

volume 2/2012

SAP Società Archeologica s.r.l.



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DESIGN

Paolo Vedovetto (Università degli Studi di Padova)

PUBLISHER

SAP Società Archeologica s.r.l. Viale Risorgimento 14 - 46100 Mantova www.archeologica.it

PRINTED BY

La Serenissima, Contrà Santa Corona 5, Vicenza

Authorised by Mantua court no. 4/2011 of April 8, 2011



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The land of milk and honey? Rescue archaeology in Norway

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What are the advantages and disadvantages of the present archaeological excavation practice in Norway in regards to research and the production of knowledge? In this article, an overview of the historic development of the cultural heritage management will be given and how it has come to shape the current legislation. In the spirit of Norwegian romantic nationalism, the idea of cultural heritage protection emerged in the mid 19th century and was well established in 1905 when Norway became an independent nation following the abolishment of the union with Sweden. The Protection and Preservation of Antiquities Act was passed by Parliament 13 July 1905 and came into effect 30 June 1906. The Act earned international acknowledgment at the time (Gustafson 1906, p. 149), and despite changes is still the foundation of the archaeological management and protection practice in Norway (Glørstad, Kallhoyd 2011; fig. 1).

One of the promoters of this act, then manager of the University's Collection of Antiquities, Gabriel Gustafson, Oslo, stated in 1906: By these acts a long due protection has been given to the antiquities, a protection that has evoked joy within our country and attracted appreciative attention from abroad (Gustafson 1906, p. 149). Gustafson regarded 1905 to be a memorable year for archaeology due to the legislation that banned the removal of monuments and sites and ensured their automatic protection; All this is now placed under government protection, he wrote optimistically (Gustafson 1906, p. 146).



Fig. 1. The archaeologist Gabriel Gustafson was one of the architects behind the Norwegian *The Protection and Preservation of Antiquities Act* from 1905. Photo, from the excavation of Oseberg 1904. Museum of Cultural History.

Archaeological excavations are still a public task, performed by the five university museums¹ and the Norwegian Institute for Cultural Heritage Research (NIKU) (responsible for investigations of churches, castles and medieval towns). In addition, three maritime museums perform underwater investigations. The responsibility for the execution of surveys and registrations is divided amongst the nineteen counties and the Sámi Parliament. The Directorate of Cultural Heritage (Riksantikvaren, RA) grants the permission to remove sites and monuments through dispensations from the law, or in opposite cases raise objections. Dispensations are granted on certain conditions, decided on by the Directorate (RA), for instance demands for excavation to secure valuable scientific data.

Today's cultural heritage management is based on the 1905 Act. In regards to archaeology, the Act was unaltered until 1951 when the large contractors where obliged to cover the costs of archaeological excavations. It was revised in 1978 and merged with *The Act of Building Protection*, and new amendments were made in 1992 and 2004 (Glørstad, Kallhovd 2011). Let us take a closer look at the historical background for the cultural heritage management.

1. History of cultural heritage management

During the 16th and 17th century small humanist communities emerged in the cities of Bergen, Oslo and Stavanger. A translation of Saxo Grammaticus´ (ca. 1160 – after 1208) great work of history, *Gesta danorum*, was published in 1514 (*Christjern Pedersens ekserpter*). More than a 100 years later Peder Claussøns Friis´ (1545-1614) 1599 translation of

¹ The five archeological museums in Norway gained status as university museums at different times; Oslo in 1812, Bergen in 1946, Trondheim and Tromsø in 1968, and Stavanger in 2010.

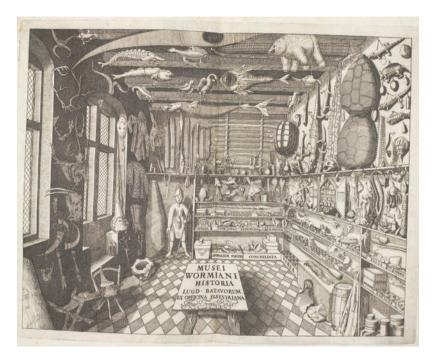


Fig. 2. Ole Worm's cabinet of curiosities became the first public collection of artefacts purchased in 1654 by the King of Denmark and Norway. The frontispiece of "Musei Wormiani Historia", 1655.

Snorri Sturluson's *Chronicle of the Kings of Norway* was published as *Norske kongers Chronica* (1633). These translations provided scholars a new non-biblical frame of reference for archaeological monuments. Large burial mounds and medieval churches were associated with the kings in the sagas and political history.

In the 1620s, a survey was launched on royal decree to register monuments with runic inscriptions in Norway and Denmark. The work was lead by Danish professor Ole Worm (1568-1654) in Copenhagen (Steinnes 1972; Lidén 1991, p. 12). Worm was one of his time's leading intellectuals, and his "curio cabinet" evoked considerable attention in Copenhagen (fig. 2). His collection of everything from stuffed crocodiles to various antiquities became the first collection to be purchased by the government, i.e. the King, when Worm died in 1654 (Shetelig 1944, p. 18).

