Quality Management in Archaeology

edited by

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CHAPTER 5

Quality assurance in archaeology, the Dutch perspective

Monique van den Dries and Willem Willems

INTRODUCTION

In the Netherlands quality assurance in archaeology is a rather new phenomenon. Until the late 1990s, a traditional system was maintained whereby the quality and relevance of archaeological investigation was thought to be sufficiently guaranteed by a very restrictive licensing system. Even under the revised Monuments Act of 1988, only universities, the State Archaeological Service (*Rijksdienst voor het Oudheidkundig bodemonderzoek*, ROB) and municipalities could obtain a licence to carry out excavations, apparently under the assumption that this restrictive access to excavation, in combination with some additional conditions, would guarantee the quality of the work.

A more explicit system of quality assurance was introduced in the late 1990s, after a change in government had led to a change of policy and a new Minister for Culture, trained as an economist, had decided that commercial archaeology would be the best way forward (see Willems 2005). The Dutch parliament passed a ratification act of the Malta Convention in 1998. This paved the path for commercial archaeology because the decision implied that the principles of the convention were formally recognised and were included in heritage policy.

In this paper, we will discuss the approach that was chosen in the Netherlands, the quality assurance system and related policies, and the effects of this cocktail of measurements that have been experienced so far.

THE COMMERCIAL SITUATION

Despite the fact that the ratification law was passed in 1998, the Malta Convention was only implemented in the legislation by the end of 2006. Since 1992, when the Convention was signed in Valletta, successive Ministers of Culture have been working on a proposal for a new Monuments Act. Nonetheless, for many years the major principles of the Malta Convention have already been put into practice as the ratification law created not so much legal, but *de facto* obligations for all levels of government. Therefore the soil disturbing activities of the national, regional or local governments already generate a lot of archaeological research. In addition, authorities have increasingly made 'preventive' archaeological research a condition

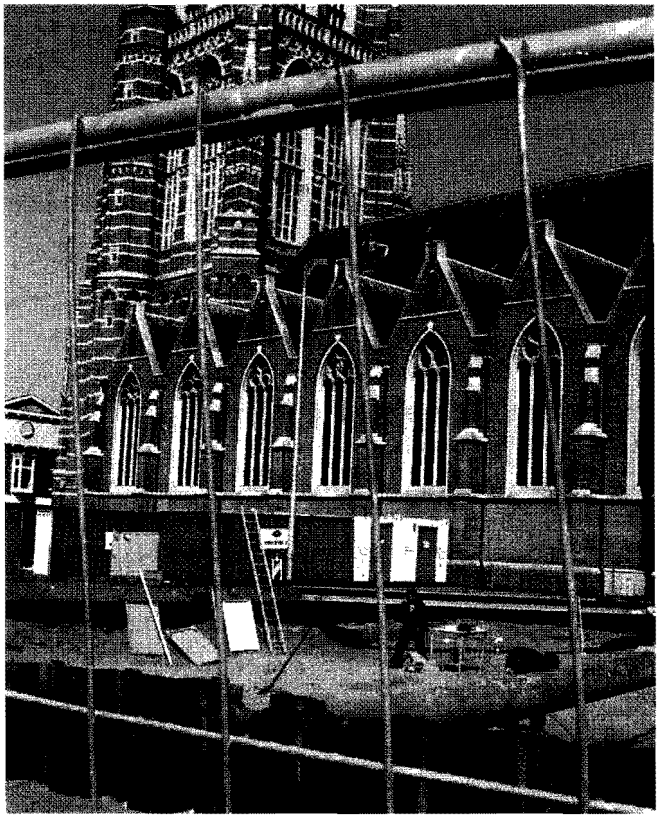

Figure 5.1 The Dutch archaeological discipline consists of one state service, four universities, nearly thirty municipality archaeologists and around twenty companies to carry out ca. 2000 (in 2006) mostly developer-funded archaeological projects (Photo Erfgoedinspectie).

for permits to private developers and sometimes even for citizens. As a result, substantial funding has been made available for archaeology. Estimates of the total volume of business amount to around 66 million Euro for 2004.

