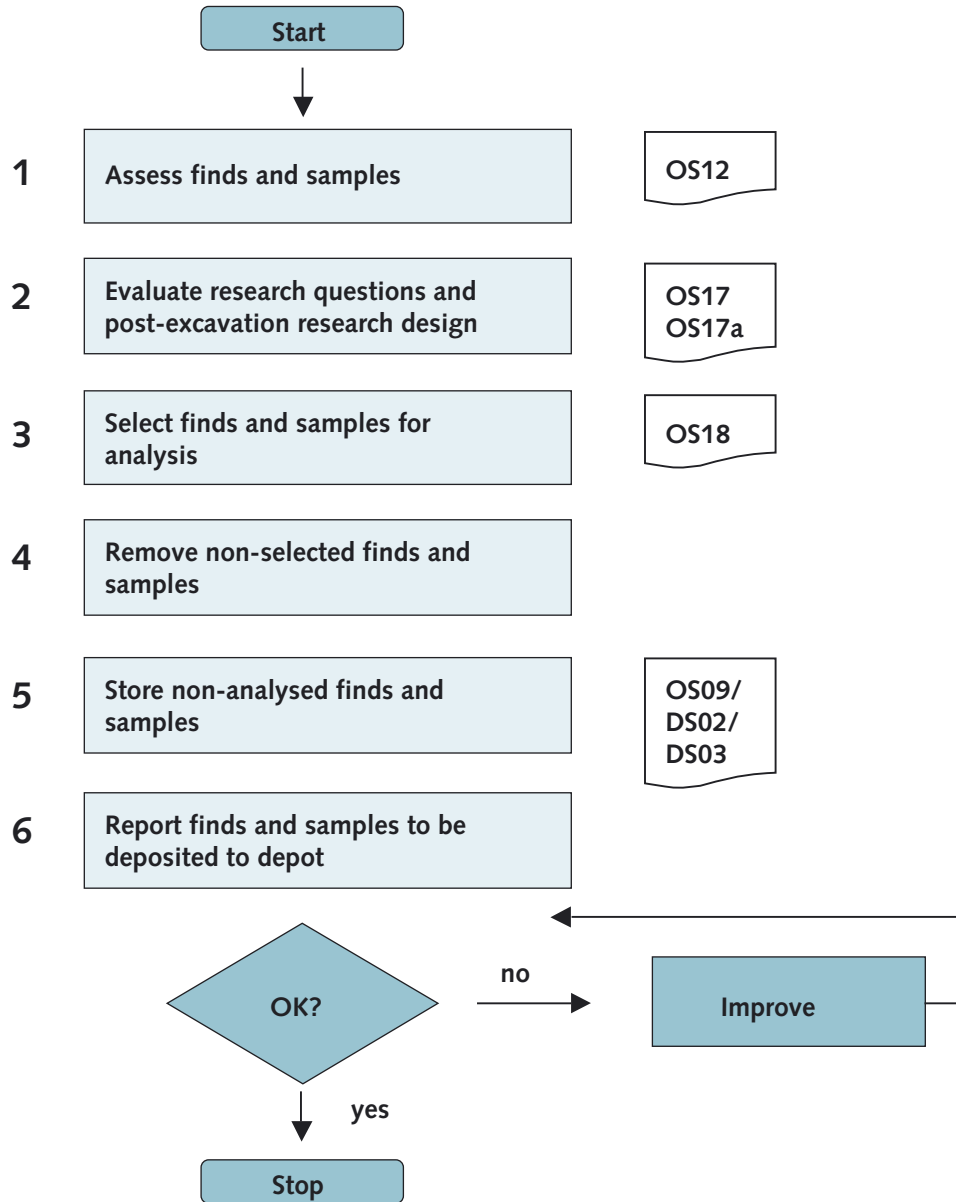
Step 2: Implementing fieldwork (continued)



Step 2: Implementing fieldwork (continued)

No.	Activity	Procedure/description	Actor	DOC
11	Photographic registration	Photographic material is collected (sets of photos of levels, sections, context cuts, and exceptional finds, registered and recorded on an appropriate form).	Junior Field Technician	OS08
OK	CHECK	Sections 2.8 to 2.11 are checked by the Medior Archaeologist. The Medior Archaeologist checks whether all the drawings and photographic records are present and comply with the standards guidelines. If correct, the Medior Archaeologist approves the drawings and photographic records by signing/initialling the forms.		
	IMPROVE	Junior & Senior Field Technician/ Medior Archaeologist.		
12	Collect and register finds and samples	The finds and samples are collected, registered (assigned a code and identification) on an appropriate form with corresponding digital files and are packed in such a way that the condition of the material is, and remains, as stable as possible.	Junior Archaeologist/ Senior Specialist	OS03
13	Document fieldwork	Collecting all the relevant documentation pertaining to the excavation.	Senior Field Technician/ Junior Archaeologist	OS10
14	Process and sort finds and samples	The finds and samples are processed and sorted in conditions that optimally safeguard their condition and stability. The materials must be coded and packed in such a way that their condition remains as stable as possible and that further analysis can be carried out.	Junior Field Technician/ Junior Specialist	OS11
15	Temporary storage of finds and samples	The finds and samples are stored temporarily in such a way that the quality of the material does not deteriorate during the period of storage.	Excavation Worker	OS09
16	Write daily and weekly reports	The work is recorded in daily and weekly reports.	Medior Archaeologist	OS16
OK	CHECK	Sections 2.12 to 2.15 are checked by the Medior Archaeologist or Senior Specialist. The Medior Archaeologist or Senior Specialist checks whether the steps have been completed. If correct, the Medior Archaeologist or Senior Specialist signs/initials the field documentation. Section 2.16 is checked by the Senior Archaeologist. The Senior Archaeologist checks whether daily/weekly reports have been drawn up.		
	IMPROVE	Excavation Worker/ Junior & Senior Field Technician/ Junior & Medior Archaeologist/ Junior & Senior Specialist		
17	Round off fieldwork and completion of the work area	The fieldwork is ended after the assignment has been implemented and after consultations with the principal. This is recorded in a completion report. The area will be left in a condition as agreed with the principal.	Senior Archaeologist	
18	Report primary results	The primary results must be recorded in a format to be determined by ROB and sent to the CIS (so called ARCHIS-notification)	Junior Archaeologist	RS09a
OK	CHECK	Sections 2.17 to 2.18 are checked by the Senior Archaeologist. The Senior Archaeologist checks confirmation of receipt by the CIS.		
	IMPROVE	Junior & Senior Archaeologist.		
	STOP	End of the process.		

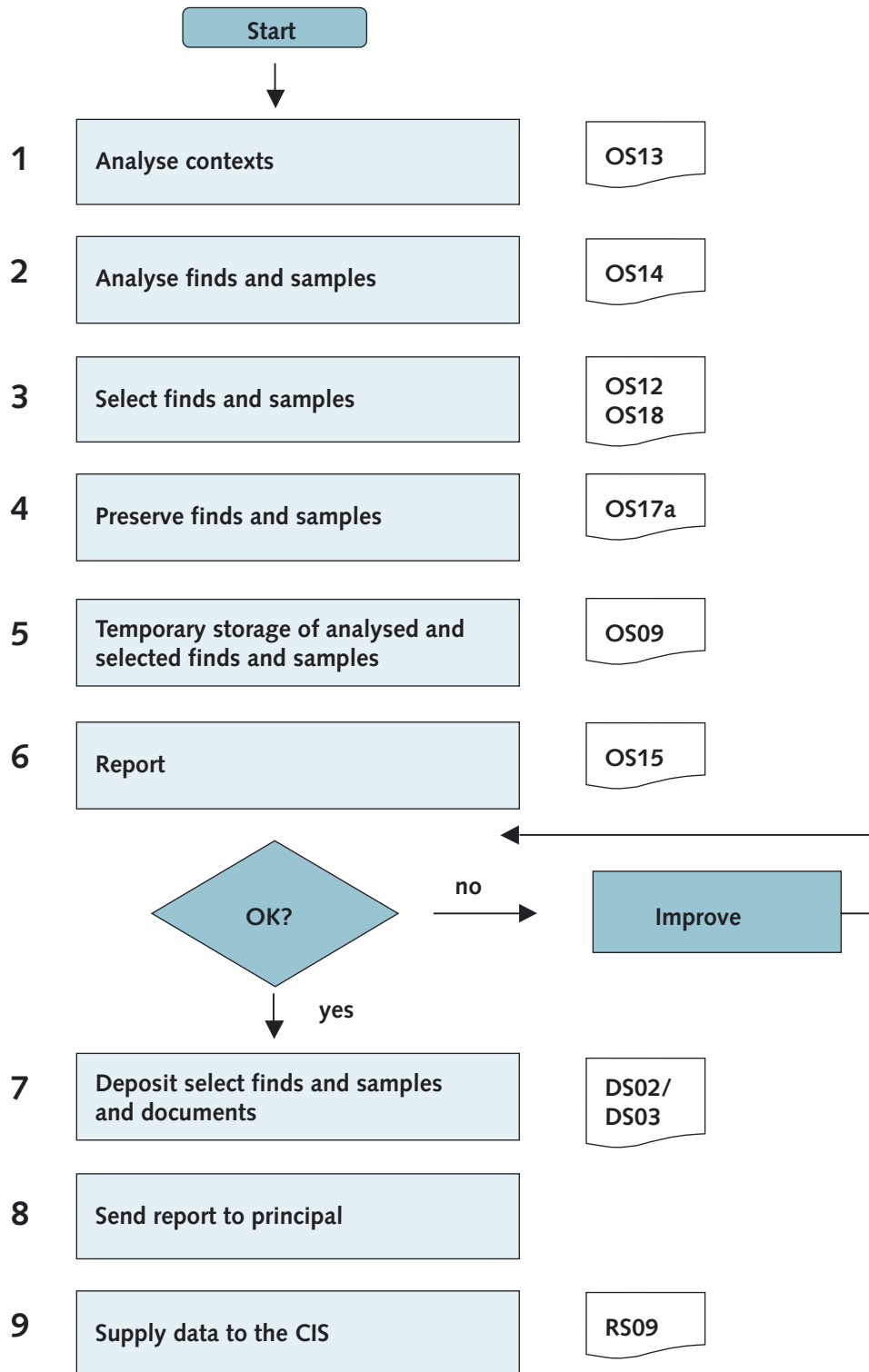
Step 3: Post-fieldwork assessment phase



Step 3: Post-fieldwork assessment phase

No.	Activity	Procedure/description	Actor	DOC
1	Assess finds and samples	The finds and samples are assessed by an appropriate specialist with regard to their suitability for analysis. The valuations are recorded in a report.	Senior Archaeologist/ Senior Specialist	OS12
2	Evaluate research questions and post-excavation research design	The research questions and the post-excavation research design are evaluated on the basis of the recommendations of the appropriate specialist. The result is an adjusted post-excavation research design and selection recommendations for the material and objects to be preserved. The adjusted post-excavation research design is evaluated against the Project Outline.	Senior Archaeologist Senior Specialist	OS17 OS17a
3	Select finds and samples for analysis	The finds and samples are selected and prepared for analysis by an appropriate specialist. Selection takes place by an appropriate specialist on the basis of consultations with the Senior Archaeologist. This results in a selection report.	Senior Archaeologist Senior Specialist	OS18
4	Remove non-selected finds and samples	Non-selected material has to be removed.	Excavation Worker	
5	Store non-analysed finds and samples	Finds and samples with research potential which are not covered by the Project Outline can be stored in the depot to be processed at some later date. This material is packed in such a way that its condition remains as stable as possible; it is also coded.	Junior Field Technician/ Junior Specialist/ Medior Archaeologist	OS09/ DS02/ DS03
6	Report finds and samples to be deposited in the depot	An estimate is submitted to the depot of the samples, finds, and documentation to be supplied.	Medior Archaeologist	
OK	CHECK	Sections 3.1 to 3.3 are checked by the Senior Archaeologist. If correct, the Senior Archaeologist approves the selection report and amended post-excavation research design by signing/initialling them. Sections 3.4 to 3.6 are checked by a Medior Archaeologist. If correct, the Medior Archaeologist will sign/initial the appropriate form.		
	IMPROVE	Excavation Worker/Junior Field Technician/Medior & Senior Archaeologist/Senior Specialist		
	STOP	End of the process.		

Step 4: Post-excavation research



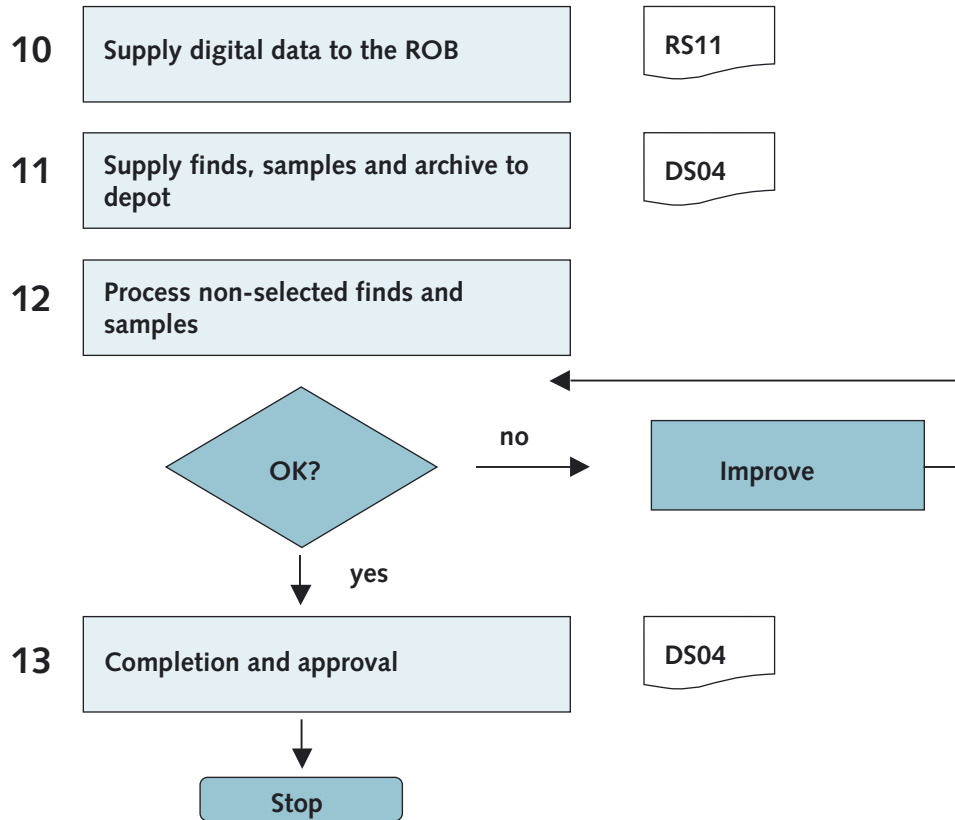
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Step 4: Post-excavation research

No.	Activity	Procedure/description	Actor	DOC
1	Analyse of contexts	The contexts and structures are analysed, documented and recorded in a data file (data file + report).	Medior Archaeologist	OS13
2	Analyse of finds and samples	Finds and samples are analysed and documented by the appropriate expert/specialist for each category. The analysis is carried out in conditions which guarantee the stability of the material.	Junior Specialist/ Medior Archaeologist	OS14
3	Select finds and samples	The finds and samples are selected on the basis of the Project Outline, Plan of Approach and scientific criteria. The selection choices are recorded in a written report (post analysis selection report).	Medior Archaeologist Senior Specialist	OS12 OS18
4	Preserve finds and samples	The finds and samples that have been analysed and selected are preserved in such a way that they can be stored under the most stable conditions as possible in the (transit) depot.	Senior Specialist (Curator)	OS17a
5	Temporary storage of analysed and selected finds and samples	The material that has been analysed and selected is packed and coded in such a way that it can be stored under the most stable conditions as possible in the (transit) depot.	Junior Field Technician/ Excavation Worker	OS09
6	Report	The various sections of the excavation process (subreports) are recorded in a final report.	Medior Archaeologist Senior Specialist	OS15
OK	CHECK	Sections 4.1 to 4.6 are checked by the Senior Archaeologist. The Senior Archaeologist checks whether the analysis report and (selection) report comply with the requirements laid down in the Project Outline. If correct, the Senior Archaeologist approves the report by signing/initialling the report of which the selection report is part.		
	IMPROVE	Excavation Worker/Medior Senior Archaeologist/ Junior & Senior Specialist.		
7	Deposit selected finds and samples and documentation	The material is packed and coded and the corresponding documentation and field data are added, in accordance with the depot guidelines, so that the material can be transferred to the depot. The material must be preserved so that the condition it is in remains as stable as possible.	Junior Archaeologist Junior Specialist	DS02/ DS03
8	Send report to principal	Sending the report to the principal.	Junior Archaeologist	
9	Supply data to the CIS	The relevant data are supplied to the CIS.	Junior Archaeologist	RS09

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Step 4: Post-excavation research (continued)



Step 4: Post-excavation research (continued)

No.	Activity	Procedure/description	Actor	DOC
10	Supply digital data to the ROB	No later than 4 weeks after the report has been sent to the principal, the digital archive is transferred to the ROB.	Junior Archaeologist	RS11
11	Supply finds, samples and archive to depot	No later than 4 weeks after the final report has been sent to the principal, the archive is supplied to the relevant provincial or municipal depot. If this depot lacks facilities to store the archive, this is transferred to the ROB.	Medior Archaeologist/ Depot Manager	DS04
12	Process non-selected finds and samples	Non-selected finds and samples have to be removed.	Excavation Worker	
OK	CHECK	Sections 4.7 to 4.10 are checked by the Senior Archaeologist or Senior Specialist. The Senior Archaeologist/Senior Specialist checks whether data have been supplied to the Depot and CIS by examining the confirmation of receipt of CIS data and the transfer protocol.		
	IMPROVE	Excavation Worker/Junior Archaeologist/Junior Specialist.		
13	Completion and approval	The project ends once the final report has been completed, approved and published in accordance with the agreements made with the principal. The final report has to be made available no later than 2 years after the fieldwork has been completed. The material to be deposited is supplied and approved after written acceptance of the material by an authorised depot has been recorded in the transfer protocol.	Senior Archaeologist Depot Manager	DS04
	STOP	End of the process.		

6.2 Standards guidelines for excavation⁵

6.2.1 Project Outline for excavation (PS05)

Explanatory notes

Notification by the competent authority to the principal or the intended executing party (archaeological contractor), which refers to the preservation value of the site and the necessity of excavation work in the event that the site cannot be preserved. In addition, requirements are formulated and provisions laid down with which the activities have to comply.

Process description

Drawing up a Project Outline based on the available data.

Products

- Project Outline.

Actors

- The Senior Archaeologist compiles the Project Outline with the appropriate specialists being consulted on specific issues.

Requirements with regard to resources

Project Outline

The minimum applicable requirements are:

Introduction

- Administrative data pertaining to the find-spot.
- Period and type of monument.
- Status of site.
- Selection recommendations.

Selection decision.

Research questions

- Specific questions which have to be answered via the excavation.
- Relation with existing research programmes: possibilities for cooperation.
- Determining the complexity of the excavation in accordance with the “complexity” guidelines (Appendix I).

Operationalisation (work to be carried out)

The Project Outline must also indicate a number of practical implementation guidelines. The Project Outline provides:

- motives for recommending the excavation method(s);
- a description of the minimum size of the sections of the find-spot(s) to be excavated: surface, number of levels, number of sections (possibly including a map);
- a description of the method of working and excavation strategy to be used, in so far as these differ from the standard procedures;
- indications with regard to quality and quantity of the specialist research.

Schedule

- Completion deadline, in agreement with the developer, taking into account legal requirements on providing information, depositing, and publication

Provisions relating to interim evaluation of the project design or research proposal

- Determining the evaluation moments.
- Who is to be involved on behalf of the competent authority (usually the compiler of the Project Outline).

⁵ The explanatory notes to standards guidelines sometimes include recommendations, assumptions or a discussion of the choices made.

Symbols used on drawings are shown in table 9 and are based on:

Veldhandboek ROB (1996): Procedure voor de registratie en het beheer van veldwerkgegevens [*Procedure for the registration and management of fieldwork data*];

Arnold Carmiggelt (1998): Kruisende sporen, Handleiding voor amateur-archeologen in Nederland. Uitgeverij Matrijs [*a guide for amateur-archaeologists in the Netherlands*].

Codes are referred to in:

Brandt et. al. (1992): Archeologisch Basisregister (ABR), Archeologische begrippen die in het landelijk archeologisch informatiesysteem ARCHIS gehanteerd worden [*Archaeological concepts used in the national archaeological information system ARCHIS*]

- After evaluation, a decision will be taken on the basis of joint consultations as to whether the original project design or research proposal is to be deviated from during the implementation phase.

Provisions relating to quality control

- The executing party is a certified company or a company that is permitted to carry out the intended work in accordance with the prevailing legislation and regulations.
- The qualified people involved in the archaeological work must meet the requirements from this Quality Standard (see Chapter 1, table 2).
- Supervisor: the relevant competent authority, the developer or a managing body acting on behalf of the developer (or on behalf of both). Names of manager(s) and supervisor(s).

Other provisions and conditions

Results

- The results expected from the excavation project.

Assessment

- The manner in which the competent authority assesses the results achieved against the Project Outline.

Literature and documentation list

- Literature and files consulted when drawing up the Project Outline.

6.2.2 Work plan (OS19)

Explanatory notes

The work plan is a concrete schedule for the preparation and execution of the fieldwork and for the analysis of the data. It is used in the field by the executing party as an excavation handbook. If a tender is issued for the project to be carried out and this complies with the following requirements, a reference to this tender will suffice.

Process description

The compiling of a work plan and corresponding safety plan based on the Project Outline and, if present, the project design or specifications.

Products

- Work plan.

Actors

- The Medior Archaeologist draws up the work plan.
- The Senior Archaeologist checks whether the work plan has been correctly drawn up. If correct, the Senior Archaeologist will initial the work plan.

Requirements with regard to resources

Plan of Approach

The agreements and procedures applicable to all the aspects must correspond to the Project Outline and possibly the project design and specifications, if available.

Administrative data

List of the people and bodies involved in the work

References to contacts, roles and responsibilities. List of subcontractors.

Plan with regard to consultations between the principal and the archaeological contractor

Plan for the implementation of fieldwork

- Description of the work.
- An indication of decision moments with regard to contract variations.

Schedule

- Staffing.
- Time.
- Resources.

Plan for the taking of samples

- Basic agreements for the taking of samples (per relevant category).
- Plan of action for exceptional circumstances (consultation specialist).

Plan for the screening

- The location of the sieving work.
- Agreements on the use of water.

- Agreements on the soil depot.

Post-excavation research design

Permits

Risk analysis

Safety plan

Model for the layout of the archaeological base camp

6.2.3 Site grid, derived measuring system and fixed NAP height (OS01)

Explanatory notes

The site grid must be measured into the national system of coordinates. This must be carried out by qualified surveyors⁶. Field technicians employed by an archaeological contractor can, of course, complete the same training course in order to qualify. Derived grid points may be set out and measured-in by unqualified surveyors.

Standards are set at the minimum level. It is for this reason that it is not specified that a benchmark has to be made of steel. In certain cases it can be made from a different material. This is left to the discretion of the responsible person or the certified company. The same applies to the fixing of a NAP height.

The standard for GPS measurements has not yet been defined, because at the time of writing this technique and its precision are subject to considerable change. However, when a GPS is used, the accuracy of coordinates must be certified.

Process description

The setting out and recording of a local measuring system. Fitting the site grid points in the national grid system. The setting out and recording of excavation trenches and fixed NAP heights.

Products

- Grid points (standards guideline relating to land surveying).
- Grid points map.
- Main grid points and benchmarks.
- Trenches and site grid map.
- Fixed NAP heights.
- Report (measuring system).

Actors

- Qualified surveyors will measure the grid points and fixed NAP heights.
- The Senior Field Technician will set out the site grid and derived measuring system.
- The Senior Field Technician or land surveyor checks whether the measuring system has been plotted out correctly by repeating the measurements.

Requirements with regard to resources

Grid points (SUF-standard NEN 1878)

The grid points map will always include the following data:

- drawing identification (OS04);
- coordinates (indicated by means of symbol, see Table 9);
- the national coordinates are determined to a precision of 30 mm, the derived measuring points (with regard to the grid point) to a precision of less than 30 mm;
- report;
- the map is assigned a map number (see OS04).

Site grid

- Relate main grid points to grid points.
- The main grid points are marked in the field.
- The site grid has at least 2 main grid points with a maximum distance of 50 m.

⁶ Requirements with regard to surveyors

- HBO [Higher Vocational Education] training;
- work to be executed in accordance with the: Land Registry Handbook of Technical Work;
- SUF Standard NEN 1878 (Information Science Advisory Council): data must be supplied in accordance with this standard.

- The coordinates are determined to a precision of 30 mm, the derived measuring points (in relation to the grid point) to a precision of less than 30 mm.
- Report.

Trenches and site grid map

The trenches and site grid map will always include the following data:

- drawing identification (OS04);
- main grid points (by means of symbols [Table 9], with national coordinates). The coordinates are determined to a precision of 30 mm. The derived measuring points (with regard to the grid point) to a precision of 30 mm;
- main zero point (the most south-western main survey point of the datum line; indicated on the drawing by means of symbol [Table 9] and grid national coordinates);
- fixed NAP heights [for symbols see Table 9];
- excavation units (trench circumference and numbers);
- grid points (indicated by means of symbol [Table 9] and with grid point coordinates);
- report.

NAP heights (see requirements relating to land surveyors)

- Levelling in urban areas by adopting level mark and a continuous measurement or measurements from two fixed points.
- GPS measurement in rural areas using at least 5 satellites, a free horizon.
- The NAP heights are determined to a precision of less than 30 mm.
- Implementation of at least 2 fixed NAP heights.
- Implementation on securely anchored location.
- Regular calibration of the NAP height (1x per two weeks and upon completion of the excavation).
- Indication on trenches and site grid map.
- Heights are expressed in whole centimetres + (plus) or - (minus) NAP.

6.2.4 Laying out excavation levels (OS02)

Explanatory notes

When creating excavation levels, a great many factors have to be taken into account. The expertise of the leading archaeologist is of considerable importance. The standards guideline only records a number of basic procedures. The point of departure is that the form and interpretation of the contexts and structures have to be established by the leading archaeologist. Thereafter, drawing and documentation work can be carried out by a technician or assistant. That is the reason for the rule that contexts have to be marked out (by the Medior Archaeologist) before they are drawn.