The idea of protection and public collections (museums) was still quite unfamiliar, but an increase of registrations and of knowledge about monuments and sites encouraged such thoughts. Art historian Hans Emil Lidén (1991, p. 28) has pointed out that this made the sites and monuments registered early on particularly important. The early antiquarians

would travel in the footsteps of the pioneers and "antiquarian itineraries" were established. Thus the monuments achieved an antiquarian biography, and the idea of protection was strengthened.

In 1743, *The Danish Chancery* initiated an extensive survey in Denmark-Norway, the Faroe Islands, and Iceland. A questionnaire was sent out, in which two of the 43 questions concerned respectively curiosities (question 30) and antiquities (question 41). The government wanted to obtain a better record of sites and monuments, but the feedback varied and was partly inadequate (Røgeberg *et alii* 2003–2008).

Gerhard Schøning (1722-1780) is regarded to have been Norway's first professional historian (NbL, Gerhard Schøning). He went on antiquarian travels in 1773-75, i.a. to the counties of Trøndelag and Møre and Romsdal. One of the first acts of protections in Norway was the result of Schøning's registrations. Instead of being demolished, as previously intended, Gran Church in Hadeland was protected by royal decree in 1774, stating it to be, an innocent Antiquity [that] has to remain for the Future, and shall be maintained by all Church-owners. The protection was justified by the intrinsic values of the monument and not for instance national identity.

Schøning was also one of the founders of *The Trondheim Society* in 1760. It became the first public collection of antiquities in Norway, and made up the core of the current *Museum of Natural History and Archaeology* in Trondheim. All of the current university museums in Norway are based on collections founded in the 1800s (Oslo 1810, Bergen 1825, Tromsø 1872 and Stavanger 1877) (Shetelig 1944; Holme 2001).

The famous Norwegian painter Johan Christian Clausen Dahl (1788-1857) spent many years in Dresden, where he became a member of Königl. Sächischen Alterhums-Vereins. Dahl realized the national values intrinsic in the antiquities, and initiated a corresponding association in Norway (Trøim 1999, p. 28). The Society for the Preservation of Norwegian Ancient Monuments was founded 17 May 1844; on the same day 30 years after Norway had founded its own constitution after the abolishment of the union with Denmark. To the Norwegian nation-builders of the 1800s, Snorri Sturluson's Chronicle was one of the most important tools, while Saxo Grammaticus was regarded as Danish and therefore received less attention (Jørgensen 1993).

Nicolay Nicolaysen (1817-1911) was Chairman of *The Society* in 1852 and in fact functioned from 1860 as the national antiquarian before this office was established in 1912. His great work *Norwegian Antiquities* (*Norske fornlevninger*) (1862-1866) was a record of the thenknown ancient monuments, prior to the more comprehensive agricultural modernization in Norway (Nicolaysen 1866). *Norwegian Antiquities* was an 850 pages milestone in Norwegian history of registration.

Nonetheless, Nicolaysen rejected the idea of protection through legislation because it would entail an intervention of private property rights.

Still, *The Society* became very influential in promoting antiquarian interests, i.a. through the collection of salvaged furnishings from Catholic churches, stave church portals, and a growing number of archaeological artefacts from 1866 and onwards. *The Society* also bought endangered properties and by 1910, the care of 27 buildings and constructions, a pair of raised stones, and a burial mound was in their hands (Liden 1991, p. 36). In 1865, all "worthy" medieval churches had been documented. Nicolaysen's many and annual archaeological investigations in Eastern Norway, and occasionally in Ryfylke in Western Norway (Trøim 1999, p. 30), initiated the so-called *burial mound period* in Norwegian archaeology (lasting until about 1930; Henriksen 1994).

The Society also encouraged the establishment of the National Antiquarian office (Riksantikvaren) in 1912 (later the Directorate of Cultural Management). Architect Herman Major Schirmer (1845-1913) was appointed the first National Antiquarian, but died soon after. The position was taken over by Art historian Harry Fett in 1913, and held by him until 1946. Under his leadership, the office evolved into being a comprehensive management and research institution, in charge of medieval monuments including ruins, churches, and other publicly owned buildings.

The National Antiquarian's excavation office (Riksantikvarens utgravingskontor) was created as a result of the large-scale excavations in medieval towns during the 1970s and 1980s (Brun 2001). Asbjørn Herteig (1919-2006) led the internationally recognized investigations of Bryggen in Bergen (1955-1968) and introduced a new academic standard for urban medieval excavations in Scandinavia. This office was responsible for such excavations until *The Norwegian Institute for Cultural Heritage Research* (NIKU) was separated from the institution in 1994 and established as an independent foundation in 2003. NIKU has limited public funding, and has to cover considerable amounts of their costs through commissioned research.