As these policy changes generated much more work, already in 2001 the free market system was introduced under a temporary decree to circumvent the legal restrictions of the current Monuments Act and companies were allowed to carry out archaeological fieldwork (figure 5.1) on the condition that they get permission from the State Archaeological Service (called the *Rijksdienst voor Archeologie, Cultuurlandschap en Monumenten*, RACM, as from September 2006). Legally, they cannot yet have a licence so they work by permission of the ROB and formally under the licence of the state service itself.

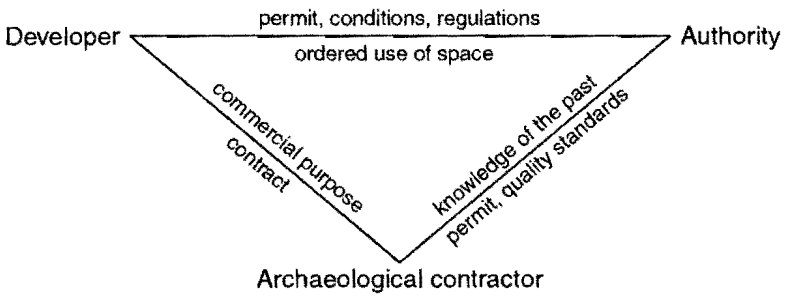

Figure 5.2 The organisation of the relation between the parties that are involved in the archaeological management, i.e. the authorities, the developer and the archaeological contractor and their (mutual) interests and relations.

By the end of 2005 there were nearly eighty private companies active on the archaeology market. Of these, 18 have permission to perform all kinds of excavation activities (including bore hole surveys) and 2 are allowed to perform bore hole surveys only. The others are doing various kinds of activities for which no licence is needed, such as surveys by field walking or remote sensing, consultancy, specialist services, presentations etc. After an explosive growth of new contractors between 2001 and 2004, the group of excavating companies has stabilised, but the group of non-licensed companies kept on growing. Especially consultancy is a growing business. Some of the excavating companies are quite large, with more than 50 and even up to 100 employees, but most of them are small with less than 10 staff members. In total, the archaeological community is estimated at around 1000 full time equivalents (fte) and the amount of registered field projects was hitherto growing each year, amounting to nearly 1800 in 2005.

THE QUALITY ASSURANCE APPROACH

Once the decision was taken that no longer only municipal archaeologists, universities and the state service were allowed to carry out excavations, the need for a quality assurance system became apparent that would clarify the responsibilities of the various parties (figure 5.2) that are involved in the archaeological heritage management process.

In the Dutch view, a just treatment of the archaeological resource and the acquisition of knowledge about the past is a government's responsibility and cannot be guaranteed by the mechanisms and instruments on the left part of the triangle, where both the developer and the archaeological contractor have important commercial concerns. There is too big a risk that commercial and financial interests

The ingredients of the Dutch quality assurance cocktail:

organised by legal means	**organised by self regulation**
– monuments act	– quality standard
– licence	– certificate
– inspectorate	– professional register
– central information system	– research agendas

Figure 5.3 In The Netherlands archaeological quality management is organised through a combination of legislative and private instruments.

will prevail. Therefore, the ministry set up a system in which the right side of the triangle remains responsible for the archaeological heritage. This means that the local, regional or national governments – dependent upon who is the responsible authority for the development concerned – decide on *what* must be investigated. They are responsible for the project outline on the basis of which a developer can put the project out for tender to archaeological contractors.

This construction does, however, not guarantee that the excavations, documentation and reports of the contractors meet the academic standards that are expected. Therefore, in addition to the construction of the responsibilities, a cocktail of quality assurance measurements was set up to make this construction work (figure 5.3).

This assemblage of instruments consists of a part that is organised through legislation and supervision, *and* a privately organised part which depends on self regulation. The idea was that the *strength* of the system would be found in the *coherence* of the system, with strong horizontal interactions between the separate elements on both sides and vertical interactions between the elements at each side.