Process description

Creating a legible (interpretable) excavation level.

Products

- A legible (interpretable) excavation level.
- Fixed benchmarks/base lines.

Actors

- The Senior Field Technician and/or Junior Archaeologist will create the excavation level and add the benchmarks.
- The Medior Archaeologist checks whether the excavation level has been correctly created.

Requirements with regard to resources

Laying out levels

- Create level preferably stratigraphically;
- In the case of excavations in which metal objects are expected, the level first has to be searched using a metal detector;
- Make level legible (manually or mechanised) before drawing;
- Mark out contexts before drawing;
- Position benchmarks in the trenches in such a way that the base lines are no more than 3 metres apart.

6.2.5 Collection and registration of finds and samples (OS03)

Explanatory notes

When collecting, a distinction is made between general, complex and vulnerable finds and samples (see below). The archaeologist decides what is complex. This might, for example, mean burials, organic material, exceptional finds (glass, metal). The standard described here does not include those finds because in such cases a specialist has, in principle, to be contacted.

Wherever standards guidelines are included for common types of complex finds, such as burials, this is done in order to lay down a number of standard procedures which always have to be complied with. This makes it possible to carry out specialist research at a later date.

Deviations from the standard can be set out in the Project Outline.

Finds and samples cover all materials that have been wholly or partially removed from the soil for the purpose of further evaluation. This concept covers three categories:

1. *General finds*: Non-vulnerable and non-complex finds, such as pottery, metal, glass, natural stone, etc.
2. *Vulnerable finds*: Vulnerable finds are finds of organic material (textiles, leather, wood), but may also consist of metal and glass. Vulnerable means that the stability and the condition of the material is not guaranteed without measures being taken.
3. *Complex finds*: Complex finds are finds that either have to be extracted in context or whose size means that they cannot be extracted whole but only in parts, for example a complete skeleton or a boat.
4. *Samples*: Because of their nature, samples are always treated as vulnerable or complex finds.

The characteristics of samples are:

- that they are the result of a random check, that is they constitute a representative part of a larger whole;
- that the sample is normally embedded in a different material, for example soil, meaning that it is not or scarcely visible without processing;
- that the nature, size, etc. of the sample is determined by the objective for which the sample is taken, for example botanical analysis, dendrochronology, chemical analysis, pedological analysis (thin sections), C14 analysis, etc.

Note: The requirements relating to resources imposed on vulnerable and/or complex finds or samples are identical and are treated jointly below.

When collecting finds and samples, the publication *Archeologie Leidraad 1: Veldhandleiding archeologie* (ISSN: 1570-6206) can be used as guidance. For the different categories, a reference is made to the corresponding chapter in this publication.

Process description

Collecting and registering material (finds and samples) when creating or excavating a level.

Products

- Finds.
- Finds list.
- Samples.
- Samples list.
- Photographic records.

Actors

- The Junior Archaeologist collects and registers the general finds.
- The appropriate Senior Specialist collects and registers the vulnerable or complex finds and samples or advises as to how these are to be collected.
- The Medior Archaeologist checks whether the finds and samples have been correctly processed and registered.
- An appropriate specialist must be consulted in the case of decisions relating to matters that deviate from the rule (such as sampling, packing and transporting, etc.).

Requirements with regard to resources

Find number

- A unique number that consists of a unique combination of data (for example trench number + level number + serial number) or a single but unique number.
- Find numbers must always be linked to the measuring system, or it must be possible to do so (via the field drawing or a context number).

Finds and sample label

- The label must be made of weather and temperature proof, acid-free, sturdy material.
- The printing on the label must be resistant to scratching, light-fast and water-resistant.
- Labels are filled in with a light-fast and water-resistant ink or using a special pencil in the case of a plastic label.

Information on finds and samples label

The finds label will record the following information (in so far as applicable):

- national registration number;
- work reference = Site Identification Code (optional);
- trench number (number of the trench from which the find or sample has come);
- section number (number of the section, the segment or the grid cell from which the find or the sample has come);
- level number (number of the level from which the find or sample has come);
- serial number (identification number of the find or sample);
- context number (number of the context from which the find or sample has come);
- codes to be included on the finds label, see ABR.

Instead of trench, section, level and serial number, a unique find number may also be sufficient. In the event that a barcode is used, a reference to the find number will suffice.

Finds list

- Find number.
- Material category.
- Sort of finds.
- Trench number.
- Level number.
- Serial number.
- Context number.
- Drawing number.

Samples list

- Sample number.
- Sort of sample.
- Trench number.
- Level number.
- Serial number.
- Context number.
- Drawing number.

A. Collecting material (in general)

Collecting finds

- The publication *Archeologie Leidraad 1: Veldhandleiding archeologie* can be used as guidance.
- The tools to be used when collecting must be adapted to the material category of the find to be collected.
- There are different sorts of finds, namely: point location, grid location, context location, level location). The choice between these options is a result of the Project Outline or is determined by the research objective.
- Collecting finds from a context per content unit or layer unit (for example: a deposit or habitation layer).
- Finds from different deposits or layers in a context are assigned their own number.
- When finds are collected individually, documentation and registration take place per individual find.

- Marking measured-in individual finds on field or section drawing (for symbols see Table 9).
- Finds must be accompanied by completed finds labels.
- In order to keep the condition of the finds as stable as possible, they must be treated in accordance with OS09.
- An indication has to be given of where the samples are temporarily stored.
- As far as the recovery of complex finds is concerned, an appropriate specialist will be consulted if such is required by the Senior Archaeologist or if prescribed in the Project Outline.
- Contact with metal tools is to be avoided.
- Exceptional or complex finds (constructions and remains in anatomical context) are to be photographed or drawn.

Collecting samples

- The publication *Archeologie Leidraad 1: Veldhandleiding archeologie* can be used as guidance
- Samples are collected in accordance with a sampling programme (see standards guideline relating to work plan, OS19).
- The tools to be used when collecting must be adapted to the category of finds. Tools must not be contaminated with material from a different context.
- Samples must be registered individually.
- Samples must be marked on the field or section drawing (for symbols see Table 9).
- Samples must be assigned a sample number and sample code.
- In order to keep the condition of the finds as stable as possible, they must be treated in accordance with OS09.
- An indication has to be given in the samples list as to where the samples are temporarily stored.
- The sample volume depends very much on the research questions, context and preservation circumstances. For the number and quantity of the samples to be collected see Table 8: collecting, packaging and processing of samples.

B. Collecting material from closed finds assemblages

Grave structure

- See requirements relating to collecting general finds (OS03).
- See *Archeologie Leidraad 1: Veldhandleiding archeologie*, chapter 9.
- All objects are to be measured-in by three dimensions.
- The presence of metal objects is determined using a metal detector.
- Any (nearly) complete pottery is, if possible, lifted in its entirety after which the content will be examined in the laboratory and sampled in consultation with the scientists leading the project and appropriate specialists.
- The complete fill of the grave must be removed and sieved.

Inhumation graves

- If inhumations are not extracted *in situ*, the four extremities, axial skeleton, skull + jaw must be extracted and packed separately. In exceptional cases, the specialist decides how skeletal elements are extracted and packed.
- See *Archeologie Leidraad 1: Veldhandleiding archeologie*, chapter 9.
- If tissue or hair or both are discovered, consultation will take place with a specialist regarding how to proceed.
- If no specialist is present, it is recommended that samples are taken of, among other things, teeth capsules and the area around the abdomen.
- If skeletal material is present, the specialist can demand that special protective measures are taken (gloves + dust mask) to ensure that a DNA analysis can be carried out later.

C. Collecting vulnerable and/or complex finds

Stone

- See the standards guidelines relating to the collection of general finds and Table 7. Collecting, packing and temporary storage of complex finds.
- See *Archeologie Leidraad 1: Veldhandleiding archeologie*, chapter 16.

Pottery

- See standards guidelines relating to the collection of general finds and Table 7. Collecting,

- packing and temporary storage of complex finds.
- See *Archeologie Leidraad 1: Veldhandleiding archeologie*, chapter 14.

Metal

- See standards guidelines relating to the collection of general finds and Table 7. Collecting, packing and temporary storage of complex finds.
- See *Archeologie Leidraad 1: Veldhandleiding archeologie*, chapter 12.

Glass

- See standards guidelines relating to the collection of general finds and Table 7. Collecting, packing and temporary storage of complex finds.
- See *Archeologie Leidraad 1: Veldhandleiding archeologie*, chapter 13.

Organic Materials

- See standards guidelines relating to the collection of general finds and Table 7. Collecting, packing and temporary storage of complex finds.
- See *Archeologie Leidraad 1: Veldhandleiding archeologie*, chapters 1 to 11.

D. Collecting samples

A variety of samples can be taken, of which the following are examples:

- botanical samples;
- pollen samples;
- wood and charcoal samples;
- zoological samples;
- samples concerning the chemical composition of the soil;
- C14 samples;
- micromorphological samples.

Samples

- In all cases, the samples must be taken in consultation with a specialist. The sample volume depends very much on the research questions, context and preservation circumstances.
- For information on collecting samples, see the standards guidelines relating to the collection of general finds and Table 8. Collecting, packing and processing samples. See also the *Archeologie Leidraad 1: Veldhandleiding archeologie*.
- In the case of C14 samples, the quantity of the sample must always correspond to the conventional method. For recent data consult the C14-laboratory in Groningen and see *Archeologie Leidraad 1: Veldhandleiding archeologie*, chapter 20.
- For micromorphological samples, see *Archeologie Leidraad 1: Veldhandleiding archeologie*, chapter 22.

Table 7. Collecting, processing and temporary storage of vulnerable and/or complex finds

With regard to all material categories processing, packaging and temporary storage must take place in accordance with advice by a specialist or by a specialist himself.

Material group	Collecting	Packing	Temporary storage
Stone	To be lifted 'en bloc' in the case of soft stone or if traces of processing and/or colour are suspected.	Wet/damp ⁷ (not under water), airtight and in hard, supportive packaging. tephrite and amber must be stored wet/under water.	Dark, Temp 5-10°C.
Ceramics	Seriously fragmented and/or very vulnerable material is lifted 'en bloc' with part of the surrounding soil. Complete pots, whole or fragmented, are removed with contents if a direct relationship is expected between the pot and its contents.	Very vulnerable material wet/damp ⁷ (not under water), airtight and in hard, supportive packaging.	Dark, Temp 5-10°C.
Metal and combinations of metal and enamel	Seriously fragmented and/or very vulnerable material is lifted 'en bloc' with part of the surrounding soil.	Pack non-vulnerable material under water and airtight. Very vulnerable material wet/moist ⁷ (not under water), airtight and in hard, supportive packaging.	Dark, Temp 5-10°C. In the event of storage for longer than a month, consult a specialist.
Glass	Seriously fragmented and/or very vulnerable glass and stained, painted and/or gilded glass is lifted 'en bloc', if necessary, with part of the surrounding soil. If loose fragments are found these can generally be removed without precautions having to be taken.	Pack non-vulnerable glass in small portions. Very vulnerable glass and stained, painted and/or gilded glass should be packed in small portions, wet/moist ⁷ (not under water), airtight and in hard, supportive packing.	Dark, Temp 5-10°C.
Organic materials such as wood, leather, vulnerable or worked bone, ivory, textiles, rope, etc. and organic materials in combination with metal	Objects made of organic material are preferably lifted 'en bloc' with suitable supportive packing. Objects cleaned in the field which are not removed immediately should be kept wet (preferably under water). The same also applies to bone objects; bone of a reasonable or good quality can be removed with no further precautions having to be taken. Wet material is very vulnerable and must be treated with extreme care	Pack single finds under water and in airtight bags. Wood, textiles, rope and vulnerable leather/bone/ivory and other very vulnerable objects should also be packed in hard, supportive packaging. Objects which have been lifted 'en bloc' with surrounding soil should be packed in airtight and wet/moist conditions in hard, supportive packaging. Do not add mould reducers ⁶ . Do not change water.	Dark, Temp 5-10°C. In the event of storage for longer than a month, consult a specialist.

⁶ Clarification as to why no mould reducers should be used

- They can have a negative effect on further analysis.
- Most mould reducers are a health hazard (Working Conditions standards).

⁷ Clarification in the case of storage in wet/moist conditions (not under water)

The aim of wet/moist packaging and temporary storage is to maintain or imitate excavation conditions as much as possible. Do not place the material under water because it may start to float and move, as a result of which fragments may damage each other.

Table 8. Collecting, packing and processing samples.

Category	<i>Archeologie Leidraad 1: Veld-handleiding archeologie</i>	Minimum collection requirements with regard to volume	Packaging requirements with regard to collecting	Minimum mesh size for screening	Packing requirements after processing and general comments
Bones from small mammals, fish, birds, amphibians	Chapter 5	40 litres ⁸	airtight, cool 5-10 °C and dark, preferably in buckets with a lid.	2 mm ⁸	Allow to dry in the air at room temperature.
Wood	Chapter 4	40 litres	airtight, cool 5-10 °C and dark, preferably in buckets with a lid.	4 mm	Do not dry, airtight storage in bags that can be sealed. Wood samples are taken in consultation with, or by, the specialist.
Charcoal	Chapter 4	5 litres Charcoal is collected as a soil sample.	airtight, cool 5-10 °C and dark, preferably in buckets with a lid.	4 mm	Screen carefully and allow to dry in the air at room temperature, storage in pots or bags that can be sealed.
Non-carbonised seeds and fruits	Chapter 2	5 litres	airtight, cool 5-10 °C and dark, preferably in buckets with a lid.	0.5 (0.25) ⁹ mm	Do not dry, watertight storage in pots that can be sealed.
Carbonised seeds and fruits	Chapter 2	5 litres ¹⁰	airtight, cool 5-10 °C and dark, preferably in buckets with a lid.	0.5 (0.25) ⁹ mm	Allow to dry in the air at room temperature, storage in pots or bags that can be sealed.
Insects and mites (arthropods)	Chapter 8	5 litres	airtight, cool 5-10 °C and dark, preferably in buckets with a lid.	N/A	Processing by specialist.
Chemical research	Chapter 21	1 cm ³	airtight, cool 5-10 °C and dark.	N/A	Sampling in consultation with or by specialist, processing by specialist.
Pollen analysis	Chapter 1	Trays ¹¹ of 50x5x5cm or gouges of at least 3cm	airtight, cool 5-10 °C and dark + The samples are packed in airtight and watertight plastic.	N/A	Sampling in consultation with or by specialist, processing by specialist.
Individual pollen samples from archaeological contexts, for example wells or cesspits	Chapter 1	2 cm ²	airtight, cool 5-10 °C and dark.	N/A	Processing by specialist

⁸ Alternative to screening samples.

- minimum of 10 litres of the 40 litres on the 2 mm sieve;
- the rest of the 40 litres on the 4 mm sieve.

⁹ Screening using a 0.25 mm sieve often causes problems. Information on the residues that measure between 0.25 and 0.5 mm is essential for botanical research. However, the residues are small and this means that only a

Continued on the next page

Continuation of Table 8. Collecting, packing and processing samples.

Category	<i>Archeologie Leidraad 1: Veld-handleiding archeologie</i>	Minimum collection requirements with regard to volume	Packaging requirements with regard to collecting	Minim. mesh size for screening	Packing requirements after processing and general comments
Diatoms		Trays of 50x5x5cm or gouges of at least 3cm	airtight, cool 5-10 °C and dark.	N/A	Sampling in consultation with or by specialist, processing by specialist.
Micromorphological survey	Chapter 22	Trays of 15x8x5 or gouges of at least 3cm	N/A	N/A	Sampling in consultation with or by specialist, processing by specialist.
Wood samples -for species determination	Chapter 19	3 cm block ³ , cubic	airtight, cool 5-10 °C and dark	N/A	Sampling in consultation with or by specialist, processing by specialist.
Wood samples -dendrochronological analysis	Chapter 19	5 cm slice	airtight, cool 5-10 °C and dark.	N/A	Sampling in consultation with or by specialist, processing by specialist.
C14 samples	Chapter 20	Consult recent C14 lab data. Prevent contamination with foreign charcoal and roots.	Pack in foil, a plastic bag that can be sealed or a glass pot with screw-on lid.	N/A	Samples supplied to C14 laboratory must be accompanied by a fully completed samples form.
Phosphate analysis	Chapter 21	Sample preparation in accordance with NEN 5751 soil preparation. Per sample 10 gram dry weight.	airtight, cool 5-10 °C and dark.	N/A	Sampling in consultation with or by specialist, processing by specialist.
Chemical analysis	Chapter 21	Collect sample using a clean shovel. Preferred quantity collected 500 ml per sample, with a minimum of 100 ml per sample. Also collect 1 or more samples outside the context.	Dark, Temp 5-10°C Maximum storage period is 2 weeks between sampling and analysis.	N/A	Store material in hermetically sealed new glass pots.

small amount is required. In order to solve this practical problem, the minimum requirements are:

The minimum volume of five litres of soil will always be sieved using a 0.5 mm sieve whereby in addition a minimum of half a litre is sieved on a 0.25 mm sieve.

¹⁰ This minimum volume is based on the "screening" processing method. If flotation is to be used, a minimum volume of 10 litres of soil is required. Samples should preferably be screened. Minimum conditions for the flotation of samples are:

- minimum sample size 10 litres;
- the sample may only contain carbonised residues which are enclosed in soil;
- the floated material must be collected on sieves with a mesh of 0.25 mm;
- for each sample, five litres of the residue must be screened in accordance with the conditions referred to under point a.

¹¹ A pollen tray is square and is at least 5 cm wide and 5 cm deep and has a maximum length of 50 cm, with holes in the base.

6.2.6 Drawing level and cut/section plans (OS04)

Explanatory notes

For the time being, overall site plans and field drawings will have to be filed in analogue form. As far as the drawing scale is concerned, a minimum requirement has been assumed; drawings to a more detailed scale are permitted unless determined otherwise in the Project Outline.

The symbols to be used in drawings will be in accordance with Table 9. The abbreviations to be used in drawings will be in accordance with the ABR.

Process description

Drawing an overall site plan or field drawing. Drawing sections, cuts and cumulative sections.

Products

- Field drawings + legends (if digital with hard copy and tables).
- Digitised drawings with hard copy.
- Drawing register (if digital with hard copy).

Actors

- The Senior Field Technician and/or Junior Archaeologist will create the field drawing.
- The Medior Archaeologist checks whether the field drawing has been correctly created.

Requirements with regard to resources

Scale of the field drawings

- Levels: minimum of scale 1:50
- Sections: minimum of scale 1:20
- Cuts: minimum of scale 1:20

Drawing film

A drawing film which fulfils the following conditions:

- true to scale mm film (with a certain tolerance 'shrink and stretch proof');
- weather-resistant;
- plasticizer-free;
- standard dimensions (no more than A0, no less than A3; DIN standard);
- the upper long side will be perforated; DIN standard.

Drawing identification

- The drawing identification will be included in the right-hand top corner of the drawing film, under the perforated side.
- The drawing identification must be permanent.

The drawing identification will comprise the following information:

- national registration number;
- Site Identification Code (optional);
- drawing number (reference number under which the drawing is documented in the drawing register);
- date (date on which a drawing is created);
- draughtsman (name of the person/persons who have created the drawing; if a number of people have worked on the drawing, an indication will be given as to who was responsible for what);
- trench (excavation trench number);
- level (number of a level within an excavation trench);
- section (reference to the location of the drawn section of a trench or excavation unit [north, east, south, west]);
- description (reference to the detail or cut that has been drawn, preferably including context and/or find number);
- scale (factor of reduction to which the drawing has been created and/or scale rule);
- arrow pointing north;
- symbols and abbreviations (see Table 9 and ABR).

Field drawing

- Shows contexts with codes.
- The drawing can be coloured true to life or alternatively colour codes can be used. The drawing must include a key, symbols and abbreviations (see ABR and Table 9). Drawings coloured 'true to life' must be coloured in the field. If coded colours are used, the colour codes relating to the phenomenon must be assigned in the field. The drawing can, if desired, be coloured elsewhere.
- Level and section drawings must link up.
- Drawings must be digitised unless stated otherwise in the Project Outline.
- A print-out must be available of a digitised drawing which print-out must comply with the requirements imposed on the film, scale, drawing identification and field drawing.

Requirements applicable to the digitalisation of a field drawing

- The drawing must be a faithful copy of the field drawing.
- The drawing must include a drawing identification.
- The digital file must be a vector file.
- The digital drawing must be supplied in accordance with the standards and guidelines.

Drawing register

Registration form (analogue, digital) must at least contain the following information:

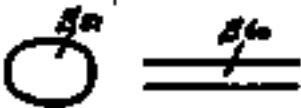
- drawing number;
- drawing type;
- trench number;
- subject.

Digital drawing in the field

- A back-up or hard copy must be made daily of digital drawings generated directly in the field.
- Back-ups must comply with the standards.
- Digital field drawings must comply with the same requirements (at least with regard to scale and drawing identification) as analogue field drawings.
- The digital file of the field drawing must be a vector file.
- The drawings must be accompanied by separate files containing the metadata.

Table 9. Symbols used in drawings

Guidelines

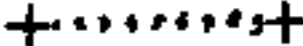
Description	Symbol	Meaning
Find number		Number in square box at the location, or in the centre, of finds.
Reference to a find number in the event of there being insufficient space in the drawing		Line or arrow linking find-spot to square box with find number.
Reference to measured-in finds		St Andrew's cross.
Sample number		Number with sample code in square box.
Photo number		Arrow points from camera to object.
Context number		Indicated by S. + no., for example S51.
Reference to a context		Context number, if possible place outside the context with reference line.
Reference to a cut		Dotted line over the context indicates the location of the cut. Hooks indicate the direction of excavation.

Requirements with regard to resources

Description	Symbol	Meaning
NAP height		5.16 above Amsterdam Ordnance Datum.
NAP height		3.10 m. below Amsterdam Ordnance Datum. The point measured is placed accurately in the plan.
Reference to drawn sections		Start and end points are indicated on the trenches and site grid map by means of arrows or by (an) extra line(s) on the inside of the trench.

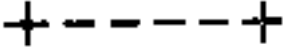
Continued on the next page

Continuation of Table 9. Symbols used in drawings

Description	Symbol	Meaning
Coordinates cross		To indicate the main direction of the x and y axis. Is always at right angles to other coordinate crosses and is only used on the grid points map.
Grid point		Point measured in national system of coordinates by surveyors, see SUF standard NEN 1878.
Main base point		An upgraded basic point on the datum line. Always at least 2 on a line.
Main zero point		The most south-westerly located main base point on the datum line. Basic point for all measurements or coordinate calculations.
Main grid marker		Marker in excavation trench. Is a upgraded grid marker. The measurement from the main zero point via the datum line to the excavation trench always refers to this point.
Grid marker		Marker in excavation trench.
Datum line		Line between 2 or more main base points in a line.
Measuring line		A line between 2 or more grid points in a line, between one main measuring point and a grid point or between the main zero point and a grid point.
Measuring line in the excavation trench		Between the main grid marker and another grid marker, between two grid markers or between derivatives (the measuring pins) of the main grid marker and the grid marker. At the point at which the centimetre lines cross on the drawing film, whole metres are indicated.

Continued on the next page

Continuation of Table 9. Symbols used in drawings

Description	Symbol	Meaning
Auxiliary measuring line in the excavation trench		The right angles, indicated on the inside with a quarter circle, have been measured precisely in the excavation trench measuring system. (This auxiliary measuring line will almost never be parallel or at right angles to the measuring lines in the trench.)
1. Fixed NAP height		Directly derived from an official Amsterdam Ordnance Datum bolt. The height is noted on the trenches and site grid map next to the symbol.
2. Derived NAP height		Derived from 1.
Recent		Interrupted line with crosshatching.
Sloping layers		The arrow points in the direction in which the layers descend.
Cremation		
Charcoal		
Shells		
Crosscut wood		Draw section at the height of the level.

Continued on the next page

Continuation of Table 9. Symbols used in drawings

Description	Symbol	Meaning
Inclined post		Draw section at the height of the level. The point of the arrow points to the underside of the post.
Brick format	30x15x7½	L x B x H (in centimetres).
Stone		Blue in colour.
Direction of span		Stone arch and the like.
Direction of flow		Sewers, gutters, etc.
Plastered side of wall		
Underside	OK	Wall, woodwork, etc.
Direction of movement		Ascending direction of movement in the case of stairs.
Wall foundations		If no cross section is drawn, note NAP height of the first cut, the number of cuts and the underside of the wall. In this example there are three cuts.
Section		Wall, woodwork, etc.

6.2.7 Identification and registration of features (OS05)

Explanatory notes

After a level has been established, the surface of contexts is normally shaved with a spade and then outlined. The colour and composition of the deposits are generally of overriding importance when determining a relative chronology and for the recognition of structures. The description of colours and/or the colouring of a field drawing serves to support the interpretation and is not a goal in itself.

Process description

The identification and registering of features. Contexts have to be registered on an appropriate form.

Products

- List of contexts comprising the same number of descriptions as there are context numbers.
- Finished primary field drawings.

Actors

- The Medior Archaeologist identifies the features.
- The Senior Field Technician and/or Junior Archaeologist will register the features.
- The Medior Archaeologist checks whether the features have been identified, described and registered correctly.

Requirements with regard to resources

Identifying contexts

- Spade surface shaving of contexts.

- Outlining contexts (again).
- Drawing contexts.
- Differentiating between features per trench.
- Determining and recording relationships between contexts.
- Checking for missing contexts.
- Determining relative chronology (colour is an important factor).
- Numbering and describing contexts on the basis of variables included in the list of contexts.
- Recording information on features in the horizontal and vertical plane on an appropriate form and a description of the contents.
- Drawing features in levels, sections and cuts (OS04).
- Photographic recording of exceptional contexts (OS08).
- Registering contexts in each level created (OS07). Features that reoccur in a subsequent level retain the same context number.

List of contexts

The list of contexts includes the following variables:

- context number (the identification number of the feature);
- trench number;
- level number (the level on which the feature was first observed);
- NAP datum determination of the upper side of the feature;
- identical to (here the context identification data will be entered of features which, for some reason, have been assigned their own number but which definitely belong to an already numbered context);
- relationship with other features;
- relative age (here the context identification data are entered of contexts which, on the basis of stratigraphic relationships, are younger than the current feature);
- find numbers pertaining to a context;
- description of the context in the horizontal and vertical plane;
- context codes (see ABR).

6.2.8 Height measurements of levels, contexts and/or finds (OS06)

Explanatory notes

The height measurement of levels and features is used to establish the mutual relationship between the various elements in the vertical plane.