Unlike the *National Antiquarian office*, the current university museums have traditionally been more focused on prehistoric archaeology and research. The cultural heritage management was therefore increasingly divided between the medieval and pre-historic periods. Right from the start, antiquarians from the two institutions had different interests regarding monuments. The main distinction ran between churches, buildings, and, in time, urban archaeology on one hand, focusing on the medieval period, and burial mounds, archaeological finds, and pre-history on the other. The disciplines of architecture and art history would sort under the *National Antiquarian office*, while the archaeologists were based at the university museums.

The idea of a systematic record of ancient monuments — ...farm after farm, parish after parish — was initially promoted on a national level by Gabriel Gustafson in 1901 (Fasteland 2000, p. 14). It was an ambitious project; considering there were over 55 000 farms in Norway. In the counties of Østfold and Vestfold the registrations started early on and the results were published in 1932 and 1943 in the series Arkeologiske landskapsundersøkelser i Norge ("Archaeological landscape investigations in Norway") (Brøgger et alii 1932—1943).

The Second World War was followed by a rapid increase in hydroelectric developments. Norway needed the electric power for industrial developments. Large dam projects in the 1950s and 1960s affected the traces of 10 000 years of activity in hunting grounds of the Southern Norwegian mountains. Mountain valleys with remains of extensive iron production and activities related to summer pastures were also affected. Archaeological investigations began in the mountains of Southern Norway in 1958, and in 1963, *The Archaeological Museums' Registration Service* (DAMR) was established. In 1964, Parliament decided that all visible ancient monuments were to be included in the national land registry maps (ØK). This triggered extensive archaeological surveys until 1991 (Holme 2001, p. 58).

DAMR was given two main functions; responsibility for and coordination of the waterway investigations and the registrations for the land registry maps. These tasks were lead by two female pioneers respectively, Irmelin Martens and Elizabeth Skjelsvik. The waterway investigations of the last 50 years have provided significant knowledge about the use of mountain resources in the periphery of Northern Europe through 10-12000 years, and the registrations were a precondition for the establishment of the national cultural heritage database *Askeladden*, which is central to the management of archaeological sites in Norway today.

The settlement investigations at Forsandmoen in Rogaland from 1984 to 1993 were crucial for a new generation of archaeologists to acquire expertise in topsoil stripping. Archaeologist Trond Løken (Stavanger) and his team uncovered traces of 250 houses and farm settlements from the Bronze Age and Early Iron Age (Løken, Pilø, Hemdorff 1996). This introduced an effective method for investigating prehistoric agricultural settlements in the lowlands. Due to major development activity and the building of new infrastructure in areas of urban expansion, topsoil stripping amounts to 50-75% of all excavations performed in Norway today. By 2010, 139 sites with a total of 450 houses had been investigated only in the management area of the *Museum of Cultural History* (MCH) in Eastern and Southern Norway (fig. 3; Iversen *in press*).



Fig. 3. Since the introduction of top soil stripping in Norway in the 1990th, there have been found c. 450 prehistoric houses (per 2010) only in the administrative region of Museum of Cultural History, South Eastern Norway. Here the site Western Ringdal, E18 project, Vestfold, showing a farmstead with 21 houses abandoned around AD 600. Photo, Museum of Cultural History.

2. Cultural heritage legislation - specific laws in perspective

Legislation in Norway has traditionally distinguished between movable antiquities and monuments and sites. Movable antiquities have economic value and were regulated by law from an early date. The oldest provision can be found in the Gulating laws (ca. 1150). It states that, each shall have the goods found in his ground, even if another digs it up (G 148). Magnus the Law-mender's new law of 1274 also includes provisions concerning movable finds. The (value of) the finds was to be shared by the state, represented by the King, the finder and the haugodelsmann, i.e. the right owner of the grounds, kindred to the person buried in the mound (cf. ML VII, 16). This regulation was maintained in the 1687 Norwegian Code of Christian V. Today the state has full ownership of finds in return of a finder's fee, which in recent years has been estimated according to market value in order to prevent that particularly coins

and metal detector finds end up in illicit antiquity markets (pers. comm. Svein Gullbekk, Museum of Cultural History, University of Oslo).

Even before the 1905 Act, two monument types had particular protection, i.e. burial mounds and churches. In the 1851 Road Act it is stated, Ancient monuments must not under any circumstances be obliterated or harmed due to the construction of roads, unless consent of the owner and the district governor has been obtained in advance (§ 29, Roads Administration Act). The act was allegedly motivated by construction work that was carried out close to the Borre burial mounds in Vestfold (Lidén 1991). This is, however, somewhat dubious, considering that the provision was included in the original 1851 Act, and the finds in the Borre mounds were probably not discovered until 1852 (Trøim 1999).

The second by-law was the Church and Churchyard Act of 3 august 1897. In § 21 it says, Churches must not be destructed, constructed, reconstructed or undergo any major changes without the consent of the King, or him who he has authorized to give such a consent. The reason for this provision was the extensive destruction of the many churches that the State had handed over to private individuals in the 1700s and 1800s. Many old stave churches were in poor condition and new requirements meant that they were replaced at a fast pace. Apparently there were about 1000 places with wooden churches in Norway during the Middle Ages, and by 1650 there were still about 270 standing stave churches left. By 1750 half of these had been demolished, and today only 28 stave churches are preserved (Storsletten 1993, p. 24).

