



DOCUMENTATION AND PRESERVATION OF GERMAN WWII AIRFIELDS IN FINLAND

Abstract

In this paper, we discuss the heritage and research potential of Second World War airfields in Finland. Our focus is on the airfields used by the German Luftwaffe during the Continuation War and Lapland War. The German troops initiated extensive construction projects at various Finnish airfields, leaving a permanent mark on the landscape. During the ensuing Finno-German Lapland War, German troops annihilated many of their own military installations, including airfields. Today, the ruins of demolished German military installations persist around the airfields. Despite their military historical significance, the airfields have been the subject of little academic research. Currently, research prospects are threatened by the lack of protection, as the sites are being compromised by looters and modern land use.

Keywords: Conflict archaeology, WWII, aviation archaeology, survey, metal detector.

Asiasanat: Konfliktiarkeologia, toinen maailmansota, ilmailuarkeologia, inventointi, metallinpaljastin.

INTRODUCTION

After the Winter War, fought between Finland and the Soviet Union in 1939–40, Finland faced a tense economic and political situation, as the Soviet Union had ceded vital territory and a new conflict was expected. In this troubled situation, Finland turned to Germany for military and material help. After giving Germany a transit permit through the country to occupied Norway in 1940, Finland gradually deepened its cooperation with Germany and eventually joined discussions on the upcoming attack against the Soviet Union. On June 22, 1941, German troops used Finnish territory for

their assault on the Soviet Union, which was followed by massive Soviet air raids targeting several Finnish cities in retaliation. On June 25, 1941, Finland joined in the attack, which would be called the Continuation War.

During the Continuation War in 1941–44, the Finns offered airfields to their German co-belligerents. As many of the airfields were somewhat modest in size, extensive construction projects were initiated at various airfields when taken over by the Germans. The Germans also built a handful of new, smaller airfields, especially around Lapland and Petsamo. The so-called ‘Luftgau Finland,’ i.e., the Finnish air district,

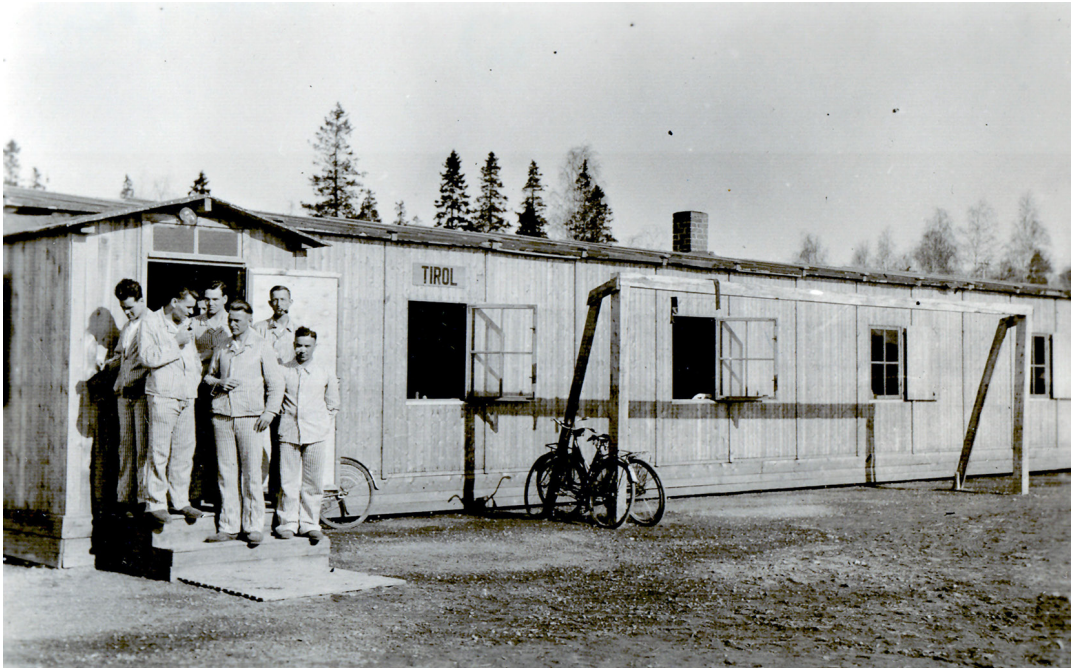


Figure 1. Wooden barracks built by Germans to be used as an infirmary. One of a few hundred constructions built by Germans in Kemi during the Continuation War. Photo: Teemu Väisänen's research collection.