Process description

The height of levels, contexts and/or finds is measured in comparison to NAP datum and recorded on a map.

Products

- Height measurements.
- Levels book.
- Contour map of the excavation area. When a contour map is available, no new map needs to be made especially for the excavation.

Actors

- The Junior Field Technician carries out and registers the height measurements of levels, contexts and/or finds.
- The Medior Archaeologist checks whether the levels, contexts and/or finds have been measured correctly. If correct, the Senior Archaeologist will initial the maps.

Requirements with regard to resources

Height measurement

- Measurements are expressed in whole centimetres + (plus) or - (minus) NAP.
- Level heights are taken with at least one measurement per 25 m².
- Heights of levels, sections and cuts are recorded on the field drawings (OS05).
- Heights of the top of contexts are recorded on the field drawing (OS05).

6.2.9 Sectioning and/or excavation of contexts (OS07)

Explanatory notes

In principle, the technique of sectioning is left to the expert discretion of the archaeologist. A number of standards apply. Wherever standards guidelines are included for common types of complex finds, such as walls, wooden constructions and graves, this is done in order to set some standard procedures which always have to be complied with. This facilitates specialist investigation at a later stage. Deviations from the standard are recorded in the Project Outline.

Process description

Sectioning and/or excavating contexts and recording contexts on an appropriate form.

Products

- Supplemented list of contexts.
- Primary field drawing.
- Photographic material.

Actors

- The Junior Field Technician sections the contexts, excavates them and records the data.
- The Medior Archaeologist checks whether the contexts have been sectioned and excavated correctly. If correct, the Medior Archaeologist will initial the appropriate forms.
- An appropriate specialist must be consulted in the case of decisions relating to matters that deviate from the standard.

Requirements with regard to resources

A. General contexts (documenting contexts in the vertical plane)

Sectioning

- Record depth of context from the highest level at which the context is visible in the case of stratigraphically separated layers. The depth to which sectioning is to take place depends on the position (depth) of the subsequent level.
- Determine the number and position of cuts required per context in such a way that a judgement can be made on the chronology and structure of the feature.

In this context it may be necessary:

- to section complex contexts in a number of places;
- if desired to cut contexts into segments while making a cross section.
- All sections are drawn and described.
- In principle, sections are recorded photographically.

Sections

- Draw and describe the sections per trench and record photographically in such a way that a judgement can be made on the chronology and the structure of the feature.

Ditch

- A ditch must be excavated in such a way that a judgement can be made on the chronology, form, contents and structure of the feature. Removing the deposit(s) is necessary for the collection of material. Under normal circumstances, the excavated fill will be a sample. See the standards guidelines relating to ring-ditches for the maximum requirements.

B. Walls & Wooden Constructions

- See standards guidelines relating to general contexts.
- Wooden constructions and walls must be recorded in the field.
- If the function (sturdiness & stability) and structure of the construction are unclear, an appropriate specialist must be consulted.
- The construction's structure must be recorded in text and drawings or photographs.
- Additional information that has to be recorded in case standing walls are present:
 - stone dimensions;
 - brickwork;
 - mortar composition;
 - degree of subsidence.

C. Graves and cemeteries

Grave structure

- See requirements relating to collecting general material (OS03).
- As long as it is unclear whether the central context contains a grave structure, an inhumation or a cremation, excavation work will be carried out by surface shaving or trowelling while leaving a cross or cross section.
- All objects are to be measured-in three dimensionally.
- Sufficient Z values have to be determined to justify a spatial reconstruction and/or determine inclines.
- All objects, skeletal elements, colourings and other phenomena are documented in a detailed field drawing (minimum scale 1:10).

Ring-ditch (or other ditch around a grave structure)

- Create equal sectors while leaving a transverse section.
- Excavate the sectors by spade surface shaving and examining for finds.
- Find concentrations inside the trench are recovered and assigned their own find numbers.
- Find concentrations are indicated on the level drawing.
- The transverse sections left are to be drawn and photographed.

Cremation burial

- The central discoloration must be excavated while leaving a cross section if the discoloration is longer than 1 m. In all other cases, a single section may be made.
- Excavation work should, wherever possible, be carried out around cremation residues.
- The complete contents of a cremation burial are screened using a plastic sieve with a 2 mm mesh.
- Cremation residues are to be lifted 'en bloc' wherever possible, and processed by a specialist (or in close consultation with a specialist).
- Pottery found in graves is lifted with contents and then processed in the laboratory.
- In the event of large quantities of charcoal, the presence of carbonised wooden objects should be taken into account.

Inhumation grave

- A single section is left.
- A single section is excavated along the longitudinal axis or by trowelling per level if preserved skeletal residues are present.
- In the event that a corpse silhouette is anticipated, excavation should be carried out by spade surface shaving.

6.2.10 Photographic recording (OS08)

Explanatory notes

In the case of photographic recording, it is assumed that normally the direction of a section or cut will be indicated on the field drawing and that this therefore does not have to be indicated on the picture. The same applies to scales. However, relevant information must always be included in the list of images. Decisions on information to be included in the photographic record are left to the discretion of the archaeologist, unless special requirements have been set in the Project Outline.

Process description

The recording of sections, cuts and levels and exceptional finds in a form of a photographic record.

Products

- Digital medium with photographic records + analogue print.
- List(s) of the photographic records (documentation list of all pictures made).

Actors

- The Junior Field Technician makes photographs of sections and exceptional finds.
- The Medior Archaeologist checks whether the photographs have been made correctly. If correct, the Medior Archaeologist will initial the list of pictures.

Requirements with regard to resources

Photographic records

General

- Including feature/context identification.

Sections

- Long sections are photographed in parts in such a way that the individual pictures can be linked without parts of the section being missed.
- In the case of long sections, a tripod is used.

Levels

- Levels are photographed from a greater height.

Printing and filing

- Photographs are printed at the minimum format of 10 x 15 cm on acid-free paper. When the resolution of digital photographs is at least 2 megapixel, digital files will suffice.
- Photographs are documented in colour on a digital or analogue medium. The continued readability of files must be ascertained.
- Photographs are documented in original format. Files are not to be compressed, at a minimum size of 1024x1280, and have a neutral colour balance.

Context identification plate

- Minimum information to be recorded on the context identification plate that is included in the image: find number, context number, trench number, level number and Site Identification Code (in so far as applicable).
- The context identification plate must be clearly legible.
- In addition to the context identification plate, an arrow pointing north and a scale are photographed if necessary.

List of images

Administrative data of the photographed object cross-referenced to the photo number. The list of pictures contains at least:

- photo number; slide number; video number;
- type of photo;
- drawing number;
- trench number;
- level number;
- subject (find number/context number, section number).

6.2.11 Packing and temporary storage of finds and samples (OS09)

Explanatory notes

The purpose of temporary storage is to stabilise the condition of the find so that the condition of the material remains as stable as possible. In most cases, storage in a cool and dark place (for example a fridge) will offer the greatest stability. Preservation only takes place after analysis and is carried out by appropriate specialists.

Process description

Finds and samples are packed and coded in such a way that the condition of the material remains as stable as possible until final storage.

Products

Finds in- or ex-situ whose condition is and remains as stable as possible because of the measures taken.

Actors

- The Junior Field Technician packs the finds and samples.
- The excavation worker places the finds and samples in the temporary storage area.
- The Medior Archaeologist and/or the appropriate Senior Specialist will check whether the finds and samples have been stored in the right manner to ensure that their condition remains as stable as possible.

Requirements with regard to resources

The following requirements refer to material in general, to vulnerable material and/or complex material and to samples.

- Material that has been collected and packed must be stored and kept in such a way that the condition of the material remains as stable as possible until final depositing.
- In the case of excavations lasting longer than 20 working days, a check should be carried out every 10 working days as to whether the condition of temporarily stored material is as stable as possible. These checks are registered.
- For all the finds categories, the maximum acceptable temporary storage period before further processing – under the conditions referred to in Tables 7 and 8 – is six months, unless stated otherwise (for example metal and organic material).
- Depositing takes place immediately after analysis and conservation and in consultation with the depot. It has to be possible to deduce from the registration data what the total period of temporary storage has been.

The following requirements refer to vulnerable and/or complex material and samples.

- For instructions relating to the temporary storage of complex find material per material category, see Table 7: Collecting, packing and temporary storage of complex find material.
- For instructions relating to the temporary storage and the packing of samples, see Table 8: Collecting, packing and processing samples.
- Depositing takes place immediately after analysis and conservation and in consultation with the depot. It has to be possible to deduce from the registration data what the total period of temporary storage has been.

6.2.12 Excavation documentation (OS10)

Process description

Collecting all relevant documentation from the fieldwork.

Products

- Collected and sorted documentation with table of contents.

Actors

- The Senior Field Technician and/or Junior Archaeologist will collect the excavation documentation.
- The Medior Archaeologist checks whether the documentation has been correctly collected.

Requirements with regard to resources

The collected documentation must consist of, at least:

- a table of contents;
- a levels book;
- a site grid map;
- a trenches map;
- an overview of the levels;
- a list of contexts;
- a list of finds;
- a list of samples;
- a drawing register;
- a list of photographic records;
- (temporary) list of storage boxes;
- daily and weekly reports;
- specialist reports on the fieldwork;
- work statements;
- summary of personnel used;
- correspondence.

6.2.13 Processing of finds and samples (OS11)

Explanatory notes

The processing of finds and samples covers the basic activities affecting almost all finds, such as cleaning, weighing, numbering and packing. Generally, this work is carried out as part of the fieldwork, but sometimes immediately afterwards. The work must, in any case, have been carried out before the excavation is evaluated.

The standards guidelines are not intended to be an exhaustive list of all the finds categories. Only the most important and most common categories are included, the rest is left to specialist expertise.

Two tables have been developed with information on processing complex find material and samples (see Tables 7 and 8).

Process description

Finds and samples are processed in conditions that optimally safeguard their condition and stability. The finds must be coded, sorted and packed in such a way that the condition remains as stable as possible and that further analysis can be carried out.

Products

- Finds and samples that have been processed and which are ready for analysis (coded, sorted and packed).
- Amended finds list and sample list.
- Digital data file.

Actors

- The Junior Field Technician and/or appropriate Junior Specialist will process the finds and samples.
- The Medior Archaeologist and/or appropriate Senior Specialist will check whether the finds and samples have been correctly processed.

Requirements with regard to resources

A. General requirements

- The tools and finds to be used during the processing work must be suitable. Tools must not be contaminated with material from another context.
- Finds and samples must be processed in circumstances that ensure that their condition remains as stable as possible.
- Vulnerable or complex finds are processed in accordance with specialist guidelines or by the specialist himself.
- Processed finds must be cleaned, sorted, identified and/or numbered and packed in such a way that specialist analysis can take place thereafter.
- Each sample and find must be accompanied by a finds label.
- Processed finds must be stored and kept in such a way that the condition of the finds remains as stable as possible until analysis can take place.
- For processing complex finds per category, see Table 7: Collecting, packing and temporary storage of complex find material.
- For processing samples per category see Table 8: Collecting, packing and processing samples.

B. Processing finds per material category

Information is only provided on the most important categories.

Stone

- See general requirements.
- See *Archeologie Leidraad 1: Veldhandleiding archeologie*, chapter 16.
- Cleaning must take place in such a way that the object is not damaged and contact with metal objects should be avoided.
- Recognisable tools and artefacts which have been specially selected for use-wear analysis are, in principle, not cleaned.
- Each recognisable tool and artefacts selected for the use-wear analysis or analysis of residues, is to be packed separately.
- When numbering, numbers are placed on the cortex, natural surface or in the middle of the central side; numbers must not be positioned near edges. For numbering see the Project Outline.

Ceramics

- See general requirements.
- See *Archeologie Leidraad 1: Veldhandleiding archeologie*, chapter 14.
- Pottery is cleaned carefully in such a way that edges of sherds and surfaces are not damaged.
- Very soft or fragile pottery, such as prehistoric finds and finds that has been damaged by fire or frost, are not washed or preserved temporarily. Preservation measures must be determined in consultation with the appropriate finds specialist.
- Pottery with cooking residues, other residues of contents, soft engobe or other traces which might be easily lost, is not washed.
- Pottery from which samples have to be taken is not washed.
- Loam must not be washed.
- Sherds which are subject to more detailed qualitative processing are marked with a legible number, which is to be printed on the inside wherever possible.

Metal

- See general requirements.
- See *Archeologie Leidraad 1: Veldhandleiding archeologie*, chapter 12.
- If an object is a combination of metals, or metal and enamel, stones/gems and/or organic material, the object must be transported at the latest on the following working day to a laboratory or workshop where it will be kept in the same humidity conditions it was found in.
- The metal object may not be cleaned at the excavation. It is to be transported to the laboratory or workshop with attached corrosive products and soil. During transportation, the humidity conditions must be kept the same as those in which it was found.

Glass

- See general requirements.
- See *Archeologie Leidraad 1: Veldhandleiding archeologie*, chapter 13
- Stained, painted and/or gilded glass is not washed at the excavation site and is not dried.
- Non-vulnerable glass can be cleaned and dried.

Organic Materials

- See general requirements.
- See *Archeologie Leidraad 1: Veldhandleiding archeologie*, chapters 1 – 11.
- Finds comprising organic materials must be transported uncleaned to the laboratory or workshop, unless a different arrangement is decided upon in consultation with an appropriate specialist.
- Non-vulnerable and unworked bone may be washed and air-dried. Gloves must always be worn when handling bone that has been selected for DNA analysis and such bone must not be washed.

C. Processing samples

Samples

- For the processing of samples per finds category see the general requirements and Table 8. Collecting, packing and processing samples.
- See *Archeologie Leidraad 1: Veldhandleiding archeologie*.
- Botanical samples must be packed in such a way that the humidity is as stable as possible and equal to the humidity of the soil from which the sample came.
- Do not add any mould reducers, do not change the water.

6.2.14 Assessing finds and samples (OS12)

Process description

The finds and samples are valued and their suitability for analysis is assessed by appropriate specialists per finds category and taking the Project Outline into account. The assessment is recorded in a report.

Products

- Assessed finds and samples.
- Assessment report.

Actors

- The Senior Archaeologist and/or appropriate Senior Specialist will assess the finds and samples.
- The Senior Archaeologist checks whether the finds and samples have been assessed correctly if this work has been done by external specialists.

Requirements with regard to resources

- Assessments are based on relevant expertise which is why no specific requirements have been formulated.
- The results of the valuation have to be recorded in an assessment report.

Assessment report

The assessment report contains at least:

- The relevant research questions from the PO for the category of find concerned
- A description of the condition / preservation (quality) of the samples / finds.
- The quantity of the finds and samples.
- An indication of whether it is possible to answer the research questions in the Project Outline.

6.2.15 Analysis of contexts and structures (OS13)

Explanatory notes

The analysis of contexts and structures is the work of the archaeologist and is carried out at his/her expert discretion. The standards guidelines include a number of minimum requirements for guaranteeing a certain standard.

The product of the analysis are analogue and digital data. The analysis report contains the metadata on types and names of files, versions of programmes used, the way in which data can be linked, used codes, legends, etc. In short: this report contains all the information that is needed to make the analysis accessible to other archaeologists.

Process description

The contexts and structures are analysed, documented and recorded in a data file (data file + report).

Products

- Analysis report.
- Data file (meta-information, digital data file and written information).
- Analysed contexts and structures.

Actors

- The Medior Archaeologist analyses the contexts and structures.
- The Senior Archaeologist checks whether the contexts and structures have been analysed correctly.

Requirements with regard to resources

A description of the contexts excavated (individual contexts, context categories, structures) based on drawings and photos.

Site plans

- A composite plan with coordinates derived from the national grid system and preferably oriented. In the case of excavations with clearly separated phases, periods or stratigraphic levels, the different phases, etc. are displayed on a corresponding number of phase plans.
- If maps of individual structures are considered to be necessary, these will be derived from the composite plan(s).
- Excerpts from, or simplified versions of, the composite plan(s) for the phasing or periodisation of the contexts, to show certain context categories, structures, assemblages and patterns.

Structures, context categories and individual contexts

- If possible, excavated contexts must be assigned to structures and categorised into context categories. The structures and contexts are described and categorised typologically, chronologically and spatially and displayed in drawings which show the horizontal level

- and the vertical section. Relevant photos taken in the field are added if available.
- Comparable scales must be used for structures and contexts of the same character or which belong to the same category.
- It has to be possible to localise the individually portrayed structures and contexts without too much trouble in the composite plan and/or site plans derived from that. For orientation purposes, an arrow pointing north must be included in all the plans.

Structures

- All structures are to be described and illustrated.

Context categories

- A representative selection per category is illustrated of contexts which cannot be assigned to structures. Complex contexts should be depicted in their entirety.

Assemblages

- Structures and contexts which appear to belong together (spatial and functional) must be discussed and illustrated as separate assemblages.

6.2.16 The analysis of finds (OS14)

Explanatory notes

The analysis of finds is the work of the appropriate specialist or analyst and is carried out at his/her expert discretion. The objective of such analysis is stated in general terms in the standards guidelines and can be defined in more detail as necessary in the Project Outline. The product of the analysis is, in addition to the analysis report, a set of data that are usually supplied in digital and analogue form. An analysis report should include a file with the *meta* information on the sorts and names of files, versions of programs used, the method by which files can be linked, codes used, keys, etc. In short, this report contains all the data required to make the data in its stored form accessible to other researchers.

Process description

The finds are analysed and documented by the appropriate expert/specialist for each finds category.

Products

- Analysis report.
- Data file (meta information, digital data file and written information).
- Packed and coded analysed finds.

Actors

- The appropriate Junior Specialist and/or Medior Archaeologist will analyse the finds.
- The appropriate Senior Specialist and/or Senior Archaeologist will check whether the finds has been analysed correctly.

Requirements with regard to resources

General analysis of finds

- The tools and materials used when analysing must be adapted to the finds category. Tools must not be contaminated with material from another context.
- Finds must be analysed in circumstances that ensure that the condition of the finds remains as stable as possible.
- The analysed finds must be coded and packed in accordance with the find identification guidelines (OS03).

The analysis of finds per finds category must, in any event, contain:

- A typological classification and typo-chronological or taxonomic classification. The number of finds, divided according to form, finds and function, the quantity and quality of the raw material, the nature of the natural surface, the source of the raw material.
- Details: indications of use (use wear), burning, secondary surface phenomena (per type and category), the condition of the finds and other details (attached finds, decoration). Use wear patterns are quantified.
- Technology and typology on the basis of the shape of the artefacts. Reconstruction of any characteristic technological processes if such is indicated in the Project Outline.
- Spatial distribution. Obligatory aspects are: periodisation and phasing, activity areas, cultural and natural transformation processes.

- Dating and attributing to a certain culture. Such is determined on the basis of typo(chrono)logy, associations, spatial distribution, parallels and/or archaeological science methods.

6.2.17 Final report (OS15)

Explanatory notes

This is the final report on an excavation, complete with the reports by the specialist(s). It is written by the archaeologist who has carried out the fieldwork in collaboration with the appropriate specialists. The subreports are included as an appendix to the final report and are published by the specialist(s) concerned.

The responsibility for the contents of the subreports is a matter for the expertise of the appropriate specialist(s). Nevertheless, these standards guidelines include a number of points which have to be included in each report. The aim is to allow the authors to focus attention on a number of issues, even in cases in which there is little to report in connection with the excavation in question. In that case, an indication or statement must be provided as to why that information is entirely or partially missing.

In addition to the Dutch summary, it is recommended that a summary for the general public and an English summary are compiled.

A further objective of the standards guideline is to assign a fixed structure to reports because that enhances comparability and makes them more readable for principals.

Process description

The writing of the final report in accordance with the Project Outline.

Products

Final report:

- Synthesis.
- Subreports.
- Data files.
- Analysis report.
- ISBN or ISSN number.

Actors

- The Medior Archaeologist writes the final report, unless a replacement has been appointed.
- The appropriate Senior Specialists write the subreports that refer to their specialist fields.
- The Senior Archaeologist checks whether the final report has been correctly drawn up. If correct, the Senior Archaeologist will initial the final report.

Requirements with regard to resources

- Requesting ISBN or ISSN number.

A. Synthesis

Depending on the research questions, the synthesis contains at least the following information.

Administrative data

- Dates.
- Principal (developer).
- Executing party (archaeological contractor).
- Competent authority (municipal, provincial or national government).
- Name of the archaeological expert on behalf of competent authority.
- Curation and location of documentation.
- National registration number (CIS-code).
- Location (municipality, place, toponym, at least four x/y coordinates).
- (Digital) map of excavation area.

Introduction

- Information on the project of which the excavation was a part, the organisation of the archaeological research and the principal.

The site

- Site data (municipality, place, toponym, at least four x/y coordinates) and all known identification codes.

- Topographical situation of the site (location of the site on the basis of a topographical map).
- A short discussion of the site in its archaeological context (archaeo-region) with a reference to the literature and/or database consulted.
- Siting in the landscape, land use and physical-geographical data on the archaeo-region.
- Description of the preliminary process carried out.

The research objective (Project Outline)

- Research questions with regard to the site (if available in accordance with the excavation design).
- Preconditions.
- Post-fieldwork assessment report.

Method of working, excavation strategy

- Description of the excavation method in relation to the nature of the site and the PO.
- Reasons for choices with regard to the selection of finds.

Synthesis

Interpretation of the finds in relationship to the different types and the site.

- The landscape around the site.
- Features and structures.
- Finds.

Dating

- The basic data from any dating analyses.

Conclusions

- Here, the results from the previous chapters are described with answers being sought to the research questions in the Project Outline. If prescribed in the PO, an evaluation of the preliminary process can be added.

Summary

- Dutch summary.

Appendices

- List of illustrations (and sources).
- Bibliography.
- (Digital) medium with basic data and summary of the relevant finds groups and the corresponding files.
- Subreports or list of subreports with references to author and subject.

B. Subreport on features and structures

The subreport on features contains the following information:

Introduction

Data on the excavation which is relevant to this subreport.

Stratigraphy

Information on the way in which the site is revealed at the present-day surface.

The present-day surface

- a map with the individual height measurements;
- a contour map ;
- photographs of the site prior to the excavation.

The stratigraphy

A description of the structure of the site on the basis of a number of (if need be composite or diagrammatic) sections. If possible, crossing sections are included across the entire site at one or - if desired - a number of strategic locations. As illustration, section photos made in the field can be included.

The contexts and structures

A description of the contexts and structures excavated (individual contexts, context categories, structures) based on drawings and photos. Summary of OS13 (results of the contexts analysis).

Site plans

- A composite plan.
- Phase plans.
- Excerpts from, or simplified versions of, the composite plan(s).

Structures, context categories and individual contexts

A description of relevant structures and contexts.

Structures

All structures are to be described and illustrated.

Context categories

Here (categories) contexts are dealt with that have not been assigned to structures.

Individual contexts

This focuses on contexts not yet discussed and not, therefore, attributed to structures or accommodated in categories.

Assemblages

Structures and contexts which appear to belong together (spatially and functionally) must be discussed and depicted as separate assemblages.

Interpretation and discussion

A description of the interpretation of the finds and a comparison with other sites to allow the research questions stated in the PO to be answered. The PO indicates whether a comparison with other sites has to be included.

Summary and conclusions

The summary consists of a brief description of the above-mentioned subjects.

Recommendations, if prescribed in the Project Outline

Recommendations for further research.

Appendices

- List of illustrations.
- Lists with cross-references (numbers) between contexts and the related finds and samples
- Plans, maps and figures not included in the text due to their size.

C. Subreports per finds category (general description)

A subreport must at least contain the following information:

Introduction

This includes the research questions relating to the finds category in question.

Finds & Methods

The methods and techniques used are described in relation to the nature of the site. In addition, the chosen method of collection and finds selection is justified.

Preservation of the finds

Description of the quality of the finds.

Results: finds analysis

- Typo(morpho)logical classification.
- Functional classification (in the case of ship inventories for example).
- Other details: use, burning and weathering, condition of the finds.
- Spatial distribution.
- Dating and cultural affiliation.

Interpretation and discussion

A description of the interpretation of the finds and a comparison with other sites to allow the research questions stated in the Project Outline to be answered.

Summary and conclusions

- Dutch summary.

Recommendations, if prescribed in the Project Outline

- Recommendations for further research.

Literature

- Literature used.

Appendices

- Tables and figures: Usually these are a number of illustrations, tables and maps intended to clarify the text.

6.2.18 Daily and weekly reports and work statements (OS16)

Explanatory notes

Daily and weekly reports serve to help in the analysis of the excavation data. The archaeologist uses these reports to record the decisions taken in the field with regard to the excavation strategy, field observations, provisional interpretations, etc. Work statements are used for financial and logistical organisation purposes. The work statements record the work, staffing details and machine hours.

Process description

Writing daily and weekly reports and work statements.

Products

- Analogue or digital daily reports for each fieldwork day.
- Analogue or digital weekly reports (if digital, accompanied by print-outs) for each fieldwork week.
- Analogue or digital work statements for each fieldwork day.

Actors

- The Medior Archaeologist writes the daily and weekly reports and work statements.
- The Senior Archaeologist checks whether the daily and weekly reports and work statements have been drawn up.

Requirements with regard to resources

Daily report

Daily reports are preferably drawn up at the end of a working day or at least at the beginning of the following day. The daily reports refer to the following:

- variables for the identification of the registration form;
- date;
- name of the reporter;
- weather conditions;
- work carried out and related staffing details;
- planned consultations that have taken place and the resulting agreements;
- technical and/or scientific developments;
- reasons for choices with regard to the selection of finds;
- visitors.

Weekly report

Weekly reports are preferably drawn up at the end of a working week or at the latest at the beginning of the following working week. The weekly reports refer to the following:

- variables for the identification of the registration form;
- week number (date) and year;
- name of the reporter;
- progress of work in relation to the schedule and the intended result referred to in the PO;
- scientific developments;
- continuation or adaptation of the work and the methodology.

Work statement

Work statements are preferably drawn up at the end of a working day or at the latest at the beginning of the following day. The work statements include information on:

- staffing details;
- machine hours.

6.2.19 Post-fieldwork assessment report (OS17)

Explanatory notes

The aim of the post-fieldwork assessment is to plan the post-excavation research of the excavation data and to draw up or revise a budget. It is therefore important that an assessment be made of the potential of finds, samples and contexts to provide answers to the questions stated in the Project Outline. On the basis of the scan a decision is made as to which finds, features and samples are to be researched in more detail. In addition, agreements can be made concerning how to deal with exceptional finds or finds not provided for in the Project Outline or project design - which are generally not budgeted for. The post-fieldwork assessment phase is also the point in time at which, for the first time, an accurate estimate can be made of the quantity of material that is to be submitted for depositing. The estimate of the quantity of material to be deposited must be submitted to the appropriate depot.