The 1905 Act led to the automatic protection of antiquities older than the Reformation in 1536/1537. The chronological protection limit was hardly accidental. On the so-called "The Lord's day" ("herredagen") a legal assembly in Copenhagen in 1536, the Norwegian national council had been abolished. Until 1814 Norway was a direct subject of the Danish king in Copenhagen. Poet Henrik Wergeland expressed the spirit of Norwegian intellectuals at the time when he, in a speech in 1834, claimed that this era was not worthy of Norwegian history. Playwright Henrik Ibsen later dubbed the 434-year union with Denmark the "400-year night" in the play Peer Gynt (1867), ironizing over the portrayal of this period as dark and gloomy. Nevertheless, by 1905, such thoughts had become part of general opinion, leading to political acceptance of the protection legislation.

Around the turn of the century, Norwegian agricultural went through the most substantial modernization and physical reorganization ever, and new cultivation led to extensive removal and damaging of ancient monuments (Trøim 1999, p. 20; Iversen 2005). This worried the professionals, who argued for protection based on the scientific value of the archaeological source material. The objects represented a tradable asset,

and the farmers were free to sell them at the open antiquity market (Trøim 1999, p. 23).

Gustafson and Hans Aall, then leader of the *Norwegian Museum of Cultural History* (Folkemuseet), prepared a bill advanced by botanist and Member of Parliament Jørgen Brunchorst (later director of the *Bergen Museum*). The academic interests were in tune with the spirit of the time and the new nation, and the trio is often credited for securing Norway a very good cultural heritage act. Today, this act is regarded as a so-called *lex superior*, which prevails over other laws in cases of mutual conflict.

The act distinguished between movable antiquities, and sites and monuments, and determined that the *current* university museums (see note 1) were responsible of managing both. Gustafson deeply regretted that there was no national museum in Norway, but accepted a system of regional management. *The Society* was initially appointed as the managing authority for building protection, but this responsibility was transferred to the National Antiquarian (RA) when it was established. Churches were to some extent protected by the 1897 Church Act, while secular buildings were not protected by law until the 1921, when the Building Conservation Act came into effect (Trøim 1999, p. 67).

In recent years, the *Planning and Building Act* (PBL) has become an important tool for the local cultural heritage management. This act is primarily a development act, *not a protection act*. The purpose of the act is to coordinate planning on a national, county, and municipal level, to enable proper decision making, but it is also an important tool to ensure the protection of valuable buildings and cultural environments. All of the 429 municipalities (number by 2012) in Norway are required to have a municipal master plan, and planned development projects has to be in accordance with this plan, or the developers have to submit a separate zoning plan to the county for consideration. Protected sites and monuments have to be mapped in the municipal master plan, and the land-use maps of the plan are legally binding. This part is supposed to be updated once every election period (every four years).

3. Management between state, local councils, private foundations, professionals and universities

Ever since the *Cultural Heritage Act* was passed in 1905, the university museums (formerly called regional museums) have been responsible for the excavation of monuments and sites and for the conservation of movable antiquities from the 19 counties in Norway, on behalf of the government. There are currently five museum regions. *The Museum of Cul-*

tural History (MCH) in Oslo manages 10 of 19 counties in Norway (Eastern and Southern Norway). The museums archaeological collection holds 1.7 million objects. The Archaeological Museum in Stavanger (AM) manages only the county of Rogaland. It was appointed as a university museum in 2010, when it became formally affiliated with the newly established University of Stavanger. Bergen Museum has an extensive collection, and manages excavations within three counties; Bergen, Hordaland, and Sunnmøre. The Museum of Natural History and Archaeology in Trondheim manages the two Trøndelag counties, North Møre, and the southern part of Nordland, while Tromsø Museum manages the areas more or less above the Arctic Circle — northern part of Nordland, Troms, and Finnmark (fig. 4).

In the late 80s, plans were put forth that involved a reorganization of the cultural heritage management in Norway. Despite strong opposition from the academic society, the museums lost some of their prominence in the system through Parliament's treatment of White Paper No. 39 in 1986/1987. The purpose of the change was to distinguish between the managing authority and research interests. The museums were commenting bodies, at the same time as having the right both to grant dispensation, and to perform excavations. Individuals in the system could grant dispensation according to their own research interests, which made for a "set a fox to keep the geese" issue. One of the aims of the reorganization was to strengthen the protection work through decentralization, transparency, and democracy, and to achieve accountability by transferring responsibility to a local level. This is still a primary political goal.