was founded in 1941 to oversee at least 19 airfields that were located mostly in Lapland.¹

Hostilities between Finland and the USSR ended with a ceasefire, which was called on September 5, 1944. One of the conditions of this agreement was the expulsion, or disarming, of any German troops in Finnish territory. Retreating Germans destroyed or damaged multiple airfields, while some airfields were briefly used by the Germans during the subsequent Lapland War in 1944–45.² After the war, airfields used by the Germans were mainly taken over by the Finnish Air Force. While a number of airfields have remained in active military use ever since, many have been turned over to civilian aviation. Some were left disused and eventually abandoned in the woods.

Despite the military historical significance of the airfields, related international

and local academic research has been limited.³ Similarly, archeological research into Second World War (WWII) airfields and heritage is a relatively new field in Finland. Only during the past decade has research into 20th-century conflicts received increasing interest from both archeologists and the general public.⁴ Similarly, abroad, conflict archeology of the 20th century is enjoying increasing attention.⁵ Military encampments, airports, and battlefields from WWII are all currently being examined.

As part of the project *Luftgau Finland*, we focus in this paper on archeological knowledge of the German airfields in the territory of Finland, based on non-destructive approaches applied during fieldwork in 2022. We demonstrate in this article the potential of material culture as a source for studying the history of WWII, as well as the difficulties in relying on a solely nonde-

structive methodology. We also discuss the threats to and protection of these monuments, as the valuable material culture of WWII airfields is being compromised by modern land use and metal detectorists before it has been properly researched.

STATE OF KNOWLEDGE: ARCHEOLOGICAL RESEARCH AT WWII AIRFIELDS

Conflict archeology is the study of past human conflict through largely archeological means.⁶ A variety of establishments and sites fall under the scope of this sub-discipline, as it is seen to encompass not only the sites of battle, but also auxiliary facilities of the home front. Furthermore, research into airfields comes under another sub-discipline of archeology called aeroarcheology or aviation archeology. Within this discipline, crashed aircraft and monuments related to aviation, such as airports and their defense lines, are examined.⁷

Both disciplines are relatively new fields in archeology, especially in Finland, as archeological study of 20th-century conflicts was still widely considered unimportant at the beginning of the 21st century.⁸ Aviation archeology, on the other hand, was mostly conducted by amateurs until the beginning of the *Feldluftpark Pori* project in 2018.⁹ Besides the research done for that project, only three partial field surveys of WWII airfields have been conducted in Finland.¹⁰

As conflict archeology is being further implemented in Finland, the research potential of these wartime archeological sites is becoming better understood.¹¹ During wartime, military sites became temporary homes for a large number of people, and

they quickly began to alter their surroundings in order to create the required facilities. In addition to the remains of more complicated buildings like airplane hangars and bunkers, the military presence can also be traced based on field observations of the remains of simple accommodation such as dugouts, tents, or wooden houses; these building structures have sometimes survived, or left visible depressions in the terrain.¹²

In addition to the remains of constructions, the presence of soldiers can also be documented based on the archeological record of the sites under investigation. A significant source of knowledge is represented by waste objects that were created as a result of soldiers' stay in an area. Latrines and waste pits, especially those containing food products, were usually located relatively near the living quarters of the soldiers.

Due to the relatively modern nature of the research subjects, conflict archeology not only relies on material culture; oral histories, ethnographies, and documentary material serve as important complementary sources alongside the archeological approaches.¹³ By using these various sources, the multifocal approach to conflict archeology serves to formulate a more complete picture of wartime.

THREATS

The relatively short research history of conflict archeology in Finland does not come without problems, as WWII constructions, and even older historical heritage sites, have not traditionally been included in the scope of archeological field surveys. Only in 2009 did the National Board of Antiquities (now the Finnish Heritage Agency) make a



Figure 2. A German-built cellar in Pori after it had already been run over by excavators. Soon after, the construction was demolished and covered with sand. Photo: Teemu Väisänen.

landmark resolution to recognize historical localities as antiquities protected under the Finnish Antiquities Act.¹⁴ However, this generally applied only to sites older than one hundred years old.