Process description

On the basis of the advice of the appropriate specialists and archaeologists, an assessment is

made as to whether the questions in the Project Outline can be answered and whether the planned post-excavation research is feasible. If necessary and with due regard for the PO, the post-excavation research design is adjusted and the advice concerning the material to be processed is amended.

Products

- Post-fieldwork assessment report.

Actors

- The Senior Archaeologist writes the post-fieldwork assessment report and is advised by the appropriate Senior Specialist(s).
- The Medior Archaeologist is responsible for informing the depot about the finds and archive to be delivered.
- The Senior Archaeologist checks whether the post-fieldwork assessment report has been correctly drawn up. If correct, the Senior Archaeologist will initial the post-fieldwork assessment report.

Requirements with regard to resources

Post-fieldwork assessment report

- Recapitulation of research questions and -objective.
- Valuation of finds and samples, structures and contexts.
- Advice from appropriate specialists and archaeologists on further research (qualitative, quantitative).
- Budget.
- (Amended) statement of finds to be deposited in the depot.

6.2.20 Preservation of the finds (OS17a)

Explanatory notes

The focus here is not on preservation in situ but on measures relating to the preservation of finds.

There are two forms of preservation, namely passive and active. In the case of passive preservation, the object's environment is conditioned in such a way that the deterioration of finds is minimal (see for temporary storage: OS09 and Table 8; for permanent storage: DS05 and Tables 10 and 11). In the case of active preservation, the object itself is treated in such a way that further deterioration under depot conditions is minimal. This standards guideline relates to active preservation.

In principle, the aim is to retain the object with all the information it contains. If this is not possible, the information present in the object is recorded while unprocessed material is sampled for analysis at a later date. Unprocessed material is only stored in a depot in exceptional cases, if such has been agreed in the transfer protocol. Before treatment, the initial situation is recorded as well as possible. Material-technical aspects which come to light should also be documented as well as possible during the preservation process. In the case of preservation, the aim is maximum reversibility.

Intake

The intake form is drawn up by the Senior Archaeologist and the Preservation Specialist. Once the data have been filled in and once the Preservation Specialist has checked that all the objects to be processed are actually present, the intake form is signed in duplicate by the Senior Archaeologist and the Preservation Specialist. One copy is issued to the Senior Archaeologist while the other is added to the preservation report.

Preservation Report

The preservation report is a report of the initial situation of the object to be preserved, the cleaning and preservation treatment and the material-technological observations carried out in relation to the object. The intake form is added to the preservation report.

The Senior Archaeologist signs the processing result and the preservation report as approved and checks whether all the preserved objects, samples (if any) and documentation are actually available for transfer.

Process description

Finds that have been analysed and selected are preserved in such a way that they can be stored under the most stable conditions as possible in the (transit) depot.

The objects to be preserved are selected by an appropriate specialist from the sorted and valued finds.

1. Receipt of one or more objects to be preserved for which an intake form is drawn up.
2. Preservation of the objects and drawing up a preservation report.
3. Delivery of one or more preserved objects for which a transfer form is drawn up.

Products

- Intake form.
- Preservation report (with corresponding photos, drawings, etc.).
- Transfer form.
- Preserved object(s).
- Samples of finds.

Actors

- The Senior Archaeologist and Senior (Materials) Specialist determine which objects are eligible for preservation. They will consult with the Preservation Specialist concerning the preservation method.
- The Preservation Specialist preserves the objects and writes the preservation report.
- The Senior Archaeologist checks whether the material has been preserved in accordance with the agreements and whether the accompanying documentation is sufficient.

Requirements with regard to resources

A. General requirements

- The tools and materials to be used for preservation work must be suitable.
- The material must be preserved in conditions that optimally safeguard its condition and stability.
- The objects to be preserved and any samples must be accompanied during the preserving process by the corresponding data (in accordance with the information displayed on finds labels).

B. Administrative obligations

Intake form

The following data are stated on the intake form:

- name of principal;
- name of Senior Archaeologist;
- name of Preservation Specialist;
- data on the finds label (municipality, toponym, national registration number, find number, date);
- (provisional) determination;
- degree of completeness;
- (provisional) dating details;
- find conditions;
- date find received;
- dimensions (in the event of expected changes in shape).

Moreover, the intake form should refer to the agreements made between the parties, namely:

- agreement on the objective and quality of the preservation;
- the date by which the work should be completed;
- a description of the (preservation) activities to be carried out.
- In the interest of some objects to be preserved, at the discretion of the specialist, it is advisable to provide the Preservation Specialist with drawings and/or photos of the objects as encountered in situ.

Preservation report

The preservation report should contain the following information and units of measurement:

- photos and/or drawings of the object;
- description of the condition before treatment (including, for example, the number of parts, dimensions, weight);
- description of the condition after treatment (including dimensions after preservation);
- description of the cleaning and preservation activities carried out and related considerations;

- the materials used;
- the degree of reversibility;
- technological observations (technique, method of production, traces of use, etc.);
- samples taken;
- if relevant, prescribed in the Project Outline or by the specialist, (X-ray) photos and drawings of the object during one or more processing phases;
- reference to any supporting construction(s);
- instructions on the method of storage and checks on the condition of the preserved object;
- other relevant comments.

Transfer form

- name of principal;
- name of Senior Archaeologist;
- name of Preservation Specialist;
- the name of the local authority;
- the toponym;
- national registration number;
- find number;
- description of type and number of objects treated, samples and documentation;
- date of transfer;
- period of guarantee and guarantee conditions;
- requirements with regard to storage;
- if prescribed in the Project Outline, recommendations on how to handle the objects when they are loaned.

C. Obligations relating to registration

After the preserved objects have been transferred, the intake form, the preservation report and the transfer form are combined and added to the excavation documentation. If desired, a number of copies can be made, for example for the Depot Manager or the Preservation Specialist.

D. Processing finds per material category

All the following activities are carried out after the finds have been transferred. Information is only provided on the most important categories. In the case of other, often exceptional, find categories a Materials Specialist should be consulted.

Ceramics

- Ceramics from a marine context and surfaces containing salt are rinsed using (tap) water until the salt content is no longer detectable.
- Ceramic materials are air-dried.
- Food residues or other substances are sampled.
- Soft or powdery pottery is, if possible after thorough cleaning, impregnated with a soluble material.
- Exceptional or special characteristics in or on the pottery, observed before or during preservation, are registered. In consultation with the Senior Archaeologist and/or Materials Specialist, the preservation is suspended until further notice.
- Objects or fragments are packed and accompanied by the relevant data in accordance with the standards guideline relating to depositing.

Glass

- Glass from a marine context and surfaces containing salt are rinsed using (de-mineralised) water until the remaining salt content is no longer detectable.
- Before preservation, it should be taken into account that samples may need to be taken for purposes such as chemical analysis.
- Iridescence or decoration must be kept intact.
- Glass is air-dried, subject to constant monitoring.
- Fragile objects, for example in the event of extreme iridescence, are impregnated with a soluble material.
- Exceptional or special characteristics in or on the glass, observed before or during preservation, are registered. In consultation with the Senior Archaeologist and/or Materials Specialist, the preservation is suspended until further notice.

- Objects or fragments are packed and accompanied by the relevant data in accordance with the standards guideline relating to depositing.

Metal

- Metal from a marine context and surfaces containing salt are rinsed using water until the remaining salt content is no longer detectable.
- Metal is passivated after having been thoroughly cleaned.
- After a check iron objects are, if necessary, desalinated under high level humidity using the most suitable method.
- Exceptional or special characteristics in or on the metal, observed before or during preservation, are registered. In consultation with the Senior Archaeologist and/or Materials Specialist, the preservation is suspended until further notice.
- The preservation method selected is such that all relevant analysis techniques remain possible afterwards. If this is not possible, unprocessed material is sampled.
- Objects or fragments are packed and accompanied by the relevant data in accordance with the standards guideline relating to depositing.

Leather

- After a thorough examination of the details, clean the leather using (tap) water.
- Leather from a marine context and surfaces containing salt are rinsed using (tap) water until the remaining salt content is no longer detectable.
- With regard to preservation, it should be taken into account that samples may need to be taken for determination or chemical analysis.
- After cleaning, the water must be removed or replaced in order to keep the leather supple if possible.
- Exceptional or special characteristics in or on the leather, observed before or during preservation, are registered. In consultation with the Senior Archaeologist and/or Materials Specialist, the preservation is suspended until further notice.
- Objects or fragments are packed and accompanied by the relevant data in accordance with the standards guideline relating to depositing.

Textiles

- Clean sufficiently supported wet textiles using (tap) water.
- Textiles from a marine context and surfaces containing salt are rinsed using (tap) water until the remaining salt content is no longer detectable.
- With regard to preservation, it should be taken into account that samples may need to be taken for purposes such as dating or chemical analysis.
- Cleaned textiles are air-dried.
- Dampen fragile and extremely dry, breakable textiles with a lanolin solution.
- Exceptional or special characteristics in or on the textiles, observed before or during preservation, are registered. In consultation with the Senior Archaeologist and/or Materials Specialist, the preservation is suspended until further notice.
- Objects or fragments are packed and accompanied by the relevant data in accordance with the standards guideline relating to depositing.

Rope

- Depending on its condition, rope is cleaned entirely or partially using (tap) water.
- Rope from a marine context and surfaces containing salt are rinsed using (tap) water until the remaining salt content is no longer detectable.
- With regard to preservation, it should be taken into account that samples need to be taken for purposes such as determination or chemical analysis.
- After cleaning, the water must be removed or replaced in order to keep the material stable after preservation.
- Exceptional or special characteristics in or on the rope, observed before or during preservation, are registered. In consultation with the Senior Archaeologist and/or Materials Specialist, the preservation is suspended until further notice.
- Objects or fragments are packed and accompanied by the relevant data in accordance with the standards guideline relating to depositing.

Bone/antlers

- Bone/antlers are cleaned using (tap) water.
- Bone/antlers from a marine context and surfaces containing salt are rinsed using (tap) water until the remaining salt content is no longer detectable.
- With regard to preservation, it should be taken into account that samples need to be taken for purposes such as dating or chemical analysis.
- Worked bone/antlers from wet environments should be dried very slowly or preserved by freeze-drying.
- Fragile, soft or powdery bone/antlers are, if possible after thorough cleaning, impregnated with a soluble material.
- Exceptional or special characteristics in or on the bone/antlers, observed before or during preservation, are registered. In consultation with the Senior Archaeologist and/or Materials Specialist, the preservation is suspended until further notice.
- Objects or fragments are packed and accompanied by the relevant data in accordance with the standards guideline relating to depositing.

Wood

- Wood is cleaned using (tap) water.
- Wood from a marine context and surfaces containing salt are rinsed using (tap) water until the remaining salt content is no longer detectable.
- With regard to preservation, it should be taken into account that samples may need to be taken for purposes such as dating or determination.
- After cleaning, the water must be removed or replaced in order to keep the wood stable after preservation.
- Exceptional or special characteristics in or on the wood, observed before or during preservation, are registered. In consultation with the Senior Archaeologist and/or Materials Specialist, the preservation is suspended until further notice.
- Objects or fragments are packed and accompanied by the relevant data in accordance with the standards guideline relating to depositing.

6.2.21 Selection of finds and samples / rejection and destruction of non-selected materials (OS18)

Explanatory notes

Selection takes place during and after fieldwork. During the fieldwork, selection is the responsibility of the Senior Archaeologist and appropriate specialists involved, in any case in so far as a certain form of selection was not prescribed in the Project Outline.

In the post-fieldwork assessment phase, a decision is taken as to which contexts and finds are to be analysed. The remaining finds can be deposited or removed. Removal may mean that finds are donated to a museum or educational institution. They may also be destroyed, in which case they should be sent to a destruction facility so that they do not end up as artefacts in the soil again, falsifying the soil archive. If, pursuant to the law, finds are the property of the state, a decision on definitive removal is the minister's responsibility.

Process description

The finds are selected on the basis of the Project Outline, Plan of Approach and scientific criteria. The selection choices are recorded in a written report (selection report). Non-selected finds are removed. Finds worth further analysis, whose processing is not covered by the Project Outline, can be stored in the depot, in consultation with the depot, for possible further processing at a later date. This material is packed in such a way that its condition remains as stable as possible and is also coded.

Products

- Selected material – processed.
- Selected material – unprocessed.
- Non-selected material.
- Selection report.

Actors

- The Senior Archaeologist and/or appropriate Senior Specialist will select the material and record the decision in a selection report.

- The excavation worker will definitively reject the selected material.
- The Senior Archaeologist checks whether the material has been selected correctly. If correct, the Senior Archaeologist will initial the selection report.

Requirements with regard to resources

General selection

- Selection has to be based on the Project Outline and recognised scientific and ethical criteria.
- Reasons for choices must be laid down in a selection report.
- The method of selection has to be accounted for in the selection report.
- Report and method of reduction of numbers or volume in consultation with a specialist.

Selection during fieldwork

- No criteria apply to practical selection during fieldwork but selection should be carried out by a Junior or Medior Archaeologist.

Selection when processing finds

- The finds must have undergone basic processing (washing and registering or quantifying).
- Collected finds are processed a) to the level indicated in the Project Outline (answers to research questions), b) based on the amended post-fieldwork assessment; c) on the basis of recognised scientific criteria; or a combination of the three.
- Evaluate how much material is to be deposited. Finds to be deposited can be reduced to the level required for re-interpretation and/or more extensive analysis, based on scientific criteria. Wherever necessary, this may mean that the finds assemblage is deposited in its entirety.
- Finds deemed unsuitable for depositing are to be removed.
- Finds are removed in a manner which can be monitored and recorded as indicated by the competent authority.

6.2.22 Registering the excavation (RS04)

Explanatory notes

The Monuments Act 1988 stipulates that notification must be given of the start of an excavation. For that purpose, use should be made of the so-called Article 41 form. Notification can be done by mail, email, or online through Archis II. Digital notification is preferred. Each site must have a unique registration number that is used on all documents. This should be requested from the CIS at the start of the project (CIS code). Archaeological contractors are allowed to use their own codes in addition to the CIS-code.

Process description

Notification of the start of the project (Art. 41 form) and registration with the CIS. The system issues a unique registration number (CIS-code). Notify the depot where finds, samples and archive are to be deposited of the CIS-code.

Products

- Administrative data.
- Registration number (CIS-code).

Actors

- The Senior Field Technician and/or Junior Archaeologist will register the excavation with the CIS.
- The Medior Archaeologist checks whether the excavation has been correctly registered and the CIS-code has been obtained.

Requirements with regard to resources

Administrative data relating to registration

- Date on which project is registered.
- General boundaries of the excavation area (at least four x/y coordinates).

- Toponym (if applicable).
- Place.
- Municipality.
- Province.
- Principal.
- Executing party.
- Competent authority (national, provincial or municipal government).
- Name of expert on behalf of competent authority.
- Type of project (desk-based assessment, archaeological field evaluation, protection, watching brief, excavation).
- Project outline or Plan of Approach.
- Topographical map (at least 1:10.000).
- Estimated time reserved for the project (start date and estimated end date).
- Motivation.
- Type of site.

The system issues a unique registration number to the contractor.

- National registration number (CIS-code).

6.2.23 Supply of preliminary data - Excavation (RS09a)

Explanatory notes

No more than 2 weeks after completion of the fieldwork, the preliminary result data are reported to the CIS on a form as determined by the ROB (so-called Archis-notification). It is possible to do this online.

Process description

The relevant result data are supplied to the CIS no more than 2 weeks after completion of the fieldwork.

Products

- Reference data.
- Observations.

Actors

- The Junior Archaeologist supplies the relevant result data to the CIS.
- The Senior Archaeologist checks whether the relevant result data have been supplied by checking the CIS confirmation of receipt.

Requirements with regard to resources

Data relating to excavation results

Project results (if applicable)

- National registration number (previously issued unique registration number).
- Dates on which project was started and completed.
- Definitive outer boundaries of the trenches dug (at least four x/y coordinates).
- (Digital) map of project area.
- Surface area of excavation.
- Excavation depth under surface level.
- Observations pertaining to the project (see below).
- Textual summary of excavation results including description of the research questions.

Reference data

- Management and location of documentation and find material (reference to depot at which the finds are managed, reference to location at which the documentation is managed, reference to the complete report).

Data to be registered per observation

- Map page no.
- x coordinate.
- y coordinate.
- z coordinate.
- Accuracy of coordinates (in m).
- Toponym (if applicable).

- Place.
- Municipality.
- Province.
- Date of find.
- Finder.
- Describer.
- Excavation method.
- Find acquisition (e.g. field walking, excavation).
- Depth to which excavation was carried out.
- Description of find-spot (from ground level).
- Find distribution.
- Geomorphology/landscape form.
- Land use (condition at ground level).
- Height of ground level (in relation to Amsterdam Ordnance Datum).
- Depth of find with regard to ground level.
- Soil profile (intact/disrupted).
- Data/documentation storage location.
- Finds/collection storage location.
- Available literature on the find/feature.

Most important categories of finds, samples and features:

- number of finds per serial number;
- condition of the find;
- material: raw material of the find;
- description of determination, terminology according to ABR;
- dating (see list 1 pertaining to ROB find registration form);
- assemblage (see list 2 pertaining to ROB find registration form);
- clarification: supplementary information.
- Description: summary of excavation data.
- Sketch: topographical or cadastral subsurface.

6.2.24 Transfer of project data - Excavation (RS09b)

Process description

The final report and additional data are supplied to the CIS.

Products

- Final report.
- Additional data.
- Reference data.

Actors

- The Junior Archaeologist supplies the report and data to the CIS.
- The Senior Archaeologist checks whether the final report has been supplied by checking the CIS confirmation of receipt.

Requirements with regard to resources

Data relating to supply of final report

- National registration number (CIS-code).
- Date on which project was completed.
- Two copies of the final report.

Reference data

- Management and location of archive and finds (reference to the depot at which the finds are managed, reference to the location at which the documentation is managed, reference to the complete report).

6.2.25 Transfer of digital data (RS11)

Explanatory notes

No more than 4 weeks after completion of the project and supplying the final report, the

digital data are transferred to the CIS according to the guideline "*aanlevering digitale documentatie ROB*".

Process description

The digital data are supplied to the CIS (controlled by ROB).

Products

- Digital data.
- Reference data.

Actors

- The Junior Archaeologist supplies the digital data to the CIS.
- The Senior Archaeologist checks whether the digital data have been supplied by checking the CIS confirmation of receipt.

Requirements with regard to resources

Data at transfer

- National registration number.
- Files archive, to be delivered on CD-rom with an index to the files. High quality CD-rom must be used.

File formats

- Texts MS Word (Windows 95 or higher), ASCII
- Databases MS Access (Windows 95 or higher), ASCII
- Images TIFF or JPEG
- Drawings DXF
- GIS ARC/View shapefile

7 DEPOSITING

7.1 Description

7.1.1 Objective

The objective of depositing is the sustainable preservation of the information pertaining to archaeological sites ex situ for the benefit of future research and of people's perception of the archaeological heritage by means of:

- preserving and managing archaeological objects and original documentation in such a way that the condition of the material remains as stable as possible;
- safeguarding the accessibility of the objects and information stored ex-situ.

All information collected during archaeological research is stored in a system which is accessible and logically ordered on behalf of professionals. 'Information' means finds, samples and original documentation in word and image. All material will be ordered in such a way that finds, samples and documentation are stored in conditions which are as stable as possible. Links can be established between finds and accompanying documentation.

7.1.2 Process

The depositing process can be divided into two phases, namely the requirements imposed by the depot vis-à-vis the executing bodies (external depot quality requirements) and the requirements of the depot itself (internal depot quality requirements).

External depot quality requirements comprise the following subprocesses:

1. consultations between the executing body and the Depot Manager;
2. the supply and receipt of finds and original documentation;
3. placing of finds and documentation in the depot and registration in relation to placement. Rendering finds and documentation accessible (catalogue system) and offering possibilities for loans.

Internal depot quality requirements comprise the following subprocesses:

4. saving finds and documentation.
5. procedures for loans (no standard procedures have yet been agreed)

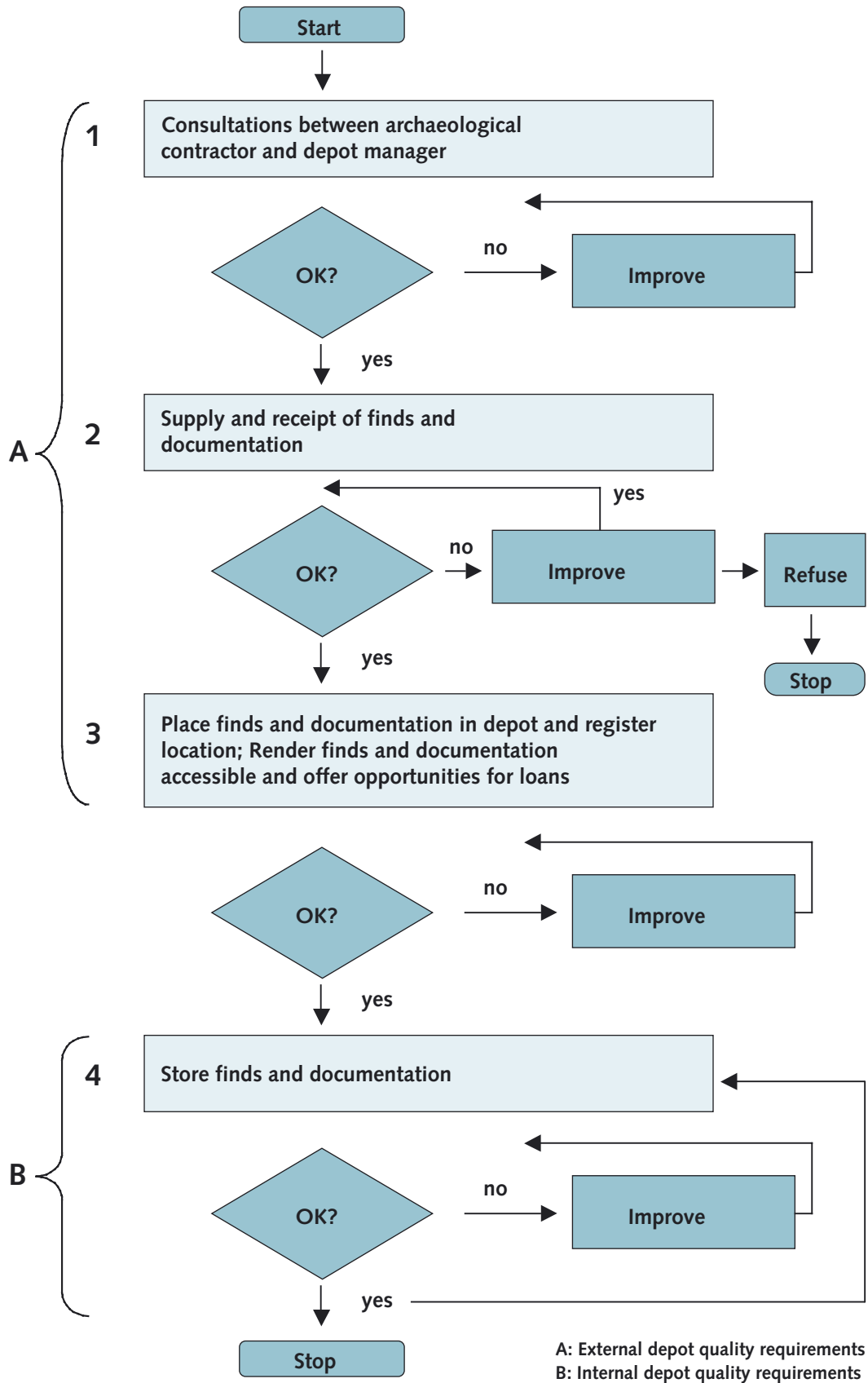
7.1.3 Actors

Depositing
Job
Junior Archaeologist
Medior Archaeologist
Senior Archaeologist
Junior Specialist
Senior Specialist
Senior Field Technician
Depot Manager ¹²

¹² The aim is to divide the function of Depot Manager in the future. The content-related management tasks would then be carried out by someone with academic archaeological training while daily management tasks can be carried out by someone with vocational training.