In 1989, the National Antiquarian office became the Directorate of Cultural Management (RA) under the Ministry of the Environment (MD) and given the overall responsibility for the entire cultural heritage management. The transition from office to directorate resulted in less attention being paid to research and a stronger focus on management and technical consulting. Until 1989, the museums had been responsible for all aspects of the archaeological management, including surveys, consultative statements, site maintenance, dispensations, and excavations. From 1990, the initial management tasks (i.e. surveys, consultative statements and site maintenance) were transferred from the museums to the counties. The reorganization was completed in 2001 by transferring the dispensation authority to the Directorate (RA). The responsibilities of the museums now include advising the other management authorities, giving consultative statements to the Directorate (RA), plan and perform excavations entailed by heritage management, and perform research on generated data. The management of movable antiquities has only undergone minor changes, for instance giving the counties primary

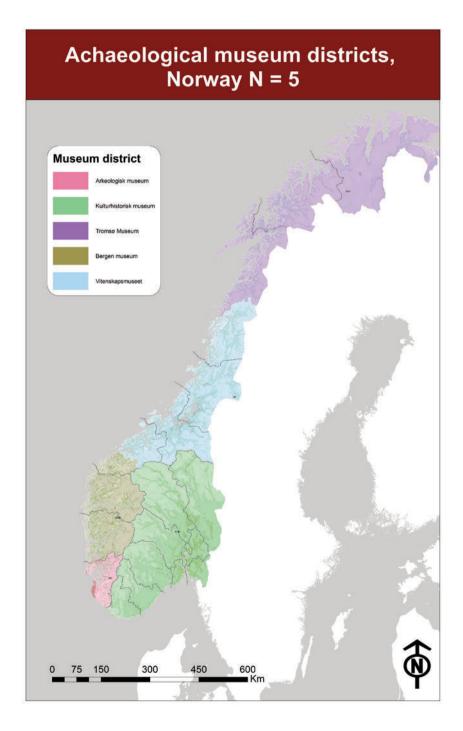


Fig. 4. The five archaeological museum districts in Norway.

responsibility for receiving finds from private individuals and conveying these to the museums.

The Ministry of the Environment (MD) is the highest management authority for cultural heritage protection, and holds the responsibility for superior matters such as developing legislation, regulations, and policies, contributing interpretations, award grants, and treats complaints and individual matters of principle importance. Only two archaeologists work in the Ministry (MD), whereas most of the staff consists of legal professionals. The Directorate (RA) functions as an advisory body for the Ministry (MD). The current head of the Directorate (RA) is lawyer Jørn Holme, former head of the secret services in Norway (PST), who has put the Directorate (RA) to the forefront as an influential body of authority, especially concerning urban development projects in Oslo. Still, the Directorate (RA) rarely raises objections, and only 3.1% of the dispensation cases in 2010 were denied, probably because most potential conflicts are already resolved through previous involvement in the planning process.

The counties perform surveys of areas where construction work is planned and give consultative statements on zoning and land use plans. The county may also raise objections. After the reorganization of the heritage management, the number of permanently employed archaeologists in the counties has increased significantly. In the management district of the Museum of Cultural History (MCH) alone, the number of permanently employed archaeologists in the counties has quadrupled in the last 20 years, rising from 10 in 1990 to 41 in 2010. In addition, the temporarily employed field staff has increased from performing 14 full fieldwork years in 2005 to 43 fieldwork years in 2009. From 2004 to 2008, the number of completed registration cases increased from about 550 to almost 800, and the total budget went from NOK 9 million to NOK 33 million. This tendency continues, partly as a result of Norway's expanding development activity and oil wealth, but also because the heritage management is more professionalized and systematically organized than before. The counties perform surveys in an increasing number of cases, but the percentage of cases with finds is decreasing, and was only 21% in 2010.

According to the *Cultural Heritage Management Act*, the municipalities have no "formal authority" in such matters. Yet, through PLB they have the main responsibility for land use planning in Norway, and consequently also for managing cultural heritage. Some municipalities have not yet developed municipal master plans. Since the municipalities vary in size from having 216 residents (Utsira) to having almost 600 000 (Oslo), it is difficult to imagine a unified management structure on this level.

4. The relationship between costs and results

Since Bishop Beck's initial investigation of the ruins of the Church of St. Hallvard in 1810 (in Oslo) much has been said and written about archaeology and economy. At the time, the archaeological finds were immediately sent to Copenhagen by order. Bech was no less disappointed when he learned that he would not have his expenses met (Shetelig 1944, p. 24). The incident has been considered as instrumental in the establishment of the University Museum in Oslo, which today is the largest excavating authority in Norway.

Annually the five university museums and NIKU perform approximately 100-150 excavations of various extents, which are initiated by heritage management. These figures do not include Maritime archaeology. The funding is based on the "polluter pays principle", and the developers cover the costs of all the mandatory archaeological investigations, both the surveys performed by the counties and the excavations executed by the university museums. The government is the main developer in Norway, and the *National Transport Plan* (NTP) outlines planned infrastructure projects 10 years ahead. NTP is revised during election year, which is every four years, and indirectly reflects the extent of future archaeological investigations (fig. 5).

The total annual cost for excavations performed in Norway is app. NOK 250 million. About NOK 150 million is spent on excavations and NOK 100 million on surveys. Budgeting is done according to a new standardized budget template prepared by the RA, a template that is applied in all the museums from 2012. The museums charge 60% overhead on the cost of labour. Performing excavations at a total cost of NOK 50-70 million annually, MCH has an overhead income of NOK 10-12 million a year.