In 2010–15, the Finnish Forest Administration, Metsähallitus, conducted extensive country-wide survey projects in their forest areas. During the survey, Metsähallitus decided to take into account all kinds of manmade constructions from the Stone Age to the 1960s, thus also documenting thousands of WWII-era structures.¹⁵ The sites were documented as “other cultural heritage sites” in the database of the Finnish Heritage Agency, meaning that they should be acknowledged in land-use planning but were not automatically protected. Following the survey by Metsähallitus, WWII constructions are now included within the scope of archeological surveys. Nevertheless, only a small number of WWII heritage sites in Finland have been documented, and the lack of survey data makes the undocumented sites more prone to damage, as they can be destroyed by modern land use without anyone’s knowledge.

However, even having information on the sites does not ensure their protection. As WWII heritage sites do not fall under the Finnish Antiquities Act due to their relatively young age, there has been little interest in preserving them from landowners or municipalities. When the Finnish Heritage Agency urged the city of Kemi to survey the WWII ruins surrounding the airfield in 2005, the city planning architect replied that, after a visit to the area, they had deemed “there was nothing to protect in the local master plan”.¹⁶ In Pori, a wartime cellar built by the Germans was destroyed as recently as 2022.

While wartime constructions are not protected under the Antiquities Act, other material culture is technically protected by law (84/1983), as all material culture left by militaries, whether Finnish or foreign, belong to the Finnish Defence Forces. However, as the Act is rarely enforced, the lack of protection makes WWII sites attractive to metal detectorists. Due to the relatively cheap prices of metal detectors and growing interest in the hobby, such a trend has already been seen in Finland.¹⁷



Figure 3. Historian Kalevi Mikkonen (in middle) showing Tomáš and Charles a large trove of porcelain pieces left behind by Germans, proving that not all “war junk” is cleaned away. Photo: Teemu Väisänen.

The detectorists have varying interests regarding their hobby. While some express a desire to interact with the history of the area, others are eager to benefit from the collectors’ market for war memorabilia.¹⁸ Among archeologists, the looting of WWII heritage has been recognized as a threat and is often the subject of professional discussions.¹⁹ There have also been efforts to cooperate with detectorists to preserve the research potential of military sites or to conduct research together. In Finland, such cooperation has been valuable, for example, in research on the Hanko front and Pori airfield.²⁰

So-called “war junk” has also been collected or disposed of by other factions, such as concerned locals and non-local environmentalists, such as the *Pidä Lappi Siistinä* association, usually in order to clean up the forests.²¹

DISCOVERING THE MATERIAL HERITAGE OF AIRFIELDS

The lack of protection and the threatened status of WWII constructions were among the primary reasons for starting research at

the Pori airfield in 2018. The project, called *Feldluftpark Pori*, included archeological excavations, archival studies, and interviews.²² The project concluded in 2022 with an exhibition at Satakunta Museum, where the excavation finds and survey results were displayed. The end of one project led to the launch of another, as the ongoing *Luftgau Finnland* research project aims to conduct similar research at other Luftwaffe airfields in Finland.

During thorough archival research at the German Military Archives, National Archives of Finland, and Finnish Air Force Museum in 2021–22, it was noted that the amount of archival material on German airfields was limited. Towards the end of the war, most material left by the German Luftwaffe was lost in air attacks or purposefully destroyed by Germans.²³ Thus, most airfields lack even a simple map that would portray German construction efforts, and most surviving maps do not have legends explaining the purpose of each building. While the use of historical aerial photos by the National Land Survey of Finland proved more fruitful, the aerial photos were often taken after the war, when the majority of constructions were destroyed,

and many ruins were hidden under vegetation.

It was evident that the real extent of the surviving constructions and ruins would only be seen in the field, and thus extensive field surveys of selected airfields were launched in summer 2022. In July and August 2022, Pudasjärvi and Utti airfields, as well as a small airfield at the Sturmbock-Stellung defensive line in Enontekiö, were mapped. In September 2022, the surveying of the airfields in Ivalo, Kaamanen, Kemi, Kemijärvi, Rovaniemi, Sodankylä, and Vuotso was started. Due to the extensive number of constructions, the survey of the latter set of airfields was not finished, but it still led to the documentation of hundreds of previously undocumented WWII constructions.

METHODOLOGY

The field surveys of the 2022 season were prepared by using existing maps and aerial photos from WWII or soon after, when the effects of German demolition works were still somewhat visible. These sources were digitized at the archives and georeferenced using QGIS software, after which it was possible to extract coordinates from constructions visible on the map. The data were further compared with modern LiDAR data, which complemented the sometimes insufficient historical source material.