7.1.4 Process diagram for depositing and accompanying description

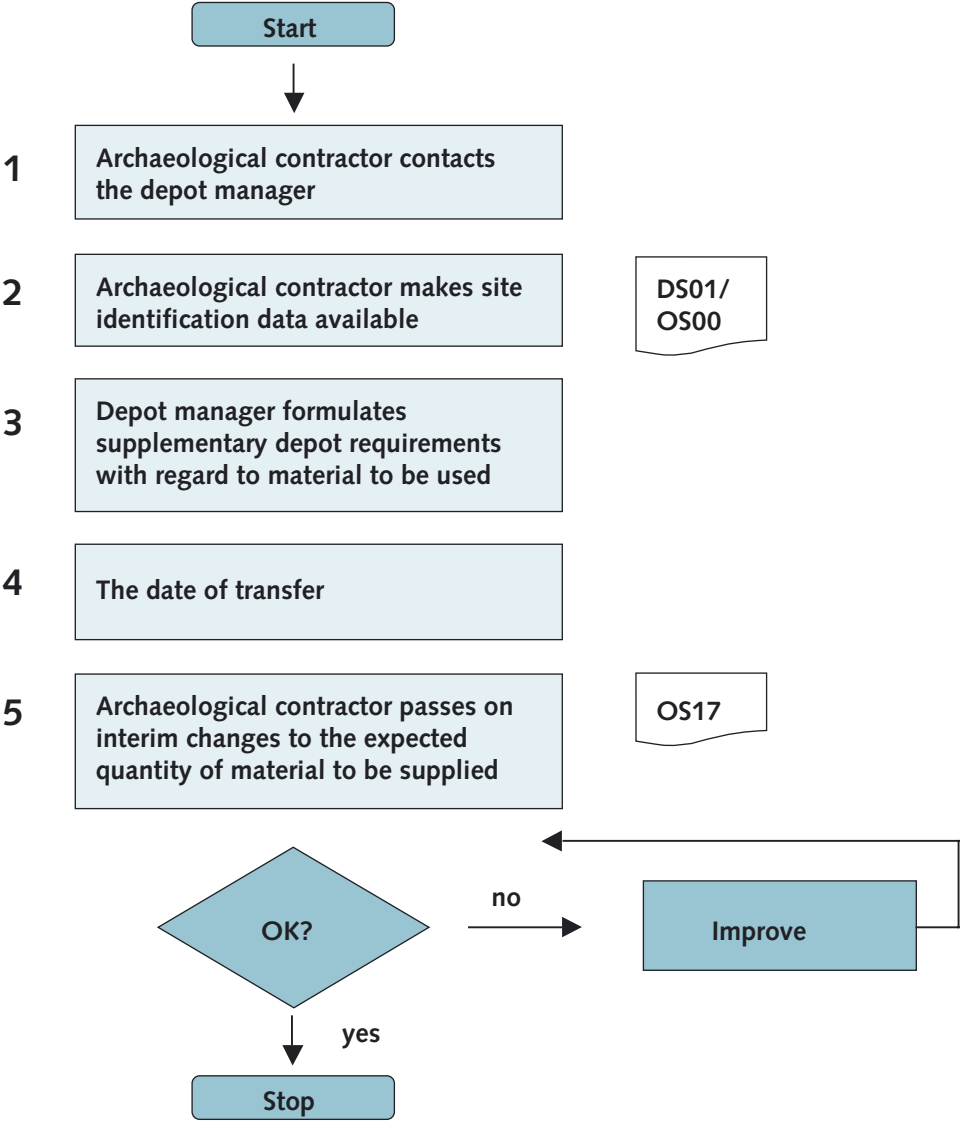
General description of the depositing process



General description of the depositing process

No.	Activity	Procedure/description
1	Consultations between the executing body and the Depot Manager	The archaeological contractor contacts the Depot Manager when preparing the archaeological project. The archaeological contractor makes the site identification data available and gives an indication of the type and quantity of materials to be supplied.
OK	CHECK	
	IMPROVE	
2	The supply and receipt of finds and documentation	The Depot Manager provides the depot's (supplementary) requirements with regard to the size and weight of the containers used for the finds, the type of material these should be made from and the way in which the corresponding documentation is to be supplied. The depot only accepts material that has been processed and with regard to which a final report has been written, unless agreed otherwise in writing. The finds assemblage is transferred using a <i>transfer protocol</i> . In the event that one of the two parties deviates from the standard set , such will be recorded in writing in the protocol.
OK	CHECK	
	IMPROVE	
	REJECTING finds and documentation	The depot is authorised to reject the deposit of the finds assemblages and corresponding documentation if they do not comply with the set requirements.
	STOP	If finds do not comply with the requirements and such cannot be rectified, they may not be included in the depot.
3	Place finds and documentation in the depot and register finds and documentation in relation to location. Render finds and documentation accessible and offer possibilities for loans.	Finds and samples are stored in the packaging material in which they are supplied. The depot will have a plan showing a summary of the locations. The boxes in the depot will bear unique identification marks. Finds assemblages, with the corresponding documentation, will be administered and rendered accessible in such a way that the assemblages are suitable for scientific analysis and that loans are possible between depots and borrowers.
OK	CHECK	
	IMPROVE	
4	Store finds and documentation	The finds, samples and corresponding documentation are managed in a depot: a storage facility with adequate air-conditioning. This storage facility is protected against fire, burglary and water damage and is provided with an alarm system. The finds and documentation are to be ordered and managed using a catalogue system.
OK	CHECK	
	IMPROVE	
	STOP	End of the process.

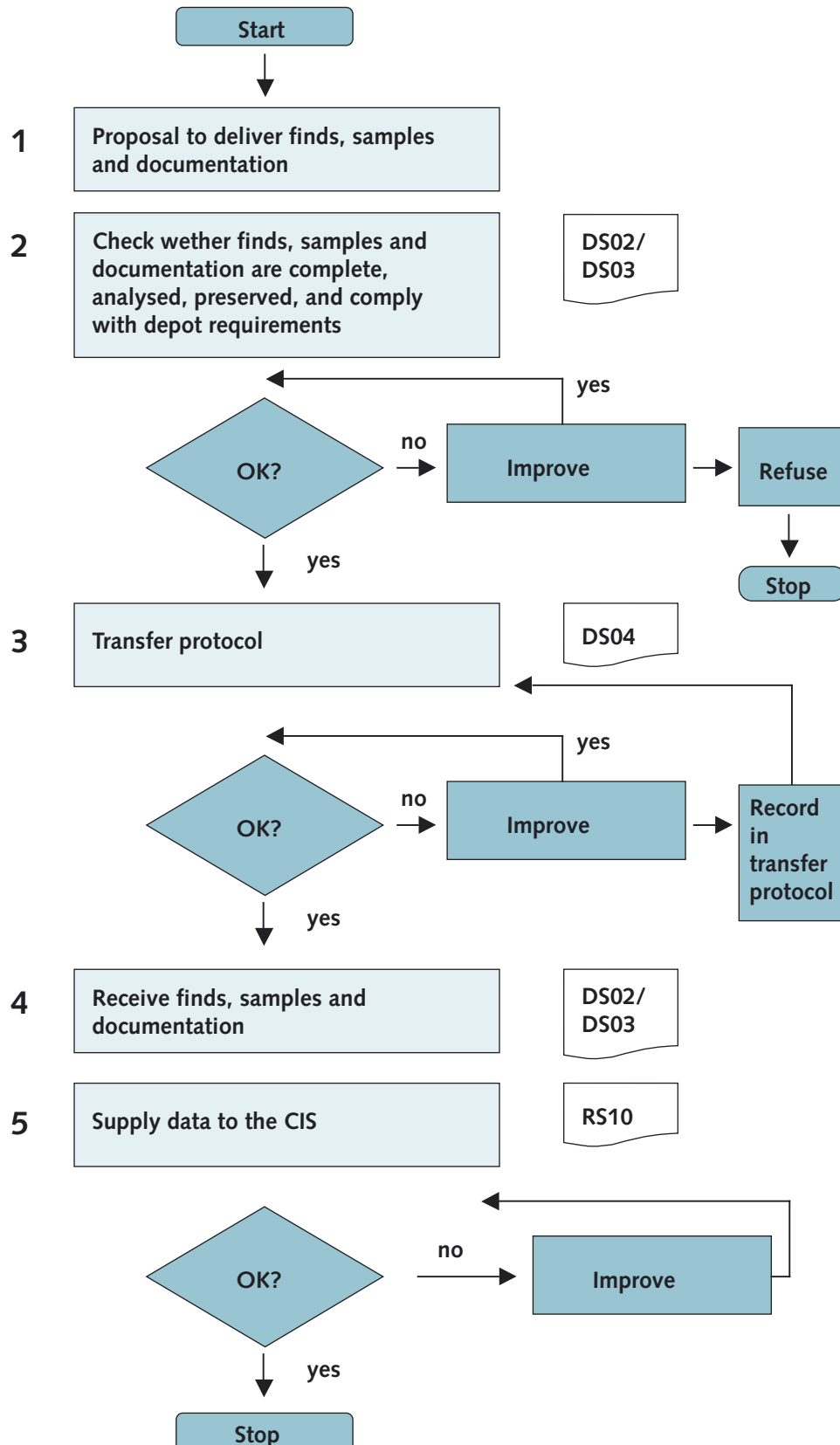
Step 1: Consultations between the archaeological contractor and the Depot Manager



Step 1: Consultations between the archaeological contractor and the Depot Manager

No.	Activity	Procedure/description	Actor	DOC
1	The archaeological contractor contacts the Depot Manager	The archaeological executing body contacts the Depot Manager when preparing the project.	Senior Field Technician/ Junior Archaeologist	
2	The archaeological contractor makes site identification data available.	The archaeological contractor makes written site identification data (incl. the national identification number) available to the depot.	Senior Field Technician/ Junior Archaeologist	DS01/ OS00
3	The Depot Manager formulates supplementary depot requirements	The Depot Manager formulates the supplementary depot requirements with regard to the packaging material to be used, the finds and the original documentation and sends this information in writing to the archaeological executing body.	Depot Manager	
4	The date of transfer is determined	The date of transfer is determined on the basis of consultation and laid down in writing. The transfer has to take place within 4 weeks after the report has been submitted.	Senior Archaeologist/ Depot Manager	
5	The archaeological contractor passes on interim changes to the expected quantity of the material to be supplied.	The archaeological contractor contacts the Depot Manager if a major change occurs in the expected type and quantity of finds and samples to be supplied.	Medior Archaeologist Depot Manager	OS17
OK	CHECK	Sections 1.1 to 1.5 are checked by the Senior Archaeologist and Depot Manager. If correct, the Senior Archaeologist and Depot Manager sign/initial the supplementary requirements document.		
	IMPROVE	Senior Field Technician/ Junior Archaeologist/ Senior Archaeologist/ Depot Manager.		
	STOP	End of the process.		

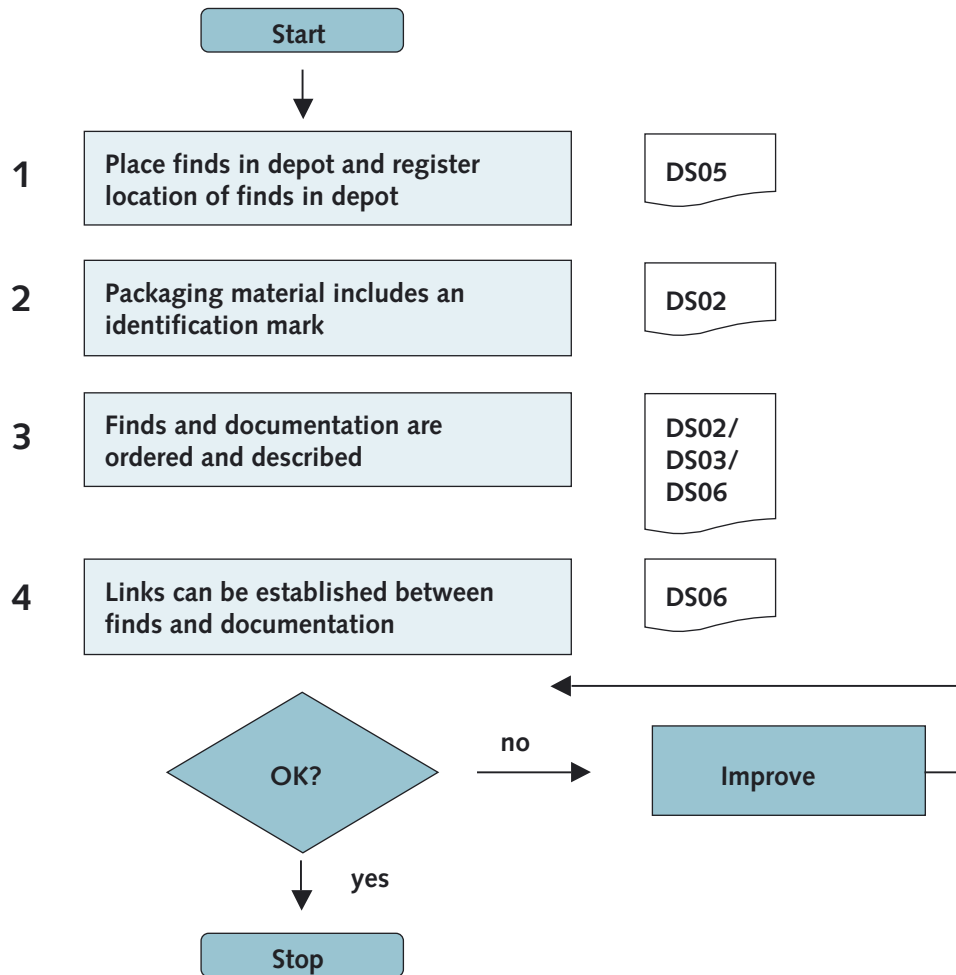
Step 2: The supply and receipt of finds and documentation



Step 2: The supply and receipt of finds and documentation

No.	Activity	Procedure/description	Actor	DOC
1	Proposal to deliver finds, samples and documentation	The Depot Manager formulates the (supplementary) depot requirements with regard to the packaging material to be supplied, the finds and the documentation and sends this information to the executing body.	Depot Manager	
2	Check whether finds and documentation are complete, analysed, preserved and comply with the depot requirements	Finds assemblages with corresponding documentation must be supplied complete (incl. final report or standard report), researched and preserved unless agreed otherwise in writing. Finds are supplied ordered and preserved. The finds have to be preserved in such a way that the condition of the material remains as stable as possible. Documentation and drawings are to be supplied numbered and ordered in accordance with the minimal requirements prescribed.	Medior Archaeologist Junior Specialist/ Depot Manager	DS02/ DS03
OK	CHECK	Sections 2.1 and 2.2 are checked by the Senior Archaeologist and/or Senior Specialist and Depot Manager. The Senior Archaeologist and/or Senior Specialist and Depot Manager will check whether the finds and documentation are complete.		
	IMPROVE	Medior Archaeologist/Junior Specialist/Depot Manager		
	REJECT	The depot is authorised to refuse the deposit of the finds assemblages and corresponding documentation if they do not comply with the set requirements and supplementary agreements.	Depot Manager	
	STOP	If finds do not comply with the requirements and such cannot be rectified, they may not be included in the depot.		
3	Transfer protocol	The finds assemblages comply with the depot requirements and can be accepted by the depot. The finds assemblage is transferred using a <i>transfer protocol</i> . In the event of a deviation from the set standard (even after measures have been taken) by one of the two parties, such will be recorded in writing in the transfer protocol, even if obligation to perform to the best of one's ability applies to comply with the standard at a later date	Medior Archaeologist Depot Manager	DS04
OK	CHECK	Section 2.3 is checked by the Senior Archaeologist and/or Depot Manager. If correct, the Senior Archaeologist and Depot Manager sign/initial the transfer protocol, thereby approving it.		
	IMPROVE	Senior Archaeologist/ Depot Manager		
4	Receive finds, samples and documentation	The finds assemblages comply with the depot requirements and can be accepted. Finds and samples are stored in the packaging material in which they are supplied.	Depot Manager	DS02/ DS03
5	Supply data to the CIS	The relevant data are supplied to the CIS. ARCHIS is notified that finds, samples and original documentation have been received by the depot (transfer protocol is sent).	Depot Manager	RS10
OK	CHECK	Sections 2.4 and 2.5 are checked by the Depot Manager.		
	IMPROVE	Depot Manager.		
	STOP	End of the process.		

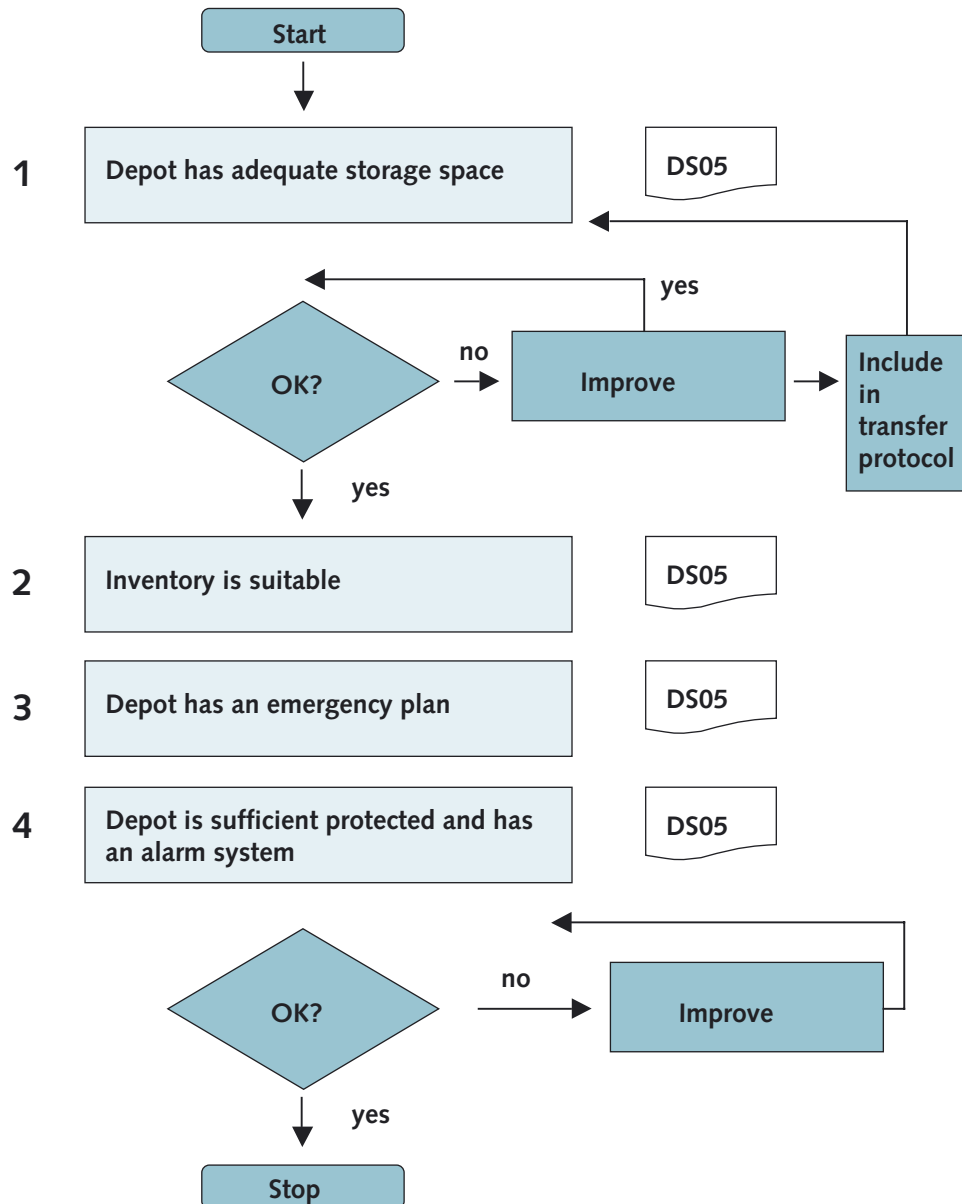
Step 3: Placing, registering and providing access to finds and documentation in the depot



Step 3: Placing, registering and providing access to finds and documentation in the depot

No.	Activity	Procedure/description	Actor	DOC
1	Place finds in the depot and register the location of finds in the depot	The finds assemblages comply with the depot requirements and can be placed in the depot. The depot will have a plan showing a summary of the locations of the various finds assemblages.	Depot Manager	DS05
2	The packaging material will include an identification mark	The packaging material in the depot will be marked with the minimum prescribed information.	Depot Manager	DS02
3	Finds and documentation are ordered and described	All finds samples are ordered according to location. All corresponding original documentation is ordered in a documentation system and can be accessed directly by the Depot Manager.	Depot Manager	DS02/ DS03/ DS06
4	Links can established between finds and documentation.	Finds assemblages are catalogued and rendered accessible in such a way that the material and corresponding documentation are suitable for scientific analysis and that loans are possible between depots and borrowers.	Depot Manager	DS06
OK	CHECK	Sections 3.1 to 3.4 are checked by the Depot Manager.		
	IMPROVE	Depot Manager		
	STOP	End of the process.		

Step 4: Storing finds and documentation



Step 4: Storing finds and documentation

No.	Activity	Procedure/description	Actor	DOC
1	The depot has adequate storage space.	The depot has adequate storage areas. Vulnerable finds are checked regularly as regards depreciations in quality. <i>If the depot does not have the right air-conditioned facilities, this has to be recorded in the transfer protocol.</i>	Depot Manager	DS05
OK	CHECK	Section 4.1 is checked by the Depot Manager.		
	IMPROVE	Depot Manager		
2	The inventory is suitable	The inventory lists materials which are free of emissions of harmful gases.	Depot Manager	DS05
3	The depot has an emergency plan	The depot has an emergency plan.	Depot Manager	DS05
4	The depot is sufficiently protected and has an alarm system	Storage facilities are protected against fire, burglary and water damage and are equipped with an alarm system.	Depot Manager	DS05
OK	CHECK	Sections 4.2 to 4.4 are checked by the Depot Manager.		
	IMPROVE	Depot Manager		
	STOP	End of the process. <i>A positive result will mean that storage of the material and documentation can continue.</i>		

7.2 Standards guidelines for depositing

7.2.1 Making available project identification data (DS01)

Process description

The archaeological contractor makes the project identification data available in writing to the depot.

Products

- Site identification data.
- CIS-code.

Actors

- The Senior Field Technician and/or Junior Archaeologist will submit the project identification data to the depot.
- The Senior Archaeologist and Depot Manager both check whether the correct data have been submitted.

Requirements with regard to resources

Project identification data

Data are issued in writing to the depot and contain at least the following:

- CIS-code;
- the name of the municipality;
- the place;
- the toponym;
- at least four x/y coordinates within which the excavation is situated.

7.2.2 Depositing of finds and samples (DS02)

Explanatory notes

No more than 4 weeks after completion of project and supplying the final report, the finds, samples and original documentation are transferred to the relevant provincial or municipal depot.

Process description

The contractor supplies the finds and samples in such a way that these comply with the requirements of the Depot. The depot requirements pertaining to the supply of finds and samples relate to the size, weight and type of material.

Products

- Packed finds.
- Packed samples

Actors

- The Medior Archaeologist and/or the appropriate Junior Specialist will supply the finds and samples in the right packaging.
- The Senior Archaeologist and/or appropriate Senior Specialist will check whether the finds and samples have been packed and supplied correctly.
- The Depot Manager checks whether the finds and samples have been supplied correctly. See transfer protocol.

Requirements with regard to resources

Packaging material

- The size, weight and type of material of the containers comply with the depot requirements.
- The finds and samples are stored at the depot in the packaging material in which they are supplied.
- The different finds categories must be packed in material with suitable properties (see recommendations for packaging materials (Table 11) and also OS09).

Requirements applicable to finds, samples and documentation

- Finds and samples have to be delivered in such a way that their condition remains as stable as possible.
- Finds are washed, dried, preserved, categorised, sorted and packed per find number and per storage category (minimal, relative humidity and relative dry storage conditions) (see also OS11).
- Samples have been processed when delivered unless (in exceptional circumstances) different agreements have been made with the Depot Manager.
- The samples are processed (screened/flotated and dried), sorted, categorised and packed per find number and per storage category (minimal, relative humidity and relative dry storage conditions) (see also OS11).
- The finds and samples are packed in numbered containers (boxes/crates) and accompanied by, at least, a properly filled-in water-resistant finds label made from acid-free material bearing text in waterproof, light-fast ink (see also OS03).
- Finds assemblages and accompanying original documentation are ordered, described and deposited in their entirety unless agreed otherwise in writing with the manager.
- The project documentation is produced at least in duplicate with one set being for the CIS and one set (the original) for the depot.

Find identification (see also OS02)

The finds label will record at the least the following:

- a unique find number;
- municipality of excavation/find;
- location: excavation name/toponym;
- year of find/excavation.

Information on packaging (containers) in depot

The packaging units in the depot bear at least the following information:

- a unique depot container number;
- municipality of excavation/find;
- location: excavation name/toponym, year of find/excavation;
- conditioning category;
- indication *breakable* or *treated with harmful substances* and the name of the substance.

7.2.3 Depositing documentation (DS03)

Explanatory notes

No more than 4 weeks after completion of the project and supplying the final report, the finds, samples and original documentation are transferred to the relevant provincial or municipal depot. If the depot lacks suitable facilities to receive the documentation, this is transferred to the ROB.

No more than 4 weeks after supplying the final report, the digital data are supplied to the ROB in accordance with the guideline "*Aanlevering digitale informatie ROB*"; see RS11.

Process description

The archaeological contractor deposits the original documentation in such a way that it complies with the requirements formulated by the Depot with regard to depositing documentation.

Products

- Original documentation pertaining to the deposited finds and samples.

Actors

- The Medior Archaeologist and/or appropriate Junior Specialist will process the documentation.
- The Senior Archaeologist and/or appropriate Senior Specialist will check whether the documentation has been deposited correctly.
- The Depot Manager checks whether the documentation has been deposited correctly.

Requirements with regard to resources

Requirements with regard to project documentation

- The original project documentation is supplied numbered and ordered.
- The documentation is, in any case, supplied on a non-digital dimensionally stable information carrier (acid-free paper), in standard formats (see also OS04).
- The size, weight and type of material of the project documentation carriers comply with the depot requirements.
- Drawings are supplied numbered and ordered on a non-digital information carrier (drawing film) in the depot's standard format (A0 maximum) (see also OS04).
- Drawings are sorted according to drawing category.
- The minimum project documentation to be supplied are lists of trenches, finds, contexts, samples, drawings, photos and slides, boxes (cf. OS10, and see also the recommendations for detailed summaries [Table 12]).
- Digital documentation (photos, drawings, etc.) is supplied in accordance with national standards and guidelines, supplemented with the depot requirements.

7.2.4 Transfer protocol (DS04)

Process description

The transfer of the finds assemblages and corresponding documentation takes place by means of a transfer protocol. If all the conditions stated in the KNA have been complied with, a reference can be made to the KNA documents and forms.

Products

- Transfer protocol.

Actors

- The Medior Archaeologist transfers the finds, samples and the corresponding original documentation to the Depot Manager.
- The Senior Archaeologist and Depot Manager check whether the finds and documentation have been submitted correctly. If correct, the Senior Archaeologist and Depot Manager both sign the transfer protocol.

Requirements with regard to resources

Requirements relating to the transfer

The transfer of a finds assemblage from a body responsible for excavating to a body managing a Depot will take place using a transfer protocol.

- All deviations from the set standard, by one or both of the parties, must be recorded in writing in the transfer protocol. Such deviations may relate to:
- missing finds;
- the depositing of samples. Samples can, in principle, not be supplied unless reasons are given and only in consultation with the Depot Manager who has to give permission, with the relevant details being laid down in the transfer protocol;
- as yet insufficient climate control equipment in the depot, etc.
- A copy of the transfer protocol is submitted to the CIS.

7.2.5 Depot storage space (DS05)

Process description

The depot has adequate storage spaces and is equipped with an alarm system. Vulnerable finds are checked regularly for depreciations in quality.

Products

- Emergency plan.
- Security system.
- Alarm.

Actors

- The Depot Manager ensures there is adequate storage space.
- The Depot Manager checks whether the storage spaces comply with the requirements.

Requirements with regard to resources

Requirements relating to depot organisation and space

- The depot will have a plan showing a summary of the locations.
- The depot has an emergency plan. This requires that:
 - the storage spaces are protected against fire, burglary, flooding and other exterior dangers;
 - the storage spaces are fitted with alarm systems for fire and burglary;
- The inventory is made of materials which are free of emissions of gases which are harmful for the stored material.
- The depot has resources for providing information on finds, samples and documentation to third parties.
- The depot has adequate storage spaces for the conditioned storage of finds so that the condition of the finds remains as stable as possible (see also the recommendations for climate conditions [Table 10]).
- Vulnerable finds are checked in accordance with the depot requirements for depreciations in quality.