The publicly organised part consists of a law, the just revised Monuments Act of 1988 (see for an English translation of the 1988 law the appendix to Willems 1997). In short, it states that nobody is allowed to excavate without a licence. Excavation is defined as 'moving the soil with the purpose to discover archaeological remains', and since November 2005 this also includes borehole surveys. This law has been revised in order to allow for commercial parties to carry out archaeological field projects. And according to this new law a permit is only given to those contractors that can demonstrate that they are capable of working according to the quality standard. So *here* there is a direct connection between the measurements at the right and the left side of figure 5.3. The revised law was submitted to Parliament in late 2005, and was accepted by Parliament in December, 2006. Details of what is discussed below may yet change as a result of the way in which decrees under the new law shall be phrased.

Another means to keep tight lines between the publicly and the privately organised

instruments was established through an independent supervising organisation. At the time that the quality system was being designed, from 1999 onwards, it was decided that if a large part of the quality assurance system is delegated to the private sector, there should also be a mechanism to verify whether in practice the work is being done properly. For this purpose, a State Inspectorate for Archaeology was created in 2001 (which merged in with three other small cultural heritage inspectorates into the *Erfgoedinspectie* or State Inspectorate for Cultural Heritage at the beginning of 2006).

The main tasks of the inspectorate are to monitor compliance with the Monuments Act, to investigate the quality of the archaeological fieldwork and the resulting products, to monitor the functioning of the archaeological system as a whole and to inform the Minister of Culture on these aspects and related issues.

Last but not least, the public part includes a central information system maintained by the state service and developed out of the former sites and monuments register. It includes information on all sites and finds in the Netherlands and there is a legal obligation to report all information resulting from fieldwork and other activities (the Netherlands belongs to those countries which allow commercial archaeology but at the same time require all reports to be submitted. This precludes the possibility for developers or other patrons of archaeological companies to withhold information as is possible in some other countries, notably those with Anglo-Saxon legal systems).

As is usual in most of continental Europe, there is also a legal obligation to report chance finds.

The privately organised part of the system covers three levels:

- the level of the processes and procedures that concern the work in the field. For this a quality standard was developed that says *how* the archaeological processes should be carried out;
- the second level is that of the people and organisations. For this a professional register and a certification system were developed that say *who* are allowed to carry out particular activities, *i.e.* which companies and which employees meet the necessary demands;
- and finally for the level of the product, a research agenda was set up that will help the authorities to decide on *what* should be done, especially on the choices that they make regarding the research topics.

THE QUALITY STANDARD

At the privately organised part of the quality assurance system – on the right side of figure 5.3 – the key element is the quality standard. This was initiated by the Ministry of Culture, but it was developed by the archaeological community because it is believed that in order to successfully develop a standard, all relevant expertise must be involved and at the same time the commitment of the entire discipline is

needed in order to successfully implement it in daily practice. Therefore a national preparatory committee was established in 1999, in which all parts of the discipline were represented: the universities, private companies, archaeological services of the local, regional and the national governments, the professional organisation Dutch Association of Archaeologists (NVvA) and also developers. Furthermore, an intensive process of consultation had to assure that the archaeological community was involved. Altogether, it took two years to develop and the Dutch Archaeology Quality Standard is now successfully operational since 2001 (in 2004 an English version of the standard was published by Willems and Brandt, it is also available as a pdf-file at www.erfgoedinspectie.nl/archeologie).

The standard covers six main processes of what is called the archaeological heritage management cycle; field evaluations, physical protection, excavations, watching briefs, depositing and registration. The process of selection was not included because that is essentially a decision that is taken by or on behalf of a government; it is not a commercial activity but a political decision on what is to happen, based on the outcome of the evaluation. There is no standard for interpretation and synthesis either. Obviously, standards have been developed for the initial analysis and interpretation in a report, which has to be produced within two years after the fieldwork has finished, but it was felt that further interpretation and synthetic work is scientific research that should not be regulated in the same way.