The coordinates of the constructions visible on aerial photos and LiDAR were uploaded into a hand-held GPS device. The field survey was initiated with the goal of documenting at least these constructions, while keeping an eye out for anything else in between. While larger constructions were generally visible in aerial

photos and LiDAR data, smaller pits and walls required more fieldwalking. This might change in the future, as the National Land Survey of Finland is currently rescanning the Finnish landscape with an improved point density of at least 5 outgoing laser pulses per square meter, in comparison to the former 0.5 points per square meter. The updated LiDAR data will make it possible to detect even the smallest features, such as foxholes and latrine pits.²⁴

During the field research, daily updates were posted on the Facebook page of the *Luftgau Finnland* research project. This initiated discussion with the public, garnering tips on WWII constructions and their

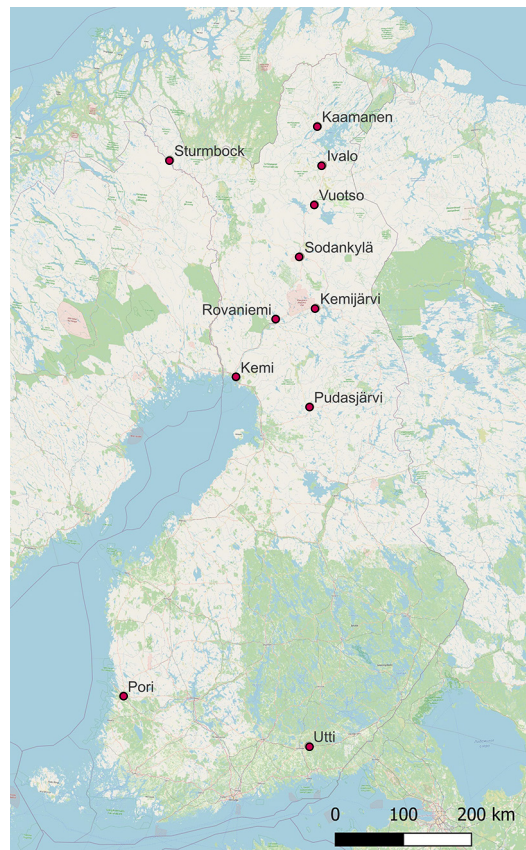


Figure 4. Locations of airfields visited in 2023 and thus mentioned in the article. Map: OpenStreetMap, modified by Teemu Väisänen.

later use. Such sites were visited especially in Kemi, where certain auxiliary facilities lay further from the airfield and were not included in wartime maps or easily recognized as German facilities in wartime aerial photos. In Kemijärvi, the local historical society reached out to share knowledge and memories regarding wartime facilities. There, certain sites were visited with elderly locals, who remembered sites such as the long-gone prisoner-of-war camp. At the campsite, the men shared their memories of wartime constructions and their ultimate demise due to gravel removal after the war.

SURVEY RESULTS AND OBSERVATIONS

All surveyed airfields had remaining WWII constructions around them, although the number of such constructions varied greatly depending on the airfield's wartime purpose and the extent of modern land use. Constructions that could be directly linked to aviation included aircraft hangars, aircraft shelters, taxiways, and anti-aircraft batteries. However, the airfields were also sur-

rounded by a large variety of dugouts, fox-holes, trenches, and other constructions.

During the field surveys, it became evident that archival studies and noninvasive methodologies are not always enough to compile a comprehensive profile of the airfields and their histories. As the wartime source material is often insufficient and the modern land use has already erased constructions and their remains, it is sometimes impossible to piece together the full extent of the airfields.

A field survey alone is also often not enough to fully determine the use of each construction. In theory, German constructions were built following military manuals and thus certain constructions can be determined based on their size and shape.²⁵ However, local varieties exist. For example, while the standing aircraft hangars and their remains in Pori and Kemi followed the same design, the aircraft shelters in both locations were slightly different in shape. Many airfields also included constructions that had no exact counterpart elsewhere.

Moreover, even determining the type of construction, such as a warehouse dugout, does not answer the question of what was



Figure 5. Tomáš Pancíř observing a still-standing wall of a German aircraft hangar in Kemi. Photo: Teemu Väisänen.