7.2.6 Accessibility of the depot (DS06)

Process description

The finds assemblages are administered and rendered accessible in such a way that they are suitable for scientific analysis and that loans are possible between depots and borrowers.

Products

- Administrated finds, samples and corresponding original documentation.

Actors

- The Depot Manager ensures there is adequate storage space.
- The Depot Manager checks whether the storage spaces comply with the requirements.

Requirements with regard to resources

Minimal accessible information in the depot

In order to safeguard the accessibility of finds, samples and documentation, the depot information system should, as a minimum, provide access to the following data:

- find number;
- coordinates;
- municipality of excavation/find;
- year of find/excavation;
- location: excavation name/toponym;
- description of find number;
- period;
- depot;
- location;
- preservation category;
- method of acquisition;
- if finds and/or samples have to be removed, the reason for removal must be registered;
- temporary storage location.

Table 10. Recommendations for climate conditions in depots (DS05)

The following climate conditions apply to processed and preserved material but not to unprocessed material. For the climate conditions applicable to unprocessed material refer to the climate conditions for the temporary storage of material (OS09). The storage conditions for samples are to be determined by an appropriate specialist, see also table 8 in chapter 6 (excavation). For more detailed information refer to: *Standards in the Museum Care of Archaeological Collections 1992*, pp. 57-59, Museums & Galleries Commission

Temporary storage space for new deliveries at minimum conditions:	
Relative humidity	Constant $\pm 5\%$
Temperature	15°C-18°C
General storage space with minimum conditions for, among other things, ceramics, glass, stone, bone:	
Relative humidity	30% <RH< 80%, constant $\pm 5\%$
Temperature	18°C $\pm 3^\circ\text{C}$
Storage space with relatively dry conditions for, among other things, metals, slag:	
Relative humidity	30%, constant $\pm 5\%$
Temperature	18°C $\pm 3^\circ\text{C}$
Storage space with relatively damp conditions for, among other things, leather, wood, textiles, rope, processed bone, antlers, amber, jet:	
Relative humidity	50% <RH< 70%, constant $\pm 5\%$
Temperature	18°C $\pm 3^\circ\text{C}$
Space for adequate storage of original documentation on paper, drawing film, etc.:	
Relative humidity	55% <RH< 65%, constant $\pm 5\%$
Temperature	15°C $\pm 3^\circ\text{C}$
Space for adequate storage of photographic material:	
Relative humidity	35%, constant $\pm 5\%$
Temperature	15°C $\pm 3^\circ\text{C}$

Table 11. Recommendations relating to packaging materials DS02 (see also OS09)

The material categories in question must be packed in material with suitable properties:

Material category	Packaging material
metal	plasticizer-free, vapour-pervious, acid-free
organic materials	plasticizer-free, vapour-pervious
stone, ceramics and glass	vapour-pervious
botanical samples	glass or plasticizer-free plastic

Table 12. Recommendations relating to detailed summaries DS03

Boxes list	box number, find numbers present, storage category.
Finds list	find number, material category, type of finds, trench number, level number, serial number and context number, drawing number (section number) (cf. OS03).
Context register	context number, trench number, level number, Amsterdam Ordnance Datum reference, identical to, relationship with other features, relative age, corresponding find numbers (cf. OS03).
Samples list	sample number, type of sample, trench number, level number, serial number and context number, drawing number (section number) (cf. OS03).
Drawing register	drawing number, type of drawing, trench number, subject (cf. OS04).
Images list and slides list	photo number/slide number, type of photo/slide, drawing number, trench number, level number, subject (find number/context number, section number) (cf. OS08).

7.2.7 Transfer of project data - Depositing (RS10)

Process description

The relevant data are supplied to the CIS.

Products

- Transfer protocol.
- Notification.

Actors

- The Depot Manager supplies the relevant data to the CIS.
- The Depot Manager checks whether the relevant data have been supplied correctly.

Requirements with regard to resources

Data to be registered

Transferring:

- National registration number (previously issued unique registration number).
- Date on which material and documentation is submitted.
- Transfer protocol.
- Notification that material and documentation have been delivered and stored

8 REGISTERING

8.1 Description

8.1.1 Objective

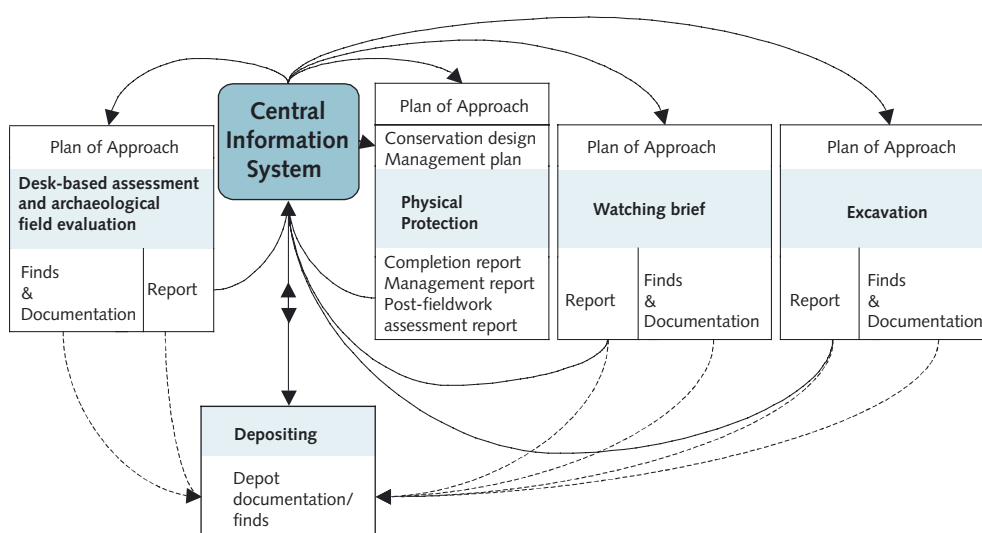
The digital recording at a central point of data required for all work processes in archaeological heritage management – to fulfill the information needs of a variety of parties.

8.1.2 Process

In all main processes, relevant information, that has already been registered, is requested during the initial phase from the CIS (CIS). Such requests are included as steps in the various main processes. In all main processes the relevant result data are supplied to the CIS when the main process is concluded. This is also included as a step in the various process diagrams.

The following diagram shows how the various main processes (preliminary process [desk-based assessment and archaeological field evaluation], watching brief, excavation, protecting and depositing) are interconnected with regard to information flows.

The diagram on the following page displays the links between the various processes at the process step level.



For requirements applicable to data to be supplied, see standards guidelines relating to registration: RS01-RS11. These have been added to the standards guidelines of the main processes. Below is an overview of where these can be located:

Standards guideline	Chapter
RS01 Registering the project - Field evaluation	3.2.10
RS02 Registering the project - Physical protecting	4.2.8
RS03 Registering the project - Watching brief	5.2.10
RS04 Registering the project - Excavation	6.2.22
RS05 Transfer of project data - Desk based assessment	2.2.8
RS06a Supply of preliminary data - Field evaluation	3.2.11
RS06b Transfer of project data - Field evaluation	3.2.12
RS07 Transfer of project data - Protecting	4.2.9
RS08 Transfer of project data - Watching brief	5.2.11
RS09a Supply of preliminary data - Excavation	6.2.23
RS09b Transfer of project data - Excavation	6.2.24
RS10 Transfer of project data - Depositing	7.2.7
RS11 Transfer of digital data	3.2.13
RS11 Transfer of digital data	5.2.12
RS11 Transfer of digital data	6.2.25

APPENDICES

Appendix I. The complexity of excavations

Introduction

An important aspect of determining a Project Outline (PO) by, or on behalf of, the competent authority (see PS05, chapter 6.2.1) is the qualification of the complexity of an excavation. It is essential that:

- it can be used as a basis for a choice of suitable executing parties, in other words: organisations that are certified to carry out excavations with a certain complexity;
- the developer can acquire an insight into the costs by means of empirical figures;
- the procedure is clear and not too complicated.

The practicability of the procedure and classification as described below is provisional and still needs further testing in practice.

Complexity

Complexity is determined on the basis of the results of the preliminary process and the selection decision.

In the process, the following criteria apply:

- technical complexity;
- content-related (archaeological) complexity;
- logistic complexity.

Technical complexity

The complexity in a technical sense is determined by three factors:

1. Stratigraphy: is the site non-stratified or scarcely stratified (2 dimensional, "flat" settlement or *Flachsiedlung*), which is considered to be the standard situation, or is it a deeply stratified site (3 dimensional, remains of walls, etc.)?
2. Technical appliances to be used and relevant knowledge: is the excavation one which can be carried out using techniques generally used in archaeology (= standard) or are special or innovative techniques or facilities required for the archaeological work and staff that have the knowledge to implement these? Special techniques or facilities required in order to carry out the excavation but which are not used directly for the archaeological work (example: sheet-pile walls), are not considered special.
3. Find density and variation: is the excavation one for which a standard team (= standard) can be deployed for find processing or are extra facilities required due to the presence of large numbers of finds and/or find categories and due to the requirements applicable to their processing in the PO?

The technical complexity is 'standard' if a standard score is achieved for all factors, 'medium' if more than standard is scored for one factor and 'high' if that is the case for two or all factors.

Content-related complexity

A convenient criterion for content-related complexity is the number of different specialists that have to be used during and after the excavation.

- The standard situation is one in which 1 (period) specialist is required to lead the excavation and during processing (that a number of finds or biological reports by others may be required, is also regarded as standard). The content-related complexity is then 'standard'.
- If more than one specialist is required during the excavation (period specialists, nautical archaeologists or a combination with one or more other specialists that are required permanently in the field), the content-related complexity is 'medium'.
- If more than one specialist is required during the excavation and if a variety of (period and/or biological) specialists need to be actively involved in the processing, the content-related complexity is 'high'.

Logistic complexity

The logistic complexity is determined primarily by the factors of scale and time. In practice, these will also function as correction mechanisms for the technical and logistic complexity, but it is a good idea to deal with logistic complexity separately because it is an indicator for

the sort of organisation that is required during the fieldwork (size, project management) and for the related financial/administrative processes.

The *size* is determined by the number of square meters and the number of excavation levels that need to be made, while it goes without saying that the depth at which a site is situated is also important. In the following calculation of the empirical figures, the point of departure is that a standard excavation is carried out by a field team consisting of an archaeologist, a field technician, 3 excavation workers and a caterpillar machine (mechanical excavator), whereby the first level does not need to be deeper than approx. 0.5 m below the surface. In the case of clay, loess and loam, the standard situation is three levels, in the case of sand there will be two.

Changes may apply to all these factors. Sometimes a standard field team cannot be used (often in the case of Neolithic and older sites), sometimes the first level will be a lot deeper, sometimes the substrate will be different (peat) and sometimes more than three or two levels will have to be created (often in the case of town centre- and ship-excavations)¹³.

The logistic complexity, determined on the basis of size, is in principle standard as far as a standard excavation is concerned, whereby no complicating factors occur, medium if there is one complicating factor and high if there is more than one complicating factor.

Thereafter, the factor of *time* can influence the logistic complexity and with that the requirements imposed on the executing party both in an upward and downward direction. In principle, the time available is determined by the principal, since there is no upper limit. A lower limit does apply though.

It is conceivable that a principal anticipates a spatial development and wishes to give a relatively small company a truly major order well beforehand. This is possible if the technical and content-related complexity is standard. In theory, therefore, there is no upper limit. Conversely, in a situation of considerable pressure of time, an otherwise entirely standard excavation is only awarded to a large company that is able to deploy a number of coordinated teams in the field (project management) and that is able to implement the corresponding financial and administrative procedures. A lower limit does apply, however, which is determined by the PO and the maximum number of staff that can possibly be deployed on a particular project. This produces the minimum required time. Incidentally, this is also a matter of professional ethics: *Thou shalt not take on work which thou knowest cannot be completed in a responsible manner.*

When determining logistic complexity, therefore, both fieldwork and administrative and financial procedures play a role. The size of any bank guarantee, etc. demanded by the principal does not play a role. This may, of course, determine the choice of the executing party (at a later stage during tendering).

In the standard situation, the number of square metres that a standard field team can excavate per working day in the case of a standard context density¹⁴ is as follows, depending on the type of site:

Substrate		Sand	Loam	Clay/Loess
Site type	Settlement	165 m ²	150 m ²	115 m ²
	Burial site	80 m ²	50 m ²	40 m ²
	Stone buildings	45 m ²	45 m ²	45 m ²

Determining complexity

In principle, the above data produces the following table, with which the complexity can be determined:

¹³ Stone-age sites and ship locations (at sea, on land) are different. Key figures in m³

¹⁴ Standard context density is 1 context per m².

Complexity classes		Standard	Medium	High
Complexity categories	Technical complexity	1	2	3
	Content-related complexity	1	2	3
	Logistic complexity	1	2	3

A step-by-step decision is then the most effective way of proceeding. This can take place as follows:

Step 1: Selection decision

When making a selection decision, the excavation qualification is recorded in accordance with the following procedure:

1. The selection decision is a choice to preserve, to excavate, to implement a watching brief or to do nothing.
2. If the decision is taken to *excavate*, it must then be indicated in the PO which sort of excavation has to be carried out:
 - excavation without restriction of the surface/volume to be excavated (this may mean that a decision is made to excavate the entire site and not just the threatened part thereof);
 - excavation restricted to a specific surface/volume;
 - excavation of the entire surface/volume but subject to other restrictions;
 - excavations with both restrictions to the surface/volume to be excavated, and other restrictions.

Although, in practice, the latter option (is) often (has to be) chosen, it is essential that this choice is made explicitly and recorded in the selection decision.

Step 2: Project Outline

The PO is used to record other choices and specify the complexity on the basis of these. A possible classification is:

- *Very complex* (excavations which score a 7 or more – that is ‘high’ in two of the three categories – or excavation projects which comprise a number of excavations to be carried out together whose complexity is standard or higher).
- *Moderately complex* (excavations which score more than 4 but less than 7 in the table).
- *Standard* (excavations which score 3 or 4 in the table).

The PO results in a detailed project design on the basis of which a specification can be drawn up and tendering can take place involving companies that fulfil the requirements imposed on the basis of the complexity. When tendering actually takes place, the principal can add its own criteria, such as the amount of a bank guarantee.

Appendix II. Requirements for support processes

The quality of support processes is of crucial importance to guarantee the quality of the primary process (archaeological work, the core activity). These processes include maintaining adequate levels of knowledge and expertise of staff, subcontracting, hiring temporary staff, maintenance of equipment, and recording of data.

These support processes should therefore also be guaranteed wherever relevant. It is for this reason that a number of essential aspects concerning the support processes have been selected here, which constitute an integral part of the quality standard. There is much more that can be done in this respect which is not obligatory. An organisation may choose to develop its quality system further, in order to improve the quality of its archaeological work and of customer satisfaction, or to decrease the cost of mistakes and thereby improve efficiency.

1. Document management

All documents referred to in the Dutch Archaeology Quality Standard and which may be subject to change must be managed by:

- establishing per (type of) document who is responsible for authorising use of the document and any subsequent changes;
- management according to version (date or version number); the organisation must maintain a central registration of all documents and currently valid versions. Only valid versions may be used.

Where digital documents are used, the version management may be organised by restricting the responsibility for implementing changes to certain staff members in such a way that unauthorised staff can only use these documents and not alter them.

Documents which must be managed by version are PO's, contracts (and subsequent changes or additions), plans of approach, safety plans, specialist reports, and forms (or copies of original forms supplied to the depot). These are the forms which have been authorised prior to carrying out a project such as levels book, site grid map, trenches map, context register, register of finds, sample list, drawing register, list of finds boxes, daily and weekly reports, register of staff, etc).

Procedures, process descriptions or work instructions are not required by the Dutch Archaeology Quality Standard. Organisations may, however, find them useful in improving the quality of their primary processes.

Previous versions of documents that have been changed or have lapsed must be stored for 3 years or more if required. During this period, such documents must be easily accessible.

2. Registration

All data from a project must be recorded with great care. During checks it must be verifiable (by signing, initialling or by the use of a password in case of digital documents) which authorised staff member has approved.

All registrations must be stored for 3 years or more if required. During this period, such registrations must be easily accessible.

Digital data must be protected by antivirus software that must be continually updated. Weekly back-ups must be made of all digital data related to archaeological projects. It must be ensured that back-ups are stored in an adequate facility where they are protected against fire and burglary, preferably at another location.

3. Staff

Qualified staff

- the organisation must have at least one senior archaeologist or, depending on its type of business, at least one senior specialist on its permanent staff
- organisations involved in archaeological field evaluations, implementing watching briefs, excavations and physical protection must have a minimum of two permanent staff

members, one senior archaeologist and other archaeologist or field technician. Both must subscribe to a code of ethics that must be verifiable by a current membership of NVvA, IFA or RPA.

- organisations involved in advisory work must have at least one permanent staff member that is a senior archaeologist with extensive experience.

Replacements

The organisation must have an established procedure for the temporary replacement of staff during absence (for any reason). Absence for whatever reason, planned or unplanned, shall never constitute a valid reason for not working in accordance with the Dutch Archaeology Quality Standard.

4. Professional registration

Only staff that meets the requirements as described under chapter 1.2.1 (Quality standards for Actors) may execute tasks as described in the Dutch Archaeology Quality Standard. A task or check may be carried out by another staff member within the same job category or a higher one. A check may never be performed by a staff member in a lower job category (less experience).

5. Purchasing

Recruiting temporary staff

Temporary staff must fulfil the same requirements as permanent staff, as far as meeting the requirements as described under chapter 1.2.1 (Quality standards for Actors) are concerned. Recruitment takes place exclusively under contracts that state which quality standards are met by the staff concerned.

The organisation must verify that temporary staff meets these quality standards. The organisation is fully responsible for its temporary staff and where tasks as described in the Dutch Archaeology Quality Standard are concerned, no appeal to the responsibility of the agency that provides staff shall be acceptable.

Contracting services

- Drivers of machinery: no specific requirements.
- Excavation workers: no specific requirements.
- Field technicians: training on the job and/or verifiable practical experience.
- Archaeological specialists: relevant professional training, expertise in their field, verifiable practical experience and a number of relevant publications.
- Land-surveyors: polytechnic university training; data must be supplied under the SUF-standard.
- Laboratories: must have a recognised method of working (when relevant substantiated by a certification document), its measuring systems are calibrated periodically as shown by the calibration records, it must have a protocol book in which methods are described uniformly and verifiably, it must comply with environmental and health and safety requirements, and it must use prescribed standards (e.g. NEN standards) for determinations and measurements of values.

Hiring appliances

Appliances that are hired must comply with the requirements imposed on that specific appliance with regard to maintenance and safety. For machinery, international requirements may apply. If drivers are included in the contract, the relevant professional requirements apply.

The organisation must verify that hired appliances comply with all requirements. Where tasks as described in the Dutch Archaeology Quality Standard are concerned, the organisation is fully responsible for the performance of hired appliances and their use and no appeal to the responsibility of the company from which the material and drivers are hired shall be acceptable.

Subcontracting

The Dutch Archaeology Quality Standard applies to the organisation that does the actual work. Only organisations that have been admitted by the Committee for Archaeological Quality (CvAK)¹⁵ may engage in archaeological work for which they have been admitted or supervise such work in practice.

When subcontracting archaeological work, the organisation must verify that the subcontractor has been admitted for the type of work concerned.

6. The management of appliances

The following measuring appliances must be calibrated periodically on the basis of standards as provided by the manufacturer: spirit level, theodolite, total station and GPS.

The management and maintenance of field equipment must be clearly allocated to a specific member of staff. Appliances that are used in the field must be inspected visually whenever they are provided or returned and must be repaired when necessary.

7. Completion

At completion of each project, it must be checked if:

- all requirements and research questions in the PO have been dealt with;
- all work has been done in accordance with the contract and the plan of approach;
- all checks have been performed;
- all registrations have been made as required;
- there is no other matter left unfinished;
- the final report has been finished and checked;
- when applicable, all finds and corresponding documentation have been prepared in the prescribed manner for storage at the internal or external depot.

This final task may be performed as an administrative verification of previous checks; the use of a checklist is recommended. In any case, the results of this verification must be recorded for each project.

8. Work practice and the Dutch Archaeology Quality Standard

In order to ascertain that its archaeological work meets the requirements of the Dutch Archaeology Quality Standard and the requirements for support processes, an organisation must compare its own work practice to the Standard by an internal audit.

Before filing an application to be admitted to any type of archaeological work by the Committee for Archaeological Quality (CvAK), an organisation must have performed this check and must have corrected all deviations from the standard in advance of the application. This means that all main processes for which admission is requested must have been compared to the quality standard during at least one 'dry run'. The same applies to support processes mentioned in this appendix.

After an admission has been obtained, this internal audit must be repeated each year during at least one project. Any deviations from the standard must be corrected.

Performing this internal audit, the results and corrections of any deviations must be recorded and must be stored for at least 3 years.

¹⁵ On the Committee for Archaeological Quality (CvAK), see the Introduction. Admittance by the Committee is the temporary alternative for certification under the decree that was gazetted in 2001.

Appendix III. List of abbreviations Dutch Archaeology Quality Standard

Abbreviation:	Meaning:
AAI	Supplementary archaeological assessment
AAO	Supplementary archaeological investigation
ABR	Archaeological basic register
AMK	Archaeological monuments map
AMvB	Governmental Decree
AHM	Archaeological Heritage Management
ARBO	Health and Safety Regulations
ARCHIS	Archaeological information system of the ROB = central information system
ARCHON	Dutch archaeological research school
BS	Standards guidelines relating to physical protection
C14	Carbon (radioactive isotope), used for dating
CAA	Central Archaeological Archive
CIS	Central Information System
CMA	Central Monuments Archive
CvAK	National committee for the Archaeology Quality Standard
DIN	German Industrial Standard (= standardised paper format)
DOC	DOCuments
DS	Standards guidelines relating to depositing
GIS	Geographical Information System
GPS	Global Positioning System
ICT	Information and Communication Technology
IKAW	Indicative Map of Archaeological Values
IPO	Association of Netherlands Provinces
ISO	International Standardisation Organisation (= quality assurance standard)
KLIC	Cable and pipeline information centre
KNA	Dutch Archaeology Quality Standard
LS	Standards guidelines relating to desk-based assessment
m.e.r.	Environmental Impact Assessment
NAP	Amsterdam Ordnance Datum (= official reference level)
NDC-B	National diving certificate-B
NEN	Dutch standard (<i>NEderlandse Norm</i>)
NNI	Netherlands Normalisation Institute
NVvA	Netherlands Association of Archaeologists
NWO	Netherlands Scientific Organisation
OCenW	Ministry of Education, Culture and Science
ODA/ODIF	Open Document Architecture/ Open Document Interchange Format
OS	Standards guidelines relating to excavation
PDF	Portable Document Format
PO	Project Outline
RIA	State Inspectorate for Archaeology
ROB	State Archaeological Service
RS	Standards guidelines relating to registration
SAI	Desk-based archaeological assessment
SGML	Standardised General Mark-up Language
SNA	Foundation for Dutch Archaeology
SPDL	Standard Page Description Language
SQL	Standard Query Language
STEP	Standard for The Exchange of Product data
VC	Preparatory Committee
VNG	Association of Netherlands Municipalities
VS	Archaeological field evaluation standards guideline

Appendix IV. Dutch Archaeology Quality Standard Glossary

While utmost care has been taken to provide adequate translations of terms as used in Dutch archaeology, some concepts lack direct equivalents in English. Whenever deemed necessary, some further explanation has been provided for foreign users. The Dutch terms are given in italics. Normally, UK terminology has been used for the translation, which is sometimes different from US terms. The glossary includes explanations of certain concepts intended specifically as clarification for the layman, because the original glossary in Dutch is also intended for use by non-archaeologists.

(>) Means a reference link. The term in question is explained elsewhere in the list.

AAI (*aanvullende archeologische inventarisatie*) Supplementary Archaeological Assessment: preliminary, non-destructive (>) field evaluation within the framework of the (>) preliminary process. This type of preliminary study is no longer regarded as a separate process and, together with the former (>) AAO, now forms part of the (>) archaeological field evaluation.

AAO (*aanvullend archeologisch onderzoek*) Supplementary Archaeological Investigation: preliminary, destructive field evaluation within the framework of the (>) preliminary process. This type of preliminary excavation (trial trenching) is no longer regarded as a separate process and, together with the former (>) AAI, now forms part of the (>) archaeological field evaluation.

ABR See: Archaeological Basic Register.

Administrative protection (*administratieve bescherming*) Protection, with a legal/administrative basis or otherwise, aimed at the preservation of (>) archaeological monuments. This protection does not affect the physical condition of the monument. Different forms of administrative protection (also referred to as 'paper' protection) are:

Aesthetic value (*schoonheid*) Aesthetic value refers to the value of archaeological monuments as part of the landscape, which is expressed primarily in visibility (> valuation).

AMK Archaeological Monuments Map (*Archeologische Monumenten Kaart*). An AMK is an archaeological policy map showing an overview of all known protected archaeological monuments and other locations with (>) preservation value in a certain area.

AMvB (*Algemene Maatregel van Bestuur*) Governmental Decree.

Analysed material (*geanalyseerd materiaal*) Material that has been processed and recorded in such a way that it is suitable for storage in the depot in accordance with the archiving guidelines.

Analysis report (*analyserapport*) (= advisory report) Written guidelines for possible further research and for the method of storing materials in so far as these deviate from the already prescribed guidelines.

Anthropogenic contexts (*anthropogene sporen*) All immobile traces of human origin, varying from postholes or phosphate traces to remains of walls.

Archaeobotany (*archeobotanie*) The investigation of plant remains within the framework of archaeological research.

Archaeological Basic Register (*Archeologisch Basis Register*) This is the register of fixed archaeological terms as used in the national archaeological information system (>) ARCHIS (Brandt *et al.* 1992).

Archaeological expectation (*archeologische verwachting*) The presumption regarding the existence of (the nature, quantity and quality of) archaeology in the survey area (> predictive map, > specified predictive model).

Archaeological field evaluation (*inventariserend veldonderzoek*) The acquisition of (extra) information on known or expected (>) archaeological values within a (>) survey area, as a supplement to and test of the archaeological expectation based on the (>) desk-based assessment by using invasive (destructive) archaeological evaluation techniques.