As it was acknowledged by the preparatory committee that much archaeological work is quite difficult to standardise and should not be made inflexible by too many prescriptions, the standard does not define all activities in detail but merely describes the requirements for each step in the process and for the documents that are involved, such as field drawings, distribution maps etc. Furthermore, the standard prescribes what kind of actor is allowed to carry out a particular activity (figure 5.4).

Another fundamental aspect of the quality control through the standard is that all critical steps must be checked, registered, and if necessary improved, by an actor with a particular status.

THE PROFESSIONAL REGISTER

As the standard puts a lot of responsibility in the hands of the individual actors, and distinguishes conditional operations which are reserved for archaeologists with a particular expertise, this also introduced the need to define the required capabilities of the actors and, subsequently, an assessment of those archaeologists that want to carry out these conditional operations. Therefore, also in 1999, the Dutch Association of Archaeologists (*Nederlandse Vereniging van Archeologen*, NVvA) was asked and facilitated by the Ministry of Culture to develop a national 'register of archaeologists' that would contain the names of the archaeologists which are allowed to take care of the reserved activities.

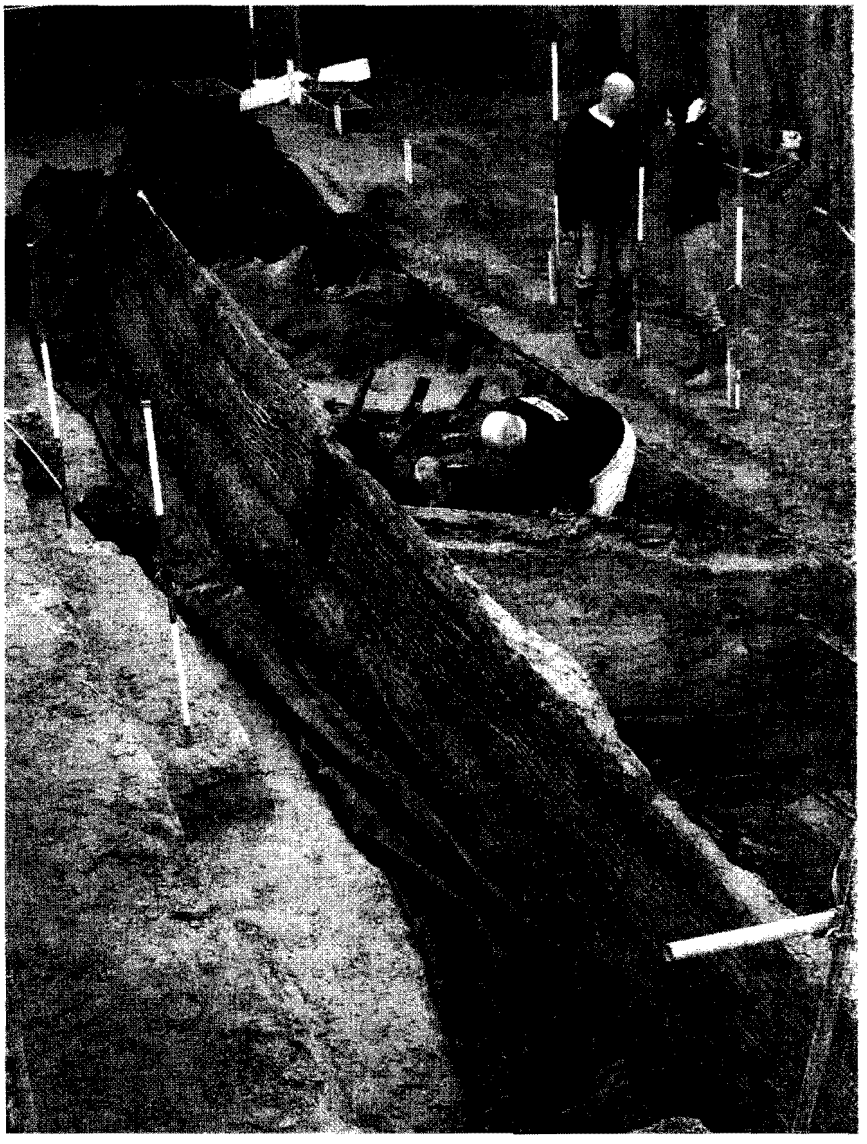

Figure 5.4 In the quality standard it is prescribed what kind of actor is allowed to carry out a particular (crucial) activity, both in the field and during the analysis (Photo Erfgoedinspectie).