Figure 6. The aircraft shelters in Pudasjärvi are still visible, but it is not known whether they are remains of the destroyed German shelters or rebuilt Finnish shelters. Photo: Teemu Väisänen.

being stored in the warehouse. The purpose of certain constructions might also have changed during the war. Certain sites, such as Utti airfield, have also been used by the Finnish Air Force continuously since the war. At such sites, foxholes and trenches dug for modern military drills have mixed with wartime constructions, making them difficult to date without invasive methods. In Utti, trenches visible from WWII aerial photos have also been extended after the war, which further complicates their documentation and dating.

Archival material can often be a great complement to field surveys. This was the case with Pudasjärvi airfield, where the remains of five German aircraft shelters were found and documented. Later, a stray document from the National Archives of Finland revealed that the Germans had destroyed their aircraft shelters when retreating from Pudasjärvi airfield.²⁶ It was also stated in the document that the Finns aimed to re-

store the shelters. However, it is not known whether the shelters documented on the field are the remains of the destroyed German shelters or rebuilt Finnish shelters.

Cooperation with the public could be helpful in determining the use of certain buildings, as the elderly generation might still remember their wartime functions. However, there are also possible challenges related to such cooperation. The German military facilities were more or less off-limits to ordinary civilians, and thus the locals might have little knowledge of what truly lay within the base. Instead, people might share local rumors and stories as truths, further confusing the research. This challenge has also been seen in previous surveys. For example, during archival research conducted by Metsähallitus in the Ketola area of Kemijärvi, a German concrete bunker was determined to be a morgue, with a shelter for an ambulance next to it. However, according to a local person, the bunker was instead a cel-

lar adjoining the house of the commander of the base, and the shelter next to it was for the commander's private car.

Even in instances when individuals may remember something quite confidently, memory tends to fade over time and there is no guarantee that every detail they recall may be entirely correct when discussing events that have long since transpired. Despite the challenge of discerning fact from fiction when combining archival research and local memory, the multifocal approach to the investigation and documentation of these sites has served to create a more complete picture of them.

SIGNS OF DISTURBANCES

The biggest threat to WWII heritage at the visited airfields is modern land use.

For example, for Pori, the German map from 1943 includes drawings of 243 finished constructions around the airfield.²⁷ When comparing the georeferenced map to modern land use, it can be noted that the remains of 115 constructions are located under modern apartment blocks, infrastructure, or extended runways. Many constructions close to the highways or within the modern airfield might have also been buried under soil when the landscape was leveled or shifted for construction efforts. Similarly, other material culture, such as trash pits, has disappeared under modern apartment blocks.

In Lapland, modern land use of rural or abandoned airfields is not as extensive as in the bigger cities, but has still left a mark on all airfields visited. In particular, gravel removal and forest work were observed as major causes of the destruction of wartime

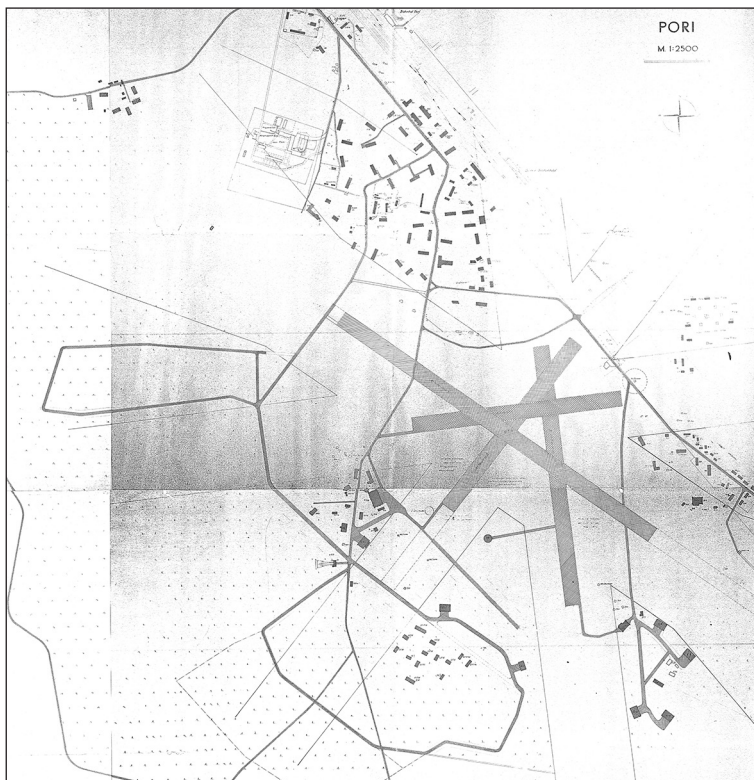


Figure 7. As-built plan (Bestandsplan) of Pori airfield features buildings that were completed, under construction, planned or demolished. The plan was updated at various dates in between 2.5.1942 and 30.3.1943. Archive of the Finnish Air Force Museum.