Archaeological indication (*archeologische indicatie*) Indicative archaeological material that, in the event of a (borehole) survey, could be an indication of the presence, locally or in the vicinity, of an archaeological site (> site, > monument type).

Archaeological policy (*archeologisch beleid*) A framework laid down by a government body setting out the way in which it wishes to deal with its obligation to care for the archaeology in its area, possibly supplemented with far-reaching provisions relating to selection priorities, a policy map, etc. (> competent authority, > selection recommendations).

Archaeological policy map (*archeologische beleidskaart*) Map comprising a spatial

presentation of the policy to be pursued, as laid down by the competent authority (Eerden/Rensink 1996).

Archaeological potential map (*potentiekaart*) A (>) predictive map combined with data on the (expected) preservation characteristics of archaeological sites and on (>) disturbances and (>) coverings (> basic map, > IKAW, > policy map).

Archaeological specialist (*archeologisch specialist*) A specialist is a qualified and registered person, who has completed a training course focused on a particular specialism. A specialist's assistance is called upon if such is regarded as essential in connection with exceptional or complex phenomena.

Archaeological value (*archeologische waarde*) (>) Site or (>) find with an archaeological value. This principally means archaeological remains in their original spatial context. Both large complexes, structures and assemblages such as settlement sites and individual finds can be referred to using this term (> valuation, > nature of archaeological value).

Archaeologist (*archeoloog*) An archaeologist is a qualified and registered person who has had relevant archaeological academic training. The archaeologist is responsible for the content-related aspects of the project's execution.

Archaeo-region (*archeoregio*) A relatively large area, within which from both the point of view of historical development and in a spatial sense, a certain relation exists between archaeology and the landscape. Thirteen archaeo-regions have been defined in the Netherlands. These form the geographical framework for investigating the archaeological record. (Groenewoudt & Bloemers 1997).

Archaeozoology (*archeozoologie*) The investigation of animal remains within the framework of archaeological research.

ARCHIS ARCHaeological Information System. The current, national archaeological information system managed by the (>) ROB. ARCHIS is linked with the (>) CMA and the (>) CAA (> Central Information System).

ARCHIS2 Reference to the new national archaeological information system that is managed by the (>) ROB. ARCHIS2 complies with the requirements for the (>) Central Information System.

Archiving (*deponeren*) The delivery of finds and accompanying (>) documentary archive to a (transit) (>) depot.

Base line (*meetlijn*) A base line derived directly from the (>) datum line in an excavation trench, from which the measurements are taken as long as the trench is operational. Base lines run parallel to, or are at right angles to the datum line.

Basic map (*basiskaart*) An overview of known archaeological sites or find-spots, an archaeological predictive map/archaeological potential map or a combination of both. In addition, it may contain data on the (expected) conservation and vulnerability of archaeological sites. A basic map is not intended to be used as a tool to make policy, but constitutes the basis for the production of archaeological recommendation maps and policy maps (> archaeological potential map, > predictive map, > IKAW, > policy map).

Basic registration (*basisregistratie*) Registration of unprocessed data, data files.

Basic report (*basisrapportage*) See: Final report.

Bioturbation The transport of material in the soil as a consequence of animal activities (worms, moles etc.).

Borehole log/section log (*boorstaat/profielstaat*) Description of a core or section with regard to the lithology, the soil formation, the sedimentological characteristics and the (>) archaeological indications.

Borehole sample (*boormonster*) (>) Sample resulting from a (>) borehole survey.

Borehole survey (*booronderzoek*) Survey method used in (>) field evaluations based on the execution of boreholes (normally using an auger), the aim of which is to identify the presence of (>) archaeological indications, such as pottery fragments, charcoal and phosphate concentrations.

Botanical macro residues (*botanische macroresten*) Plant residues that are visible at minor magnification (to approx. 50x) (primarily seeds and fruits). Wood is not included in this category.

CAA (*Centraal Archeologisch Archief*) Central Archaeological Archive. Part of (>) ARCHIS with digital data on archaeological sites and finds (> CMA).

Central Information System (*centraal informatiesysteem*) The system, managed at national level, containing the basic information and references on the data collected during the (>)

preliminary process, (>) implementation of watching briefs, (>) excavations, (>) protection and (>) archiving. In so far as a statutory arrangement to that effect has been made (> obligatory notification), the system is also used to register government decisions relating to archaeological values. The central information system is not the same as (>) ARCHIS, but is made operational in (>) ARCHIS2.

Certification or Certificate (*certificatie or certificaat*) A declaration that the agreed standard has been complied with.

Certification system (*certificatiesysteem*) Method used by the certifying body in order to certify an organisation.

Certifying or Certification (*certificering or certificeren*) The process of acquiring a (>) certificate.

CIS-code The (>)national registration number that is issued by the (>)Central Information System.

CMA (*Centraal Monumenten Archief*) Central Monuments Archive. Part of (>) ARCHIS comprising digital data on legally protected archaeological sites and other plots with established values or sites which are assumed to have (>) preservation value (> CAA).

Collecting (*verzamelen*) All tasks from collecting finds during fieldwork to their temporary storage at the excavation.

Competent authority (*bevoegd gezag*) The government body empowered to take the (>) selection decision that ensures that the (>) project outline (brief) is drawn up and approves any (>) project design.

Complex A complex consists of a number of structures and/or individual features connected with each other in terms of space, time and function.

Complexity (*complexiteit*) The degree of (technical, logistical and content-related) complexity of an excavation that can be determined according to a prescribed system and expressed as a figure, on which the choice for suitable parties to carry out the project (organisations that are certified to carry out excavations with a certain complexity) can be based (> Project Outline (brief)).

Composite plan (*allesporenkaart*) Site plan showing all the features excavated on an archaeological site (> secondary field drawing).

Conditioning category (*conditioneringscategorie*) Group of archaeological materials that need to be stored under certain conditions. In practice there are minimum conditions of storage, relatively humid, and relatively dry (>archiving).

Conservation design (*inrichtingsplan*) Plan for the execution of measures aimed at the physical preservation of a (>) site (>implementation of conservation design).

Content-related complexity (*inhoudelijke complexiteit*) Expressed by the number of different specialisms that have to be engaged during and after the (>) excavation (> complexity).

Context (*spoor/grondspoor*) A context or feature is a spatial, clearly finite phenomenon of anthropogenic origin (for example a posthole, refuse pit or wall) or of natural origin (for example a tree throw). A context may contain a number of clearly different units.

Context location (*spoorlocatie*) Determining a location by referring to a (>) context number. This involves finds being collected and registered per stratigraphic unit in a feature, layer or soil horizon.

Context number (*spoornummer*) The context number serves to identify a context (feature, layer, soil horizon, level). Contexts are always assigned context numbers.

Context or group value (*context- of ensemblewaarde*) The added value which is assigned to a site on the basis of the extent to which a landscape and/or archaeological context exists (> valuation).

Context register (*sporenlijst*) Registration form (analogue, digital) which contains information on all the context numbers.

Contour map (*hoogtelijnenkaart*) A map marked with contour lines, created using recorded height measurements.

Contractor (*aannemer, opdrachtnemer*) Person or body that undertakes to execute certain projects and/or deliveries for an agreed upon price and subject to known conditions.

Corrosion (*corrosie*) Processes that harm archaeological metal objects which are caused by elements in the object's vicinity.

Covering (*afdekking*) Relatively young deposit which covers one or more archaeologically relevant layers. This phenomenon may be caused by anthropogenic processes and by natural processes (such as colluvial deposits).

Cross section (*kruisprofiel*) Sections which bisect each other.

Curatorial management (*beheer*) All measures regularly taken (> field inspection, >

monitoring and maintenance) which are essential in order to ensure that the (>) quality of a monument is preserved.

Current use (*huidig gebruik*) Current situation with regard to land use, in so far as such is important for the choice of research strategy (> historic use, > desk-based assessment).

Daily report (*dagrapport*) Daily report on the progress made by the investigation.

Data carrier (*gegevensdrager*) A storage medium on which data can be stored, transported and transferred. Examples are paper, diskettes, ZIP disks and CD-ROMs.

Datum line (*hoofdmeetlijn*) The imaginary line between the fixed main grid points of the (>) site grid.

Degradation (*degradatie*) Loss of quality of the material as a consequence of a change in the physical and chemical properties of the surroundings.

Deposit (*vullingseenheid*) A stratigraphic unit (fill) that can be distinguished within a context on the basis of colour, substance and enclosures.

Depot (*depot van bodemvondsten*) A facility that is suitable for the conditioned storage of archaeological finds, samples and (>) documentary archive. A depot is ideally divided into four zones: a buffer storage area for new deliveries, a general storage area with minimal conditioning, an area with relatively moist storage conditions and an area with relatively dry storage conditions.

Depot manager (*depotbeheerder*) The depot manager is responsible for the depot.

Derived field drawing (*afgeleide veldtekening*) A drawing derived from an (>) overall site plan or field drawing for the purposes of analysis and/or synthesis.

Derived measuring system (*afgeleid meetsysteem*) Derived measuring systems are created by the base lines and auxiliary base lines derived from the (>) datum line.

Designer (*ontwerper*) An archaeologist or civil engineer who is specialised in drawing up and planning a (>) project design.

Desk-based assessment (*bureauonderzoek*) The acquisition of information, using existing sources, on known or expected (>) archaeological values within a (>) study area, comprising the presence or otherwise, the (>) nature and quantity, the dating, (>) integrity and (>) preservation and the relative quality of the values (> SAI, > archaeological field evaluation, > preliminary process).

Developer (*initiatiefnemer; veroorzaker*) The person or body (private or governmental) that takes the initiative with regard to soil-destructive activity whereby archaeological (>) values may be affected, and that has requested a permit. If the requirements set by the (>) competent authority are fulfilled, the developer will become the (>) principal.

Development area (*plangebied*) The area within which the realisation of the planning process may threaten the archaeological evidence (> survey area).

Diachrone specialist Person with an academic qualification who studies a thematic subject that is not related to a specific archaeological period, such as an archaeobotanist, archaeometrist, archaeozoologist, physical geographer, or an archaeologist specialised in a number of periods (> professional register).

Disturbance (*verstoring*) Damage to an area with (>) archaeological values. This phenomenon may occur due to erosion, mineral extraction, levelling, deep ploughing, subsidence as a result of raising, drainage and acidification.

Documentary archive (*documentatie*) All the information to be archived, irrespective of the medium (recordings, drawings, investigation records, determination files, etc.).

Drawing film (*tekenfolie*) A plastic film used for drawing that fulfils the specified conditions.

Drawing identification (*tekeningidentificatie*) Information which has to be present on each (field) drawing.

Drawing register (*tekeningenlijst*) Registration form (analogue, digital) containing the information relating to the drawing identification of all field drawings.

'En bloc' lifting (*en bloc lichten*) Raising an object (or group of objects) together with an undisturbed section of the surrounding soil (> excavation).

Excavate/excavation (*opgraven/opgraving*) The evaluation or investigation of a (>) site by intrusive fieldwork with the aim of collecting and recording information required to answer the research question(s) formulated in the (>) Project Outline and to fulfil the research objectives.

Excavation level (*opgravingsvlak*) Artificial level on which (>) features are observed, interpreted and drawn.

Excavation trench (*opgravingsput*) Separate work unit within an excavation.

Excavation worker (*grondwerker*) The excavation worker (digger) carries out excavation work on the site, sieving work, or is engaged in activities such as the numbering or washing of finds. No training requirements are required.

Executing party (*uitvoerder*) The (>) archaeological contractor or the (>) subcontractor. Within the framework of archaeological heritage management this is the (competent) person or body that carries out archaeological projects as commissioned by third parties.

Feature (*grondspoor*) See: Context.

Field archaeologist (*veldarcheoloog*) Someone with university training and experience in the execution and management of fieldwork and the detection and interpretation of features. Field archaeologists have had the same academic education as (>) project managers, but generally less experience. In practice, a field archaeologist is often in charge of an excavation or part thereof on a daily basis (> professional register).

Field evaluation (*veldinventarisatie*) See: Archaeological field evaluation.

Field inspection (*schouwen*) The examination in the field – visually or using simple appliances – of the condition of a monument during the management period (> inspection, > monitoring).

Field mapping (*veldkartering*) Generic term for the different mapping methods.

Field team (*veldteam*) Group of people involved in the execution of archaeological investigations, whose composition is based on the (>) Project Outline (brief) and the (>) complexity of the excavation.

Field technician (*veldtechnicus*) A person who has at least had vocational or practical training and who is authorised and responsible for the execution of all excavation work including the measuring and drawing of features and the recording and documenting of finds (> professional register).

Field walking (*oppervlaktekartering*) Surveying method whereby find-spots are localised on the basis of (>) finds on the surface. Primarily in the case of arable land, this involves (in connection with visibility of finds) walking along regularly spaced section lines while inspecting the surface for finds.

Final report (*standaardrapport*) Standardised written report on an excavation which contains and interprets information in accordance with the standards guidelines. The basic data have to be presented in such a way (verifiable) that additional scientific research can be carried out. The report must be published and also has to be supplied in digital form, including the complete (>) basic registration.

Find (*vondst*) All kinds of movable objects: movable or semi-movable parts of immovable goods resulting from archaeological fieldwork or from existing collections.

Find number (*vondstnummer*) A unique number that is assigned to a find or sample.

Finds assemblage (*vondstcomplex*) Collection of all finds from a single archaeological site.

Finds label (*vondstenkaartje*) A label included with archaeological finds bearing the administrative data of the find concerned, on the basis of which the finds can be traced to their source and find number.

Finds list (*vondstenlijst*) Register of finds.

Find-spot (*vindplaats*) A spatially demarcated area in which archaeological information is located (> monument, > type of monument, > nature of archaeological value, > archaeological indication).

Fixed NAP height (*Vast NAP-punt*) A reference level in the (>) survey area, derived from the official reference level (NAP, Amsterdam Ordnance Datum), that serves for height determinations.

Flotation (*floteren*) The obtaining of carbonised plant residues from the sediment using the floating capacity of carbonised material.

Future use (*toekomstig gebruik*) Future land use, in so far as such is relevant for the choice of research strategy (> desk-based assessment).

Geophysical survey (*geofysisch onderzoek*) Survey based on geophysical measuring techniques. This allows features to be detected and visualised in the soil (> remote sensing, > archaeological field evaluation).

GIS analysis (*GIS-analyse*) Method (GIS = Geographical Information System) aimed at investigating relationships between the locations of sites and/or the relationship of distribution patterns of sites and geological factors (soil scientific, geological, geomorphological). In this respect (>) location factors can also be used.

GPS measurement (*GPS meting*) Determining position using three or more Global Positioning System satellites.

Grid location (*gridlocatie*) Determining a location by referring to a horizontal grid cell system. This involves objects being collected and registered per cell (square) in a regular grid. In principle, excavation trenches are grid cells, but the dimensions can vary considerably.

Grid points (*grondslagpunten*) Points plotted in the coordinates of the National Trigonometrical Network.

Growth rings (*jaarringen*) The age of wood can be determined by examining growth rings. In the case of, among other sorts, oak, growth rings are compared dendrochronologically in order to acquire absolute dating.

Historical use (*historisch gebruik*) Previous land use, in so far as such is important for the choice of research strategy (> current use, > desk-based assessment).

Historical value (*herinneringswaarde*) The recollection of the past that an archaeological monument invokes (> valuation) (Deeben a.o. 1999).

IKAW Indicative map of archaeological values. A (>) predictive map at the national level produced by the (>) ROB with the expected relative or absolute density of (certain) archaeological phenomena in the soil. It is based on a (>) GIS analysis with a limited number of variables and on expert judgement (> archaeological potential map, > desk-based assessment). (See Deeben a.o. 1997).

Implementation (or realisation) procedure (*uitvoeringsprocedure*) An implementation or realisation procedure describes the relationship between the principal, civil contractor and archaeological actors on the site with regard to archaeological supervision in the context of a watching brief; it is always laid down in writing and possibly a flow chart.

Implementation of conservation design (*inrichting*) The taking of measures in order to repair damage to archaeological monuments (> restoration), to prevent (additional) harm (> stabilisation) or to make the monument more visible and accessible (visualisation and opening up for tourist/recreational purposes).

Inhumation (*inhumatie*) Non-cremated human body deliberately deposited in a grave or burial place.

Inspection (*inspectie*) The inspection – in an official capacity – of the condition of administratively protected monuments by, or on behalf of, the body that has granted the protection order. An inspection differs therefore from a (>) field inspection which is one of the tasks of (>) the curatorial management.

Inspectorate (*inspectie*) The State Archaeological Inspectorate (*RIA*): an independent government body that monitors the execution of the quality system and the operation thereof, including the way in which principals, advisors and authorities fulfil their role.

Integrity (*gaafheid*) The extent of (physical) disruption of the soil, both in the vertical sense (depth) and in the horizontal sense (scope) (> valuation).

Inventory (*inventarisatie*) An evaluation of the nature, quantity and quality of the archaeological record.

Key (*tekeninglegenda*) Explanation of the symbols and colours used in a drawing or map.

KLIC notification (*KLIC melding*) Notification of projects to be carried out submitted to the KLIC. Affiliated interested parties are informed of (archaeological) projects to be carried out and are required to make available information on the (present) location of cables and pipelines.

Known archaeological value(s) (*bekende archeologische waarden*) (>) Archaeological values that have been established, described and mapped (in contrast to indicative or expected archaeological values).

Land registry (*kadaster*) The maintaining, by authority of the state, of a public register of immovable property in which this property is described by means of references to municipality, section and number and in which notes are kept of all real rights by entering or copying the relevant deeds.

Land surveyor (*landmeter*) A land surveyor is a qualified and registered person with HBO [Higher Professional Education] training relevant to the field. The land surveyor is responsible for setting up the (>) site grid.

Landscape genesis (*landschapsgenese*) History of the evolution of the landscape.

Layer (*laag*) A layer is a deposit which continues (horizontally and vertically) over a certain

area and can be defined as a unit for archaeological or geological reasons.

Legal protection (*juridische bescherming*) Form of (>) administrative protection on the basis of a listed monuments bye-law whereby local authorities designate plots as municipal or provincial monuments. The consequence of such a designation is that it is forbidden to damage or destroy the (>) monument or to alter it without a permit.

Level number (*vlaklocatie*) All artificial excavation levels (within a trench) must have a level number.

Levelling (*waterpassen*) Determining height above sea level using a height measuring or levelling instrument (spirit level or theodolite).

Levels book (*hoogtematenlijst*) Registration form on which level and height measurements are recorded.

Local measuring system (*lokaal meetsysteem*) Measuring system (for a more localised area) derived from the (>) site grid.

Location factors (*locatiefactoren*) Factors that determine (to some extent) the place in which activities occurred in the past.

Location section (*deellocatie*) A separated off section of the area to be investigated. This may involve a demarcation as regards area or a demarcation as regards depth. A number of location sections may overlap each other. The arrangement into location sections is based on distribution and/or dating (> excavation).

Logistic complexity (*logistieke complexiteit*) The logistic complexity is determined, above all, by the factors of quantity and time. In practice, these will also function as correction mechanisms with regard to (>) technical and (>) content-related complexity. Logistic complexity is differentiated because it is an indicator for the sort of organisation required for the execution of the fieldwork (extent, project management) and for the corresponding financial/administrative processes (> complexity).

Macro residues (*macroresten*) Plant residues that are visible to the naked eye, primarily seeds and fruits as well as other flower elements and vegetative residues.

Management (*directie*) Party or organisation that provides (daily) supervision for the (>) principal on work to be carried out for third parties and that monitors compliance with the contractual agreement.

Management plan (*beheerplan*) A plan which records all the measures to be taken with regard to (>) management, together with an operating plan.

Maritime archaeology (*maritieme archeologie*) Maritime archaeology covers nautical archaeology (*scheepsarcheologie*), which in the Netherlands may be on land as well as under water, and (>) underwater archaeology (and may thus include non-nautical archaeological find-spots located under water).

Material (*materiaal*) Covers all objects that have been wholly or partially removed from the subsurface for the purpose of further evaluation and/or storage, including samples. This concept covers three categories:

- 1) *General material* (*materiaal algemeen*) Archaeological finds in the classical sense of the word, for example pottery, metal, glass, stone, etc.
- 2) *Vulnerable material* (*materiaal kwetsbaar*) Vulnerable finds are finds of organic material (textiles, leather, wood), but may also consist of metal and glass. Vulnerable means that the stability and the condition of the material is not guaranteed without measures being taken.
- 3) *Complex material* (*materiaal complex*) Complex finds are finds that either have to be extracted in context or whose size means that they cannot be extracted whole but only in parts, for example a complete skeleton or a vessel. *Samples*: Due to their nature, samples always fall into the vulnerable and/or complex material categories.

Material category (*materiaalcategorie*) Finds that are made from the same material (such as ceramics, metal, organic materials, glass, wall paintings).

Material group (*materiaalgroep*) See: Material category.

Materials specialist (*materiaalspecialist*) Specialist who has completed an academic training course and who specialises in a specific (>) material category, mostly linked to a particular archaeological period (> professional register, > period specialist).

(Mechanised) Machine surface shaving (*schaven met de machine*) The removal of a thin layer of soil using an excavator to produce an optimally legible (>) excavation level or (>) section. Since the 1980s a dragline cradle with a knife-edge which can be attached to an excavator has been developed in the Netherlands for the purpose of machine stripping (to replace the increasingly costly manual labour). The knife edge is based on the 'Gillette razor-

principle' of two blades. The method is very cost-effective in *planum* excavations and gives acceptable (on sandy soils) to excellent results (on clay and loess).

Meta data (*metagegevens*) Information on all digital files stored on a data carrier, such as the file name, the file type, etc. Comparable to catalogue data on books.

Monitoring The measuring of the physical condition of a monument with regard to certain, pre-determined aspects using suitable means and throughout an agreed period, with the aim of acquiring insight in the effectiveness of the measures taken. Monitoring is scientific research in the framework of archaeological heritage management. The concept is distinct from (>) inspection or (>) field inspection.

Monument General term, in archaeological heritage management usually a synonym for (>) site or (>) find-spot. The term monument therefore does not imply (>) statutory protection. In the Historic Buildings and Ancient Monuments Act of 1988, the term monument also applies to a (>) find and a building. The law stipulates that monuments must be 'constructed items' at least 50 years old.

NAP height Ordnance level, Dutch datum level.

National registration number (*landelijk registratienummer*) Unique code which must be assigned to each archaeological project undertaken in the country.

National research agenda (*ationale onderzoeksagenda archeologie, NOA*) The National research agenda provides guidance for archaeological research and is the joint product of the entire archaeological community (ROB, university departments, municipal archaeology and contract archaeology). The agenda is important for coordinating research efforts, the valuation and selection of sites, and for writing relevant (>) Project Outlines.

Nature of archaeological value (*aard archeologische waarde*) Characteristic(s) of the site in question (> site, > monument type).

Nautical archaeology on land (*droge scheepsarcheologie*) Investigation of nautical archaeological remains on land. This is work that, from the point of view of its technical execution, corresponds most with terrestrial archaeology. Due to the large scale land reclamation works in the 20th century the Netherlands now have extensive polders where large numbers of shipwrecks can be evaluated and excavated using dry-land techniques rather than using underwater archaeological techniques. This has resulted in a distinction between 'dry' and 'wet' nautical archaeology.

Non-archaeological specialist (*niet-archeologisch specialist*) The non-archaeological specialist has expertise in a non-archaeological field. Specialists have to be called in to assist if such is essential in connection with certain tasks.

Obligatory notification (*informatieplicht*) The obligatory notification of (>) archaeological values and finds to the (>) central information system. In the Netherlands, reporting monuments is a legal obligation for any citizen. In contract archaeology this obligation rests on the contractor and overrides any eventual contractual agreement whereby a client reserves knowledge for his own use (this would in fact be illegal).

Overall site plan (*overzichtstekening*) A map concerning the whole, or a considerable section, of the (>) excavation area. Overall site plans include: the topographical map, the (>) composite plan, the geo(morpho)logical map, the contour map, the (detailed) field evaluation map, the borehole location map, the (>) trenches and site grid map.

Passification (*passiveren*) The stabilisation of active corrosion processes.

Period (*periode*) A certain chronological phase in (pre)history. An era that is distinct from other eras as a result of characteristic elements and/or evolutionary development.

Period specialist (*periodespecialist*) Specialist who has completed an academic training in archaeology and who studies a certain archaeological period (> professional register).

Photographic registration (*beeldregistratie*) The recording, during an excavation, of sections, levels and special finds in some (digital) photographic form.

Physical protection (*fysieke bescherming*) Physical protection is a protective approach that aims to prevent the (continued) deterioration of archaeological (>) sites and – wherever possible – repair any damage caused hitherto. In doing so, measures are taken which have an active/physical bearing on the situation the monument is in.

Plan of Approach (*plan van aanpak*) A plan drawn up by the archaeological contractor for the project to be executed. It is intended to achieve compliance with the requirements as formulated in the (>) Project Outline (brief) and/or the (>) project design and involves the elaboration thereof in proposals for a method of working with which the research objectives

or 'expected results' formulated in the PO and/or project design can be achieved.

Planning protection (*planologische bescherming*) Planning protection is provided by designating the area with (>) archaeological value entirely or in part 'for archaeological use' in a zoning plan and by including a (>) restricted area/buffer zone in the regulations of the zoning plan.

PO See: Project Outline (brief).

PoA See: Plan of Approach.

Point location (3D) (*puntlocatie 3D*) Determining a location by referring to x, y and z coordinates.

Point location (*puntlocatie*) Determining a location by referring to a system of coordinates. The locations of objects are recorded by means of x and y coordinates.

Policy map (*beleidskaart*) Map that is intended to be used as a tool in policy making, such as in spatial planning decisions.

Post-excavation research design (*uitwerkingsplan*) Plan of approach for post-excavation work, drawn up or adjusted on the basis of the (>) post-fieldwork assessment.

Post-fieldwork assessment (*evaluatie*) The project results are assessed by a qualified archaeologist against the original project design, in order to assess the potential for further work. This may result in adjustment of the plans, for example to create an adjusted (>) post-excavation research design and recommendations concerning (>) selection material in the case of (>) archaeological field evaluation and (>) excavation, or an adjusted (>) management plan in the case of (>) physical protection.

Post-fieldwork assessment phase (*evaluatiefase*) The point in time during the processes of (>) physical protection, (>) archaeological field evaluation or (>) excavation, at the end of the fieldwork, at which the post-fieldwork assessment takes place.

Predictive map (*verwachtingskaart*) A map showing expectations with regard to the situation and existence of as yet unknown sites in terms of surfaces and zones (> archaeological potential map, > basic map, > IKAW, > policy map).