The initial idea was that there would be a direct connection between the key actors in the standard and in the professional register and that all archaeologists would be registered according to education, training and experience into three categories. For a number of reasons, this approach was eventually not followed

Figure 5.5 The lack of an operational professional register implies that there is not yet an assessment of most of the 'key persons' that the quality standard distinguishes (Photo Erfgoedinspectie).

by the association and they designed a register that consists of two categories (Perk 2004). The higher category of registered archaeologist involves a peer review system for admission, and the system is includes an obligation for CPD, continuing professional development (see Aitchison 2006 for a discussion of what this may entail).

The proposals were accepted by the members of the association in December 2004, but unfortunately, when this paper was written (early 2006) the proposals had not been put into practice and the professional register was not yet operational. One of the main reasons for this is that the proposed approach, especially the peer review system does not seem to meet the demands of objectivity that certification rules require.

The obvious consequence of a non-operational register is that the quality assurance cocktail lacks a very important ingredient. It implies that there is not yet an assessment of most of the key figures that the quality standard distinguishes while meanwhile the contractors already carry out these activities (figure 5.5). This is a major risk for the quality system. Since 2001, the State Inspectorate has encountered several situations in which inexperienced or even incompetent archaeologists were carrying out conditional and reserved operations and subsequently performed poorly. Another implication of not having a professional register is that there

is no opportunity to 'punish' individuals by removing them from the register in case of severe un-ethic behaviour. This, however, is provisionally covered by the requirement in the quality standard that archaeologists working in heritage management must subscribe to a code of ethics, which can be demonstrated by membership in a professional organisation with a grievance committee: not just the Dutch one (NVvA), but also the English Institute for Field Archaeologists (see Hinton and Jennings, this volume) or the American Register of Professional Archaeologists (see Peacock and Rafferty, this volume) are acceptable.

THE CERTIFICATION SYSTEM

During the years that the register was under construction, a certification system for archaeological companies has been designed as well. The new Monuments Act requires a licence to excavate and of course the system must provide for a method to guarantee that organisations – both governmental excavation services and private companies – that want to obtain a licence are evaluated with respect to their ability to work according to the Standard. At the moment, it has not been decided yet if this shall be done by certification, whereby organisations are audited and must obtain a certificate on the basis of which a licence is given, or if it will be done by the government.

The original idea was that a certificate would be granted by independent certification agencies and would verify – on the basis of assessments and audits – if companies or institutes have the right equipment, the necessary internal procedures, qualified personnel etc. at their disposal and that can make it plausible that they are able and willing to live up to the quality standards. The Ministry could then recognise such a private certificate and issue licences upon request to certified parties. In the Netherlands, this is currently the preferred approach in many other fields where the government wants control but does not want to organise the quality control itself.

Although the archaeological community was not against such a system, and indeed developed the criteria for certification, commercial parties were only prepared to actually go ahead with this if the Ministry would make the certificate a legal obligation with no 'back doors'. This, however, did not happen as apparently it would be against policies of deregulation. This has led to a kind of stalemate and implies that either the certificate will only be used as an instrument by which contractors voluntarily can distinguish themselves from others, that it is replaced by an equivalent system, or that it will not be implemented at all. The chances of voluntary certification are slim, however, because substantial costs are involved for contractors. In that case, the ministry still has to come up with a decree concerning the procedure of admittance before the new Monuments Act is accepted by the parliament. This may well take the form of an evaluation procedure that is more or less equivalent to certification, but organised entirely within the civil service (State Service and/or Inspectorate). Fortunately, during the parliamentary discussion of

the revised law, it became clear that whatever road is taken, the Quality Standard is fully accepted as the basis for evaluation of suitability of licence holders.