Figure 8. Some ruins, especially in Kemi and Rovaniemi, show signs of later recreational use. Based on the graffiti, the history of these ruins was common knowledge at least to some locals. Photo: Teemu Väisänen.



material culture. Likewise, the postwar upkeep of runways, as well as the construction of other infrastructure, had also often led to the destruction of wartime constructions. The extent of damage caused by modern land use to various airfields can only be measured when the surveys are complete, and only if there are existing WWII maps or aerial photographs to compare with.

Almost all visited airfields also had signs of visits by metal detectorists or other artifact hunters, such as uncovered shovel pits and pieces of metal objects left behind. Commonly found and broken artifacts, possibly not attractive enough to the finder, were often left behind. Such signs were observed even within areas where the use of metal detector was not permitted, such as the Pori National Urban Park and the premises of the Finnish Aviation Academy.

Among the airfields visited, the best preserved from looting and/or disturbance were those fenced off from the public, such as the airfield areas still in active use. For example, the areas restricted by the military at Utti airfield did not have a single visible shovel pit. However, even fencing might not always stop the most determined detectorists, as a certain hobbyist claimed that he

frequently sneaks through the fence to conduct his hobby at the Pori airfield.

A similar lack of concern about rules was also heard in other interactions with certain hobbyists, who often knew of their wrongdoings but insisted that their “research into WWII history” was more important than the local restrictions. However, such actions often come with consequences. When our research team asked for permission to use a metal detector at a certain German campsite that was on private land, the landowner declined, stating that he had grown tired of detectorists, who had constantly visited his lot without asking for a permit. Thus, the site remains visited only through so-called *nighthawking*, i.e., looting with a metal detector under cover of darkness.

During the field survey, it was also noted that some wartime constructions close to populated areas were destroyed or harmed in other ways. In Kemi, small German warehouses, which typically still had somewhat standing walls, were commonly used for waste disposal and some even had marks from burning trash. Similarly, many constructions in Kemi and Rovaniemi had marks from graffiti, sometimes hinting of at

least some level of knowledge of their wartime functions.

DISCUSSION

In 2022, ten airfields used by the German Luftwaffe during WWII were visited and surveyed fully or in part. While the airfields differ in their wartime and post-war use, the outcome of the surveys indicate that all airfields have a rich material culture that would be a valuable complementary source, alongside oral histories and documentary material, when researching the histories of the WWII airfields and their everyday use.

However, formulating a more complete picture of the localities can prove challenging, as noninvasive methods reveal little of the ruins and their original purpose. Similarly, the limited documentary material rarely answers more detailed, if any, questions about the surveyed constructions. Cooperation with the local communities could be helpful in determining the use of certain buildings, as the elderly generation might still remember their wartime functions. However, oral histories can also further complicate the picture if the memories are no longer clear. Furthermore, finding people with firsthand memories from wartime will be more challenging as time passes.

As time passes, the research into material culture also becomes more complicated, as modern land use and relic hunting continuously compromise areas with research potential. During the surveys, even rural and abandoned airfields were seen to be impacted, due to gravel removal and forestry work. Almost all visited airfields also had signs of visits by metal detectorists or other artifact hunters.

CONCLUSIONS

Conflict archeology in Finland is in transition. The WWII sites are currently acknowledged as cultural heritage and included in the scope of archeological surveys. However, their relatively late designation as such has led to the destruction of countless sites without proper documentation. The archeological surveys conducted before recent years have not taken into account the wartime heritage and the information on such sites has not been passed to local officials, meaning that the sites are prone to damage and destruction.

The upcoming update to the Antiquities Act does not seem to change the protection status of WWII sites and there is no indication of restricting the use of metal detectors in Finland, so the current status quo remains. It is also likely that restrictions would not be the solution, as they would only affect law-abiding detectorists and not those already bending or breaking the rules. One key to ensure the future research potential of WWII sites is cooperation between researchers and hobbyists. However, patience is required from all involved parties, as there are far more passionate hobbyists than archeologists specialized in conflict archeology in Finland.