The more extensive projects have a total budget of about NOK 40-50 million spread over 3-4 years. The largest archaeological project so far in Norway preceded the construction of a process terminal at Aukra, Møre og Romsdal for the gas field *Ormen Lange*, and amounted to NOK 80 million. The developers' demand for progression means there is usually only time for two field seasons. The projects rather upscale on staff and are completed quickly, but with high quality. Normally the same length of time is calculated for post-excavation work, such as treating finds and writing reports, as for the actual fieldwork, but then performed by a much smaller staff. In large projects such as European road construction (i.e. E6, E18), about 1- 2% of the total development cost is spent on archaeological investigations, or even more, depending upon the number and character of sites to be examined.

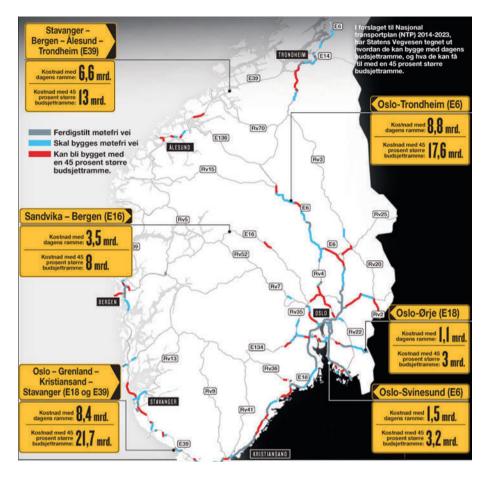


Fig. 5. Planned road infrastructure projects in Norway 2014-2023, according to the *National Transport Plan*. Map: VG.no.

The government covers the costs of archaeological investigations preceding small, private development projects. RA has a total of NOK 12,5 million available for this purpose annually (figures for 2011). Conflicts primarily arise in relations to small and medium-sized private entrepreneurs with limited willingness to pay for investigations and moderate knowledge of the position of cultural heritage management in legislation and the planning process.

Reports from larger projects are usually published as books 2 to 3 years after projects are completed. Not all the smaller projects are published, but the reports are supposed to be available in the museum archives. It is somewhat varying how field data and reports are made available. Some university museums have been criticized for poor prac-

tice in this respect. There is no current national electronic common archive for excavation reports, or any requirement to make the reports digitally available, which is a general liability for archaeology in Norway.

Both the counties and the museums work actively on communicating with the general public. Archaeology is frequently covered in mass media, which usually focus on the "treasure hunt" and the archaeological fieldwork rather than the research results. As primary producers of such results, it would be desirable if the university museums in particular could be more successful conveying new archaeological knowledge through for instance exhibitions. On a positive note, the new RA budget template allows for a certain percentage of the costs in heritage management initiated projects to go to such ends.

5. Weak and strong points of the present system

There are many good things to be said about the archaeological excavation practice and heritage management in Norway. The system is transparent and predictable for developers. The legislation is plain, well defined and politically agreed upon. By law, all archaeological sites dating from before 1537 AD are automatically protected. The cultural heritage authorities do not have to argue for protection. The division of responsibility between the institutions functions quite well. The economic aspects are well regulated with unambiguous budget templates.

The effectuating institutions are placed under various ministries. This can be a disadvantage. The counties are subjected to the *Ministry of Local Government and Regional Development*, and the Sámi Parliament to the *Ministry of Administration, Reform and Church Affairs*. The university museums are subjected to the *Ministry of Education and Research*, the maritime museums to the *Ministry of Culture* and the RA to the *Ministry of the Environment*. Three levels of management subjected to five different ministries hardly strengthen the overall cultural heritage management. On the other hand, Norway is the only country in Europe where the cultural heritage management is subjected to the *Ministry of the Environment*. This endorses and stimulates to a holistic way of thinking concerning cultural heritage and its surrounding landscape, which may add strength to the management of protected sites.

The background for the division of excavation authorities, by having a separate unit responsible for urban excavations, is historically contingent. Today this division is artificial. In accordance with the current liability regulations, government authority has been placed with founda-

tions with high demands to cover their own costs (NIKU), or limited funding, such as the maritime museums of Oslo, Bergen and Stavanger. The latter are responsible for all underwater archaeological investigations. Gathering and placing all the excavation authority with the Government could achieve a more unified management structure.

The regional management structure may be an obstacle for more geographically integrated research perspectives. There is currently no national strategy for the publication of excavation reports. Standardized procedures and electronic systems regarding the reuse of digital field data across the administrative levels have not yet been developed.