THE NATIONAL RESEARCH AGENDA

A final element that was considered important for the Dutch quality assurance system is that relevant research objectives for archaeological field research are pointed out. The quality standard only provides the framework, as it requires that any field project is based on a project outline or brief that contains the research questions; it specifies *what* must be investigated, and *how*. This still is no guarantee, however, that academically relevant and useful questions are being asked. In the past, national research goals were set by the State Service and by the universities, and local goals by the towns with a municipal archaeologist. Now, due to decentralization of government, decisions for most fieldwork lie in the hands of local authorities (ca. 450 municipalities) that do not have their own archaeologist. Therefore, the need for 'research agendas' was perceived, preferably both at the national and at regional levels, that can provide guidance for these local authorities. The work on a research agenda at the national level started in 2004, and again representatives of all branches within the discipline were involved in what turned out to be a huge endeavour. Altogether more than seventy people were involved and together they wrote a 'research bible' of more than 800 pages. Fortunately it was published on a website that recently became operational (www.noaa.nl).

The aim is to link the quality standard statutorily with the research agenda in order to make sure that the aims on the agenda are taken into account in project outlines for excavations and field evaluations.

FIRST EXPERIENCES

The above outline describes the development of a Dutch perspective on an archaeological quality assurance system and how this is influenced by policy changes, legal barriers and opportunities, and other considerations. All this, however, is still only the theory. Logically, the next issue is to explore whether it works in practice. At this moment, this cannot yet be answered fairly. Not only have major and crucial parts of the system not yet been fully implemented or perhaps may never become operational, but also the legal framework within which the system is meant to function, will only become operational in 2007. This means that, for example, funding was not always available.

Notwithstanding the fact that our quality assurance system is not fully operational and that the coherence of the system is still far from optimal, there are certainly some positive effects. It can be seen, for instance, that nearly all archaeologists comply with the standard and that most of the work in the field meets its demands.

The effect of this is that the quality of data and documentation is more comparable and coherent and therefore more durable and better accessible for future analytical research. Furthermore, results of field projects are in the majority of cases being published within two years. This is a huge improvement in comparison with the traditional situation, in which the majority of the excavations never were published. Its importance cannot be overstated, as the enormous and growing backlog of half a century of unpublished or just superficially published excavations is a major problem for archaeological heritage management all around the world (for example, Hadjisavvas and Karageorghis 2000). Another improvement of great importance is that all information on sites and projects is reported and put into the central archaeological information system. The implication is, that not only the backlog of unpublished excavations is no longer growing each year, also the enormous problem of an ever increasing volume of grey literature has been halted (see *e.g.* Hills 1993; Lauwerier and De Vries 2002).

The benefit for future research will be enormous. Even if it is recognised that the fact that all reports are now accessible this is of course no guarantee for their quality, at least the data are available. Moreover, the actual quality of reports is also monitored and it is expected to gradually improve. This may already be going on, though for the moment it cannot yet be demonstrated. What *can* be demonstrated, however, is that with the rising volume of total output and despite shortcomings to be discussed below, there is a clear rise in the number of high quality reports that is beginning to exert an influence on Dutch archaeological research.

A final positive effect is that the development of the individual parts of the quality system generated the unique experience of a whole archaeological community that is intensively and successfully working together. Without creating a false impression of a totally harmonious community of Dutch archaeologists it can still be said that by this process divides have been bridged and cooperative ties have been strengthened across the discipline.

Nonetheless, there are also aspects that need serious attention. While most of the procedural demands are met during the work in the field, there seems to be less attention for the scientific demands. Three recent studies have shown that especially the quality of the knowledge products, such as project outlines, site evaluations and final reports is far from sufficiently guaranteed.

For instance in an orientation study that the State Inspectorate carried out in 2003 on the quality of 15 project outlines for field evaluation projects, it was found that they contained only thirty percent of the requirements concerning content (Aten *et al.* 2003). For example, only one of the five project outlines for 'surveys' provided research questions, and also only one project outline gave a justification for the prescribed research method. Fortunately the project outlines for excavations were considerably better as they contained on average half of the requirements, but the overall picture was not very satisfactory.