Preliminary process (*voortraject*) The process that is intended to provide sufficient data to enable a (>) selection decision to be taken concerning the (>) archaeological value in question. The preliminary process consists of a (>) desk-based assessment, usually supplemented in a second step by an (>) archaeological field evaluation.

Preservation (*conserveren*) The degree to which features, inorganic (pottery, flint, metal, glass, etc.) and organic (bone, seeds, wood, etc.) archaeological finds have been preserved (> valuation).

Preservation value (*behoudenswaardigheid*) The result of the different valuation steps, whereby a decision is made as to whether a site is, in principle, eligible for sustainable preservation (> valuation, > selection recommendations). (Deeben a.o., 1999)

Preserving (*conserveren*) The treatment of an object and/or its environment in such a way that the natural decay of the object is minimised. The point of departure for this treatment is maximum (>) reversibility.

Primary field drawing (*primaire veldtekening*) A drawing of a phenomenon measured and drawn directly in the field. This includes: level drawings (of a level within an excavation unit or trench, whether or not combined with sections or drawings of structures, such as walls), section drawings (of one or more walls of an excavation unit or trench), detail drawings of contexts, sections, finds in situ etc. (> secondary field drawing).

Principal (*opdrachtgever*) The client or commissioning body by whose instructions the project is executed within the framework of archaeological heritage management. As far as the (>) contractor is concerned this is the (>) developer, who is obliged on the basis of the permit to have archaeological projects carried out. As far as the (>) subcontractor is concerned, this is the contractor.

Processing (*verwerken*) All activities (incl. washing and numbering) aimed at preparing finds for analysis.

Professional register (*beroepsregister*) Register of persons and their qualifications for the execution of certain archaeological work.

Project design (*ontwerp*) A plan drawn up by the developer which states the way in which the (>) PO is to be fulfilled. A project design approved by the (>) competent authority can be converted into a written (>) specification (> Plan of Approach).

Project manager (*projectleider*) An archaeologist with university training and experience in the execution and management of fieldwork and the detection and interpretation of features (> professional register).

Project outline (PO), brief (*programma van eisen*) A notification from the (>) competent

authority drawn up by an archaeologist who, on the basis of registration in the (>) professional register, is qualified to do so. The notification is submitted to the (>) developer and possibly the intended (>) contractor, based on the (>) selection decision. The PO states the research questions and objectives of the work to be carried out on the (>) site and formulates the resulting requirements.

Prospection (*prospectie*) Systematic detection of (>) archaeological values by means of non-destructive methods and techniques (> archaeological field evaluation).

Protect (*beschermen*) Protection can take the form of (>) administrative protection and (>) physical protection.

Protection measure (*beschermingsmaatregel*) Measure for the (>) physical or (>) administrative protection of a (>) monument.

Quality (*kwaliteit*) The entirety of properties and characteristics of a product or service that is important for compliance with the set requirements and needs.

Quality assurance (*kwaliteitsborging*) The guaranteeing of quality by means of setting up, implementing and maintaining a quality system including demonstrating to third parties that the quality supplied fulfils the set conditions.

Quality management (*kwaliteitszorg*) The aspect of total management that is focused on the acquisition or maintenance of the highest possible quality.

Quality system (*kwaliteitssysteem*) System of agreements recording the responsibilities, procedures and provisions for the execution of quality management. Features of a quality system are job descriptions, procedures, inspection plans, instructions and standards guidelines.

Rarity (*zeldzaamheid*) The extent to which a certain type of monument is (or has become) rare for a period or in an area (> valuation).

Reconstruct (*reconstrueren*) Changing the physical condition of a (>) monument into a known or presumed former state which differs from (>) restoration due to the introduction of new material.

Registration (*registreren*) The digital recording at a central level of data that is essential for archaeological heritage management (> central information system).

Remote sensing Generic term for techniques with which (>) archaeological values can be detected at a distance (on or above ground level), without interfering with the soil, such as air photography and various geophysical techniques (> prospection).

Representativity (*representativiteit*) The degree to which a certain type of site is typical of a period or an area (> valuation).

Rescue excavation (*noodopgraving*) Emergency (>) excavation caused by the execution of work with the aim of documenting, as well as possible, any archaeological information present without a prior (>) Project Outline (brief) and (>) project design. Officially no longer applicable but still in use.

Research potential (*informatiewaarde*) The relevance of a monument as a source of information and knowledge of the past. The research potential is the extent to which (excavating) the monument can contribute to new knowledge on the past (> valuation).

Restoration (*restaureren*) Restoring the physical condition of a (>) monument to a known, former state by means of removing additions and/or returning original components without the introduction of new material (> reconstruction).

Restricted area/buffer zone (*beperkingsgebied/bufferzone*) An area around a (>) monument where restrictions apply which are beneficial to the preservation of the site.

Reversibility (*reversibiliteit*) The extent to which an operation carried out on an object can be reversed. The aim is always maximum reversibility.

Revision report (*revisierapport*) The recording in diagram and/or written form of the work carried out, in the instances that this work deviates from the provisions and dimensions indicated in the (>) project design or (>) plan of approach.

ROB (*Rijksdienst voor het Oudheidkundig Bodemonderzoek*) Dutch National Service for Archaeology.

Safety plan (*veiligheidsplan*) The safety plan describes how the safety regulations are to be complied with.

SAI (*Standaard Archeologische Inventarisatie*) Standard Archaeological Assessment; former name for (>) desk-based assessment.

Sample (*monster*) Part of an object or sediment that is secured for further evaluation and/or storage.

Sample list (*monsterlijst*) A register of samples, possibly separate from the (>) finds list. This list is otherwise identical to the finds list.

Scanning Method of recording whereby the quantity and quality of samples are determined in advance of the post-excavation analysis.

Secondary field drawing (*secundaire veldtekening*) A drawing that is derived from an (>) overall site plan or (>) primary field drawing for analysis or synthesis purposes. This covers, among other things, the (>) composite plan, the period map, the compilation, the reconstruction drawing and the digitized field drawing.

Section (*profiel*) Vertical wall in an (>) excavation trench, (>) test pit, or (>) trial trench. Stratigraphic layers are visible in the section which are important for the relative dating.

Sectioning (*couperen*) Making one or more vertical sections through a feature, layer or soil horizon in order to determine the nature, depth, deposits, form and relations with other phenomena (> excavation).

Selection (*selectie*) Prioritization and making choices by the (>) competent authority on the basis of (>) selection recommendations.

Selection decision (*selectiebesluit*) An informed decision by the (>) competent authority as to whether or not a particular (>) archaeological value should be preserved, based on (>) selection recommendations.

Selection material (*selectie materiaal*) Selection of (>) analysed material based on a (>) valuation. The selection should be clarified in writing and substantiated by recommendations from specialists. The focus may be on selecting the part that has to be retained and the finds to be preserved.

Selection recommendations (*selectieadvies*) Written recommendations to the (>) competent authority. These cover the (>) preservation value of one or more (>) sites on the basis of the (>) valuation formulated and possible additional criteria if these are stated in the (>) archaeological policy of the authority involved (> selection, > selection decision).

Selection report (*selectierapport*) Report of the choices relating to (>) selection material and (>) preservation.

Sieve mesh width (*zeefmaaswijdte*) The sieve mesh width used for the sieving and flotation of soil samples depends on the desired result.

Sieving (*zeven*) The rinsing of soil samples through (a series of) sieves in order to obtain archaeological or biological material.

Site A place at which human activities took place in the past (> type of monument).

Site grid (*hoofdmeetsysteem*) The site grid comprises the grid points inside - or in the immediate vicinity of - the excavation measured in coordinates of the National Trigonometrical Network.

Site grid map (*meetpuntenkaart*) A map showing heights or grid points with their values.

Site identification code (*site identificatie code*) A unique combination of numbers and letters used to refer to an excavation.

Site manager (*terreinbeheerder*) The site manager oversees and manages the monuments in a certain area and ensures the area is accessible for management purposes.

Soil intervention (*bodemingreep*) All work or activities in the ground that (could) have an effect on the continued existence of (>) archaeological values in situ.

Soil survey (*fysisch-geografisch veldonderzoek*) Describing and mapping out landscape genetic information on and around an archaeological site.

Spade surface shaving (*schaven met de schop*) The removal of a thin layer of soil using a spade to produce an optimally legible (>) excavation level or (>) section.

Specialist report (*deelrapport*) Report on an (>) archaeological excavation, whereby the excavated and collected data on a particular subject, such as features observed or a category of finds, are presented and interpreted. The specialist report may be published as an independent publication or a chapter of the (>) final report.

Specifications (*bestek*) Detailed description (including necessary maps or illustrations) and record of instructions for a project to be carried out (including a written account of any modifications). The specifications are the basis of the contractual agreement between the principal and contractor/commissionee.

Specified predictive model (*gespecificeerd verwachtingsmodel*) Predictive model based on an assumption of the existence of (the nature, quantity and quality of) (>) archaeological values in the survey area, whereby the degree of reliability has to be indicated (> archaeological expectation, > predictive map).

Stabilisation (*consolideren*) Treatment of a (>) find in such a way that – up to the moment of preserving – its quality no longer deteriorates, or the taking of (at most reversible) measures

on a (>) site so that the degradation thereof is slowed down as much as possible with the focus being on the physical preservation of the (>) research potential.

Standards guideline (or guideline for standards) (*specificatie*) A description of the properties of a product and of requirements made thereof, or a description of the steps in a process in a prescribed sequence and of the required resources.

Statutory protection (*wettelijke bescherming*) The designation of archaeological monuments on the basis of the Historic Buildings and Ancient Monuments Act of 1988.

Stratigraphy (*stratigrafie*) Sequence of layers in the soil.

Structure (*structuur*) A structure consists of a number of (>) features connected with each other in terms of space, time and function.

Subcontractor (*onderaannemer*) The party that carries out an archaeological project as commissioned by a (>) contractor who has a contract with the (>) principal.

Surface level (*niveau*) A surface level refers to a recognisable (old) surface such as a ground level or an erosion level.

Survey area (*onderzoeksg gebied*) The geographical area in which the survey takes place (> development area).

Synthesis (*synthese*) Analysis and presentation of the research carried out in an integrated way (the integration of the subreports). This is not the same as the wider meaning of scientific synthesis and interpretation, which falls outside the scope of the quality system.

Technical complexity (*technische complexiteit*) The complexity of an excavation in a technical sense is determined by three factors: stratigraphy, the technical resources used and the required knowledge thereof, and the density and variation of finds (> complexity).

Temporary storage (*tijdelijke opslag*) The storage for a limited period, lasting no longer than 2 years, of material prior to (>) archiving/storage in accordance with the prescribed guidelines (> transit depot).

Tender (*aanbesteding*) Putting out as tender. Giving (>) contractors the opportunity to submit a tender for a precisely described project.

Test pit (*proefput*) See: Trial excavation.

Transfer protocol (*protocol van overdracht*) Document which describes whether, and if not to what extent, the parties to the transfer have complied with the conditions imposed on the transfer of archaeological finds and accompanying (>) documentary archive. If all conditions are complied with, a reference may be made to this effect. Deviations from the standards imposed are laid down in the protocol.

Transit depot (*transitodepot*) A facility for the temporary storage of finds (packed in boxes or on pallets) for the further processing of the material (> temporary storage).

Trenches and site grid map (*putten- en meetlijnenkaart*) Overall site plan showing all land surveying data and the location and borders of excavation trenches.

Trial excavation (*proefonderzoek*) Limited excavation on one or more locations within a site by means of trial trenches or test pits or in the form of an array of one or more machine-dug trenches or pits in order to collect further information on the nature, extent, depth, etc. of the features, whereby these features are left intact as much as possible. Trial trenching or test pits may be necessary within the framework of an (>) archaeological field evaluation, but are mainly used as preparation for (>) excavation.

Trial trench (*proefsleuf*) See: Trial excavation.

Trowelling (*troffelen*) The removal of soil using a trowel, with the objective of locating and uncovering archaeological remains (> spade surface shaving).

Turf line (*vegetatiehorizon*) Layer of vegetation in clay, recognisable due to its relatively dark colour, originating from a stagnation phase during sedimentation. The turf line represents a former surface level.

Type of monument (*type monument*) (>) Site of a certain kind such as a settlement, burial place, etc. (> monument).

Typology (*typologie*) Systematic chronological and/or morphological classification of artefacts in characteristic forms.

Underwater archaeology (*onderwaterarcheologie*) The part of (>) maritime archaeology that, with regard to execution, differs totally from terrestrial archaeology and nautical archaeology on land. From a research point of view (such as effectuation) it is similar to nautical archaeology on land. With regard to the non-nautical archaeological aspects of underwater archaeology, the approach is primarily technical; data analysis corresponds with the approach used in terrestrial archaeology and therefore does not have to be carried out

by a nautical archaeologist. The standards guidelines do not therefore refer separately to the latter.

Valuation (*waardering*) The term refers to three types of valuation: 1. significance evaluation in archaeological heritage management, 2. assessing the quality of finds for selection purposes, and 3. determining the quality of samples.

1. Significance evaluation in archaeological heritage management is done on the basis of:
 - perception value (using the criteria of > aesthetic and > historical value);
 - physical quality (using the criteria of > integrity and > preservation); these indicate the extent to which archaeological remains are still intact and present in their original position;
 - intrinsic quality (using the criteria of > rarity, > research potential, > context or group value and > representativity).

The valuation of a site or a group of sites results in a judgement concerning its (>) preservation value and forms the basis for the (>) selection recommendations. See Deeben a.o. 1999.

2. After the finds have been processed and analysed, they can be valued in order to allow a selection to be made of material that can be archived (> selection material).
3. Samples are valued by (>) scanning them before analysis, in order to gain an impression of the diversity, quantity and preservation of organic residues

Valuing (*waarderen*) See: Valuation.

Watching brief (*archeologische begeleiding*) The registration of (>) finds and (>) feature data pertaining to a (>) site, without trenches or pits having been dug. A watching brief is implemented during (>) soil interventions which take place for non-archaeological reasons – on land, in the intertidal zone or under water – and where there are substantiated reasons for assuming that (>) archaeological values might be present (> selection decision).

Weekly report (*weekrapport*) Weekly report on the progress of the fieldwork and the scientific ideas on the phenomena excavated. This report also includes details on how the investigations are to be continued in the coming week, the arguments on the basis of which choices have been made concerning changes to the original plans or schedule.

Work plan (*draaiboek*) Technically detailed written definition of work in which the contractor indicates how the work is to be organised and carried out (who, what, where, when, etc.), generally consisting of schedules, safety plans etc. The work plan is a further and 'internal' elaboration of the (>) Plan of Approach.

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Appendix V. Dutch-English list of terms

<i>aanbesteding</i>	tender
<i>aannemer, opdrachtnemer</i>	contractor
<i>aanvullend archeologisch onderzoek</i>	supplementary archaeological investigation
<i>aanvullende archeologische inventarisatie (AAI)</i>	supplementary archaeological assessment
<i>aard archeologische waarde</i>	nature of archaeological value
<i>administratieve bescherming</i>	administrative protection
<i>afdekking</i>	covering
<i>afgeleid meetsysteem</i>	derived measuring system
<i>afgeleide veldtekening</i>	derived field drawing
<i>allesporenkaart</i>	composite plan
<i>analyserapport</i>	analysis report
<i>anthropogene sporen</i>	anthropogenic contexts
<i>archeobotanie</i>	archaeobotany
<i>Archis</i>	archaeological information system
<i>archeologisch basisregister</i>	archaeological basic register
<i>archeologisch beleid</i>	archaeological policy
<i>archeologisch specialist</i>	archaeological specialist
<i>archeologische begeleiding</i>	watching brief
<i>archeologische beleidskaart</i>	archaeological policy map
<i>archeologische indicatie</i>	archaeological indication
<i>archeologische monumentenkaart</i>	archaeological monuments map
<i>archeologische verwachting</i>	archaeological expectation
<i>archeologische waarde</i>	archaeological value
<i>archeoloog</i>	archaeologist
<i>archeoregio</i>	archaeo-region
<i>archeozoologie</i>	archaeozoology
<i>basiskaart</i>	basic map
<i>basisrapportage</i>	basic report
<i>basisregistratie</i>	basic registration
<i>beeldregistratie</i>	photographic registration
<i>beheer</i>	curatorial management
<i>beheerplan</i>	management plan
<i>behoudenswaardigheid</i>	preservation value
<i>bekende archeologische waarden</i>	known archaeological value(s)
<i>beleidskaart</i>	policy map
<i>beperkingsgebied/bufferzone</i>	restricted area/buffer zone
<i>beroepsregister</i>	professional register
<i>beschermen</i>	protect
<i>beschermingsmaatregel</i>	protection measure
<i>bestek</i>	specifications
<i>bevoegd gezag</i>	competent authority
<i>bodemingreep</i>	soil intervention
<i>boormonster</i>	borehole sample
<i>booronderzoek</i>	borehole survey
<i>boorstaat/profielstaat</i>	borehole log/section log
<i>botanische macroresten</i>	botanical macro residues
<i>bureauonderzoek</i>	desk-based assessment
<i>centraal archeologisch archief</i>	central archaeological archive
<i>centraal informatiesysteem</i>	central information system
<i>centraal monumentenarchief</i>	central monuments archive
<i>certificatie of certificaat</i>	certification or certificate

<i>certificatiesysteem</i>	certification system
<i>certificering of certificeren</i>	certifying or certification
<i>complexiteit</i>	complexity
<i>conditioneringscategorie</i>	conditioning category
<i>conserveren</i>	preserving
<i>conservering</i>	preservation
<i>consolideren</i>	stabilisation
<i>context- of ensemblewaarde</i>	context or group value
<i>corrosie</i>	corrosion
<i>couperen</i>	sectioning
<i>dagrapport</i>	daily report
<i>deellocatie</i>	location section
<i>deelterrapport</i>	specialist report
<i>degradatie</i>	degradation
<i>deponeren</i>	archiving
<i>depot</i>	depot
<i>depotbeheerder</i>	depot manager
<i>diachrone specialist</i>	diachrone specialist
<i>directie</i>	management
<i>documentatie</i>	documentary archive
<i>draaiboek</i>	work plan
<i>droge scheepsarcheologie</i>	nautical archaeology on land
<i>en bloc lichten</i>	en bloc lifting
<i>evaluatie</i>	post-fieldwork assessment
<i>evaluatiefase</i>	post-fieldwork assessment phase
<i>floteren</i>	flotation
<i>fysieke bescherming</i>	physical protection
<i>fysisch-geografisch veldonderzoek</i>	soil survey
<i>gaafheid</i>	integrity
<i>geanalyseerd materiaal</i>	analysed material
<i>gegevensdrager</i>	data carrier
<i>geofysisch onderzoek</i>	geophysical survey
<i>gespecificeerd verwachtingsmodel</i>	specified predictive model
<i>gis-analyse</i>	gis analysis
<i>gps meting</i>	gps measurement
<i>gridlocatie</i>	grid location
<i>grondslagpunten</i>	grid points
<i>grondspoor</i>	feature
<i>grondwerker</i>	excavation worker
<i>herinneringswaarde</i>	historical value
<i>historisch gebruik</i>	historical use
<i>hoofdmeetlijn</i>	datum line
<i>hoofdmeetsysteem</i>	site grid
<i>hoogtelijnenkaart</i>	contour map
<i>hoogtematenlijst</i>	levels book
<i>huidig gebruik</i>	current use
<i>IKAW</i>	indicative map of archaeological values
<i>informatieplicht</i>	obligatory notification
<i>informatiewaarde</i>	research potential

<i>inhoudelijke complexiteit</i>	content-related complexity
<i>inhumatie</i>	inhumation
<i>initiatiefnemer; veroorzaker</i>	developer
<i>inrichting</i>	implementation of conservation design
<i>inrichtingsplan</i>	conservation design
<i>inspectie</i>	inspection
<i>inspectie</i>	inspectorate
<i>inventarisatie</i>	inventory
<i>inventariserend veldonderzoek</i>	archaeological field evaluation
<i>jaarringen</i>	growth rings
<i>juridische bescherming</i>	legal protection
<i>kadaster</i>	land registry
<i>klic melding</i>	klic notification
<i>kruisprofiel</i>	cross section (sections which bisect each other)
<i>kwaliteit</i>	quality
<i>kwaliteitsborging</i>	quality assurance
<i>kwaliteitssysteem</i>	quality system
<i>kwaliteitszorg</i>	quality management
<i>laag</i>	layer
<i>landelijk registratienummer</i>	national registration number
<i>landmeter</i>	land surveyor
<i>landschapsgenese</i>	landscape genesis
<i>locatiefactoren</i>	location factors
<i>logistieke complexiteit</i>	logistic complexity
<i>lokaal meetsysteem</i>	local measuring system
<i>macroresten</i>	macro residues
<i>maritieme archeologie</i>	maritime archaeology
<i>materiaal</i>	material
<i>materiaal algemeen</i>	general material
<i>materiaal complex</i>	complex material
<i>materiaal kwetsbaar</i>	vulnerable material
<i>materiaal categorie</i>	material category
<i>materiaal groep</i>	material group
<i>materiaal specialist</i>	materials specialist
<i>meetbuis</i>	grid marker
<i>meetlijn</i>	baseline
<i>meetpuntenkaart</i>	site grid map
<i>metagegevens</i>	meta data
<i>monitoring</i>	monitoring
<i>monster</i>	sample
<i>monsterlijst</i>	sample list
<i>NAP</i>	Amsterdam Ordnance Datum
<i>niet-archeologisch specialist</i>	non-archaeological specialist
<i>niveau</i>	surface level
<i>noodopgraving</i>	rescue excavation
<i>onderaannemer</i>	subcontractor
<i>onderwaterarcheologie</i>	underwater archaeology
<i>onderzoeksgebied</i>	survey area
<i>ontwerp</i>	project design

<i>ontwerper</i>	designer
<i>opdrachtgever</i>	principal
<i>opgraven/opgraving</i>	excavate/excavation
<i>opgravingsput</i>	excavation trench
<i>opgravingsvlak</i>	excavation level
<i>oppervlaktekartering</i>	fieldwalking
<i>overzichtstekening</i>	overall site plan
<i>passiveren</i>	passification
<i>periode</i>	period
<i>periodespecialist</i>	period specialist
<i>plan van aanpak</i>	plan of approach
<i>plangebied</i>	development area
<i>planologische bescherming</i>	planning protection
<i>potentiekaart</i>	archaeological potential map
<i>primaire veldtekening</i>	primary field drawing
<i>proefonderzoek</i>	trial excavation
<i>proefput</i>	test pit
<i>proefsleuf</i>	trial trench
<i>profiel</i>	section
<i>programma van eisen</i>	project outline (PO), brief
<i>projectleider</i>	project manager
<i>prospectie</i>	prospection
<i>protocol van overdracht</i>	transfer protocol
<i>puntlocatie</i>	point location
<i>puntlocatie 3D</i>	point location (3D)
<i>putten- en meetlijnenkaart</i>	trenches and site grid map
<i>reconstrueren</i>	reconstruct
<i>registreren</i>	registration
<i>remote sensing</i>	remote sensing
<i>representativiteit</i>	representativity
<i>restaureren</i>	restoration
<i>reversibiliteit</i>	reversibility
<i>revisierapport</i>	revision report
<i>scanning</i>	scanning
<i>schaven met de machine</i>	(mechanised) machine surface shaving
<i>schaven, schaven met de schop</i>	spade surface shaving
<i>schoonheid</i>	aesthetic value
<i>schouwen</i>	field inspection
<i>secundaire veldtekening</i>	secondary field drawing
<i>selectie</i>	selection
<i>selectie materiaal</i>	selection material
<i>selectieadvies</i>	selection recommendations
<i>selectiebesluit</i>	selection decision
<i>selectierapport</i>	selection report
<i>site</i>	site
<i>site identificatie code</i>	site identification code
<i>specificatie</i>	standards guideline (guideline for standards)
<i>spoor/grondspoor</i>	context
<i>spoorlocatie</i>	context location
<i>spoornummer</i>	context number
<i>sporenlijst</i>	context register
<i>standaard archeologische inventarisatie (SAI)</i>	standard archaeological assessment

<i>standaardrapport</i>	final report
<i>stratigrafie</i>	stratigraphy
<i>structuur</i>	structure
<i>synthese</i>	synthesis
<i>technische complexiteit</i>	technical complexity
<i>tekenfolie</i>	drawing film
<i>tekeningenlijst</i>	drawing register
<i>tekeningidentificatie</i>	drawing identification
<i>tekeninglegenda</i>	key
<i>terreinbeheerder</i>	site manager
<i>tijdelijke opslag</i>	temporary storage
<i>toekomstig gebruik</i>	future use
<i>transitodepot</i>	transit depot
<i>troffelen</i>	trowelling
<i>type monument</i>	type of monument
<i>typologie</i>	typology
<i>uitvoerder</i>	executing party (contractor)
<i>uitvoeringsprocedure</i>	implementation (or realisation) procedure
<i>uitwerkingsplan</i>	post-excavation research design
<i>vast NAP-punt</i>	fixed NAP height
<i>vegetatiehorizon</i>	turf line
<i>veiligheidsplan</i>	safety plan
<i>veldarcheoloog</i>	field archaeologist
<i>veldinventarisatie</i>	field evaluation
<i>veldkartering</i>	field mapping
<i>veldteam</i>	field team
<i>veldtechnicus</i>	field technician
<i>veroorzaker/initiatiefnemer</i>	developer
<i>verstoring</i>	disturbance
<i>verwachtingskaart</i>	predictive map
<i>verwerken</i>	processing
<i>verzamelen</i>	collecting
<i>vindplaats</i>	find-spot
<i>vlaklocatie</i>	level number
<i>vondst</i>	find
<i>vondstenkaartje</i>	finds label
<i>vondstenlijst</i>	finds list, register of finds
<i>vondstnummer</i>	find number
<i>vondstcomplex</i>	finds assemblage
<i>voortraject</i>	preliminary process
<i>vullingseenheid</i>	deposit
<i>waarderen</i>	valuing
<i>waardering</i>	valuation
<i>waterpassen</i>	levelling
<i>wekrapport</i>	weekly report
<i>wettelijke bescherming</i>	statutory protection
<i>zeefmaaswijdte</i>	sieve mesh width
<i>zeldzaamheid</i>	rarity
<i>zeven</i>	sieving

Appendix VI. Parties involved in writing the Dutch Archaeology Quality Standard

Name	Organisation
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Ms A. van Duinen	Provincial government of North Holland
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