The National Cultural Heritage Database (Askeladden) will probably become increasingly important, but is dependent upon better quality data. The database contains the ØK registrations done by DAMR until 1973, and subsequently by the museums until 1995, when NIKU was made responsible for this task. In 2000, the Directorate (RA) took over and redeveloped the register into becoming the database Askeladden. The responsibility for updating and quality assurance of the data in Askeladden was delegated to the counties from 1 January 2005. It is a challenge that areas may be protected solely based on uncertain and ambiguous registration data. A lot of the data is outdated or lack accurate mapping. The Directorate (RA) work continuously to secure the means for better quality assurance of the data, and a comprehensive revision of the data has been initiated in several counties.

Many Norwegian towns were founded in the 1600s. A weakness of the current legislation is the lack of protection for post-reformation sites and objects. NIKU is in the process of completing a major research project (LAND), which aims to increase the knowledge about post-reformatory cultural layers and evaluate protection practices. They wish to define new protection criteria, as well as to evaluate existing legislation, regulations, and practices in the cultural heritage management, both on a national and on a local level. Hopefully, this suggests better protection for post-reformatory archaeological material, and possibly even changes in legislation, in the future.

Temporary employment in Norwegian archaeological practice has become more problematic during the last few years. During an interview, former Director of the Museum of Cultural History (MCH), Egil Mikkelsen, compared archaeological fieldwork with doing low status seasonal work, such as "strawberry-picking", which was a very unfortunate comparison and one that was not well received by the archaeological milieu (Museumsnytt nr. 4/2010). In the past, fieldwork has usually been performed by students. Today, most of the field workers have completed their education, as well as having extensive work experience and fam-

ily obligations. A more comprehensive employment policy is therefore essential, as well as a prerequisite for securing expertise and to provide more predictable conditions for field archaeologists. This could be achieved by better coordination and reduced use of temporary contracts. This is one of the main objectives the association for *Temporarily Employed Archaeologists* (MAARK) have, which became part of the union *Norwegian Association of Researchers* (Forskerforbundet) in 2010.

6. Quality and value of the scientific results and products

Following the establishment of the *Institute for Comparative Research in Human Culture* in 1922, Anton Wilhelm Brøgger initiated the first joint research program in Norwegian archaeology in 1927, following up with a new program in 1936. The idea of prioritizing excavations based on academically founded programs is discussed even today (see *Primitive Tider* 13/2011). The RA has requested the museums to develop programs for the excavation activities according to specific topics (Trøim, Johansen 2011). The purpose of these programs is to disclose the status of knowledge, identify key research questions, and integrate excavation activities. By 2012 such programs have been developed for Stone Age studies, investigations of iron production sites, and waterway archaeology.

Archaeological research is to be covered by the universities' basic funding, in addition to external project funding through the Norwegian Research Council (NRC) and international research programs. It is an important principle that the research should not be funded by the developers. But the growing amount of empirical data provided by excavations is not conducive to the scale of research. This means that there is a risk that much of the collected material will not be activated in contextualized research. On the positive side, in 2008, the Ministry of Education and Research asked NRC to develop a national research initiative focused on the university museums, including museums of both cultural and natural history. The purpose is to stimulate more active research on data from rescue archaeology. Funding has been provided to develop networks of researcher within specific topics across the museum regions. The museums aim for a permanent funding program of a certain size, but to what extent this will be realized is yet uncertain. Archaeological research is mostly performed by the museums and in the educational institutions at the universities. The degree of publishing varies, but Researchers at MCH are amongst the most productive.

7. Future perspectives

Norway distinguishes itself from most countries in Europe by having a law that automatically protects cultural heritage sites and antiquities older than 1536 AD. However, this law provides insufficient protection of post-reformatory archaeology. The monopoly embedded in the liability regulations also distinguishes Norway from many other countries, in addition to the fact that the heritage management is part of an integrated management of environmental issues.

Norway has per 2012 a social democratic government, and currently there are no political intentions of outsourcing or privatizing archaeological excavation practice. Nor are there any discussions of withdrawing the universities' responsibility in this matter and instead organizing the archaeological practice through state enterprises like they do in Sweden. This may change. A new White Paper is currently being developed, which will most likely address prospective organizational models and may result in some new perspectives. The enterprise model is usually considered more commercial and could therefore be perceived as a step towards privatization. Many archaeologists fear that this would affect both the quality of the work and important employment issues.

One probable scenario would include more specialization and competition between the university museums. Integrated budgeting systems and a well-regulated cost recovery may make this a possibility. A development concerning increased use of non-evasive methods, which would improve efficiency, is encouraged by the *Directorate (RA)*. NIKU is currently building an expertise in non-evasive methods, such as *Archaeological Remote Sensing* and geophysical prospecting, and thus preparing for a development that will be particularly relevant for the front line services and the counties.

The professional archaeological communities in the counties have grown. In 2011, the *Ministry* (MD) commissioned a trial project. The project involves delegating the authority to excavate to the archaeologists doing surveys or topsoil stripping, so that they may perform an immediate excavation in cases where only a few and uncomplicated sites are identified. Due to this project, approximately 10% of the excavation portfolio of university museums (so-called "small cases") has been transferred to the counties. It is uncertain whether this may represent the beginning of a more decentralized excavation authority. The RA will evaluate the project in 2012.