At that time it was presumed that the archaeological community needed some time to get acquainted with the quality standard, with writing good project outlines

and with the commercial way of working. Therefore, the inspectorate waited until 2004 to start a study on the quality of the reports on field evaluations. For this study (Aten *et al.* 2005), the latest published report was selected of each of the 20 companies that were performing field evaluations at that time, of three municipal archaeologists and of the State Service.

This time it was found that in most reports much of the required basic information is present, but that there is still far less academic content, let alone *relevant* content. For instance, only in one third of the reports specific research questions were mentioned that related to the expected archaeological phenomena. The aim of the other projects merely was to trace and to date find spots. Furthermore, in only two reports a motivation was given for the research strategy that was chosen. It seems that in the other projects a standard procedure had been applied without a validation of the reliability or the applicability of the method in relation to what archaeological phenomena were to be expected.

A third study that was published in 2005 by the state archaeological service. It involved 100 project outlines and 39 reports (Bazelmans *et al.* 2005). Unfortunately this study was biased as it only involved the products of 13 companies and none of universities or municipalities, but again, the conclusion was that the scientific quality is disappointing. More than half (52%) of the project outlines was judged to be unsatisfactory and one fourth was even considered totally unacceptable. The excavation reports were found to be slightly better than the project outlines, as 56% was found to be satisfactory. Nonetheless, the average appreciation of the quality of the reports was quite lean (5.5) as well and again there was a fairly high percentage (19%) of very bad reports.

Apart from these studies that clearly demonstrate the deficiencies, there are also less firm indications that the quality of the archaeological work is not sufficiently assured yet. There are, for example, signals from within the archaeological community itself that people are worried about the academic quality of the Malta-projects. Despite the fact that the archaeological community has put a lot of effort in developing a quality system, with the intention to guarantee a certain academic level of the output, there seems to be a growing tendency to perform field projects merely as a craft rather than a scientific enterprise. In proportion to the enormous growth of jobs and projects in the last say ten years – respectively around 400% (from 250 to 1000 fte) and 600% (from 300 to 1750) – there is not as much profit in terms of scientific output. In other words, although in absolute terms the annual number of high quality reports is certainly rising that is not yet so in relative terms and it may be concluded that the return on investment or value for money in terms of academic output and relevant research results is not as high as the investment itself. In the long term this may become a serious problem, because already regional authorities start using it as an argument to cut down the financing of archaeological research.

THE NEED FOR ADDITIONAL MEASURES

The archaeological community as a whole is aware of the shortcomings. And in an attempt to improve the quality of the output, various parties have initiated a whole range of remedies. Some of these measures have not left the drawing table yet, such as a plea for more state interference and financial support to facilitate granting of projects with outstanding academic prospects to university departments. Others, however, are already put into practice. For instance, work is now being done on developing supplementary guidelines or 'best practices' for excavations and all companies must now use a standard model to write project outlines, so important elements cannot be left out. Some local authorities have set up their own guidelines for particular practices, such as scenarios for field surveys with prescriptions relating to the grid and density of trial trenches or boreholes in certain geological situations. The organisation that administers the quality standard has investigated the needs and possibilities for (re)training programs.

It is of course very important that the archaeological community signals the problem and is willing to work on improvements, and some of these truly are important initiatives that may indeed be helpful. However, they hardly influence the more fundamental issues that are causing the difficulties that we are faced with.

The main problem is that at the moment the system has insufficient incentives to encourage the production of a relevant research output. The results of the various studies on the quality of the output, together with the audits of the inspectorate at field projects, show that much of the commercial archaeological fieldwork is degrading towards a craft rather than a scientific enterprise. The reasons for this are clear. First of all, the contractors that are engaged in archaeological work have to deal with a ferocious economic competition: there are not enough profitable projects and contractors fight each other for work. As a result, they have to drop their prices and the profit margin is declining below what is economically sustainable. This is not something that the contractors can be blamed for, this is how the commercial world works. However, the undesirable side effect is that it leads to a situation in which there often is hardly enough money and time to put a real effort in the knowledge products such as excavation reports. Added to a shortage of qualified and experienced employees who are capable to perform on an academic level while the time constraints are getting worse, this will eventually lead to a loss of quality of the output.

Second, most developers, builders etc. are hardly interested in the end product in terms of scientific results, yet they select which contractor is going to do the job. This encourages that their choice is primarily based on economic grounds and on a contractor's abilities to master the project, but not on the contractor's academic qualities.

Third, within the development-led archaeology we are not very much focussed on getting the most out of the field projects in terms of knowledge gain. We lack,

for instance, a lively discourse within the archaeological community in relation to the development-led archaeology. Companies, municipalities and universities are largely working on their own, there is not much dialogue going on with regard to the results of the field projects in archaeological terms. In addition, and as a result of being a small country, we do not have a flourishing academic journal and there are relatively few conferences on academic subjects. Therefore there is not a lot of stimulation from colleagues, neither by means of appreciation or reward for good practices nor by means of 'punishment' for bad practices (see also Van den Dries 2005 for an analysis of the knowledge management activities and opportunities of the Dutch archaeological discipline). Formerly, when the archaeological community was still small, much of this was compensated for by a very international orientation that was practically unavoidable in the past because of the smallness of the language community. As has been shown recently by Kristiansen (2001), the growth of the discipline in smaller language communities in Europe, has demonstrably led to a loss in international orientation.

Unfortunately there are no simple solutions for these fundamental issues. We are dealing with a complex situation with – on the one hand – competing economic and academic concerns and – on the other hand – a government that wants deregulation instead of an increased interference by the authorities. To a certain point, it may help if the functioning of the quality control system will be optimised according to the way it was set up, but this will not 'make' people think in a scientific way and it cannot force them to keep up with the state of the academic art and to contribute to the research progress as long as the right climate is missing. If the archaeological community seriously wants to do something about it, it must start to acknowledge that the direction we are heading for is not the direction that we had in mind when we started.

CONCLUSION: LESSONS LEARNED

Returning to the issue of quality assurance, the process of change did teach some important lessons and although the situation differs in each country, these lessons may certainly be relevant elsewhere. A first lesson is that the cocktail of measurements seems to be a useful approach, as long as all of them operate in the way they were originally intended to. If even one of them is missing, the system immediately looses its balance and things go wrong. Furthermore, we have experienced that if the quality assurance system has to be built up from scratch, as it had to be in our case, it is important to get commitment from the entire archaeological community. This can for instance be accomplished by encouraging representatives of all fields (consultants, academics, municipal archaeologists, state archaeologists etc.) to be involved and to take care of particular parts of the quality system, such as the quality standard, research agendas and the professional register.

Figure 5.6 The Dutch quality assurance system was established by applying the 'poldermodel': the interests of all parties were considered (Photo Gerlo Beernink Fotografie).

For many, this may seem the ultimate example of the famous Dutch 'poldermodel' (figure 5.6), which means that all parties must be involved in the decision making in order to reach a decision that is acceptable by all parties, but which also implies that in many cases the decision is considered to be a feeble, tasteless or 'flat' compromise. In our case it would not have worked otherwise. Since we endeavoured a rather drastic change in the archaeological heritage management system, the only way was to take the interest of all parties into account. With such a large group of persons involved, it surely takes quite a while to establish consensus, but the result is that almost the entire community approves the results. This does not mean that the entire community is pleased with the situation of commercial archaeology as a whole, but given the way that policymakers have dictated the way to implement the Malta Convention, the general attitude towards the quality assurance system is one of acceptance.

A final lesson, however, is that a quality assurance system is not enough to guarantee the quality of the end product, *i.e.* the knowledge that is gained by the archaeological work. Therefore quality assurance should be combined with knowledge management to obtain a more complete quality management approach.

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