The chronological limits for protection are under continuous debate. The protection status of cultural layers at post-reformatory urban sites needs to be clarified. There is also a challenge concerning the protection

of Sámi cultural monuments and shipwrecks. The law states that all Sámi cultural heritage and shipwrecks older then one hundred years, are automatically protected. Because of this, protection statuses are continuously changing. This is challenging because of the number of protected sites and objects over time will become unmanageable.

The strength of Norwegian archaeology lies in the integrated relationship between management, research and public communication. The university museums play a key role in this. Future discussions will focus on how this integrated relationship can be strengthened further.

Acknowledgements

Thanks to Marte Spangen, advisor, *Museum of Cultural History*, for discussions, reading the manuscript and translating it into English, and thanks to Isa Trøim, Senior Advisor, *Directorate of Cultural Heritage (RA)*, for suggestions and critical reading of the manuscript, professor Brit Solli, *Museum of Cultural History* for comments, and Jessica McGraw for proofreading.

References

- A.W. Brøgger et alii 1932–1943, Arkeologiske landskapsundersøkelser i Norge, Oslo.
- W. BRUN 2001, Mellomalderarkeologi i teori og praksis: ei drafting av anvendte metoder ved tre utgravingsprosjekter i Norge, Tromsø.
- A. FASTELAND 2000, Arkeologisk registreringsarbeid gjennom skiftande tider, "Arkeo 2000", pp. 10-17.
- $\label{eq:Gamma} G = \textit{Den eldre Gulatingslova. Norrøne tekster 6}, \\ \text{utgitt ved B. EiTHUN, M. RINDAL og T.} \\ \text{ULSET, 1994, Oslo.}$
- H. GLØRSTAD, K. KALLHOVD 2011, Rescue archaeology initiated by research a contradiction in terms?, in G. BLANCQUAERT et alii (eds), Understanding the Past: A Matter of Surface-Area Acts of the XIIIth Session of the EAA Congress (Zadar 2007), BAR IS 2194, Oxford, pp. 113-127.
- G. GUSTAFSON 1906, Norges Oldtid: Mindesmærker og Oldsager. Gammel norsk kultur i tekst og billeder, Kristiania.
- R. HENRIKSEN 1994, Gårds- og bosetningsutvikling i Sørvest- og Øst-Norge : funksjonalisme og modellbruk i norsk arkeologisk gårdsforskning, Oslo.
- J. Holme 2001, Kulturminnevern lov, forvaltning, håndhevelse, "Økokrims skriftserie", 12, vol 2. Oslo.
- F. IVERSEN 2005, Verning og fjerning. Utilsiktede konsekvenser av kulturminneloven av 1905?, in K. BERGSVIK, A. ENGEVIK (eds), Fra funn til samfunn. Jernalderstudier tilegnet Bergljot Solberg på 70-årsdagen. UBAS, Nordisk, vol 1, Bergen, pp. 21-33.
- F. IVERSEN in press. Big bang, lordship or inheritance? Changes in the settlement structure on the threshold of the Merovingian Period, South-Eastern Norway, in J. KLAPSTE (ed), Papers from the Proceedings of RURALIA 2011, Leiden-Boston-Koln.

- J.G. JØRGENSEN 1993, Sagaoversettelser i Norge på 1500-tallet, "Collegium Medievale", 6.2, pp. 169-198.
- L = Den nyere Lands-Lov, utgiven av Kong Magnus Haakonsson. NqL II, 1–178.
- H.-E. LIDÉN 1991, Fra antikvitet til kulturminne – trekk av kulturminnevernets historie i Norge, Oslo.
- T. LØKEN, P. HEMDORFF 1996, Maskinell flateavdekking og utgravning av forhistoriske jordbruksboplasser: en metodisk innføring, Stavanger.
- NbL, G. Schøning utdypning (*Norsk biografisk leksikon*). Store norske leksikon. From: http://snl.no/Gerhard Schøning.
- N. NICOLAYSEN 1866, Norske fornlevninger. En oplysende fortegnelse over Norges fortidslevninger ældre end reformationen og henførte til hver sit sted, Kristiania.
- K. RØGEBERG et alii 2003–2008, Norge i 1743 : innberetninger som svar på 43 spørsmål fra Danske Kanselli, vol 1–5, Oslo.
- H. SHETELIG 1944, Norske museers historie : festskrift til Thor B. Kielland på 50-årsdagen 9.12.1944, Oslo.
- A. STEINNES 1972, AM 370 fol. Jonas Andersson frå Skånevik om fornminne i Bergen bispedømme 1626. Oslo.
- O. STORSLETTEN 1993, En arv i tre (De norske stavkirkene), Oslo.
- I. TRØIM, K. JOHANSEN 2011, Hvorfor faglig program?, "Primitive Tider", 13, pp. 113-115.
- TRØIM 1999, Arkeologisk forskning og det lovregulerte fornminnevernet – en studie av fornminnevernets utvikling i perioden 1905–1978. Varia 49, Oslo.