At the same time, conflict archeology as a sub-discipline is showing its potential for broadening our knowledge of WWII with new material and information. While nondestructive surveys have limitations on uncovering detailed information on each construction, the survey results are vital for understanding the extent of the preserved WWII constructions, and the data may become the last glimpse into certain ruins before they are ultimately destroyed. In the absence of exact archival material and giv-

en the sometimes unreliable nature of local memory, archeological research can thus complement the overview of wartime activities, such as the German military presence at the airfields.

The field surveys will continue in 2023, when the mapping of airfields in Lapland will be finished. Afterwards, it will be possible to compare the survey results with existing WWII maps and aerial photographs in order to observe how many constructions have already been lost to land use changes. While plenty of important wartime heritage has already been lost without proper research, Finland still has a unique preservation status in comparison to many European countries, where the modern land use around airfields has been more extensive. However, it is important to note that changes can happen fast and it is vital to appreciate the uncontaminated archeological context of the preserved WWII sites, while there are still some left.

Teemu Väisänen

Degree Programme in Digital Culture, Landscape and Cultural Heritage, University of Turku
teemu.t.vaisanen@utu.fi

Tomáš Pancíř

Archaeological Institute, Faculty of Arts
University of South Bohemia

Charles Pauley

Virginia, United States

NOTES

- 1 Valtonen 1997: 27.
- 2 Peltonen 1983: 117.
- 3 Laakkonen et al. 2017: 319.
- 4 Seitsonen 2018: 23.
- 5 See Theune 2018; Doyle et al. 2013; Carpentier & Marcigny 2013; Early 2013.
- 6 Banks 2020: 192.
- 7 Daly 2015: 69; Rak 2010: 250; Vařeka 2013.
- 8 Seitsonen 2018: 18.
- 9 Seitsonen 2010: 105.
- 10 Jussila 2020; Laakso 2020; Rahtola & Laakso 2021.
- 11 Seitsonen & Herva 2011: 175.
- 12 Early 2013, 100–103.
- 13 Eg. Fast & Väisänen 2023; Moshenska 2019; Stichelbaut et al. 2021.
- 14 Niukkanen 2009: 91; Taivainen 2013: 26.
- 15 Taivainen 2013.
- 16 Mäkinen, 2006.
- 17 Seitsonen 2018: 120; Doyele et al. 2013: 137.
- 18 Thomas et al. 2015: 184; Seitsonen & Herva 2011: 178.
- 19 Van der Schriek & Van der Schriek 2014
- 20 Fast et al. 2021: 45; Väisänen 2019: 31
- 21 Thomas et al. 2016: 10.
- 22 Väisänen 2020.
- 23 Herwig 1972, 122.
- 24 Ikäheimo & Seitsonen 2021: 14.
- 25 Theune 2018: 93.
- 26 National Archives of Finland, T-19345/4.
- 27 Archive of the Finnish Air Force Museum.

REFERENCES

Archival sources

Archive of the Finnish Air Force Museum. Luftwaffe. Bestandsplan Pori. Dated 30.3.1943.

National Archives of Finland, T-19345/4. Salainen kirjeenvaihto ja muut asiakirjat (1940–1945).

Online sources

Mäkinen, Leo 2006. Saksalaishistoria häivytetty maisemasta. *Kaleva*. <https://www.kaleva.fi/sotahistoria-haivytetty-maisemasta/2062537>

Unpublished sources

Daly, Lisa M. 2015: *Aviation Archaeology of World War II Gander: An Examination of Military and Civilian Life at the Newfoundland Airport*. Doctoral Thesis. Department of Archaeology, Faculty of Arts. Memorial University of Newfoundland.

Häkälä, Piritta 2014. Kemijärvi, kulttuuri-perintöinventointi 2014. Metsähallitus.

Jussila, Timo 2020. Asikkala. Vesivehmaan lentokentän alueen arkeologinen inventointi 2020. Mikroliitti Oy.

Laakso, Ville 2020. Imatran yleiskaava 2040. Arkeologinen inventointi 2019–2020. Maanala.

Rahtola, Johanna & Laakso, Ville 2021. Kouvola Utti. Arkeologinen inventointi lentokentän asemakaava-alueella vuonna 2021. Maanala Oy.

Väisänen, Teemu 2019. *Porin lentotukikohdan kadotettu historia – paikkatieto arkeologian apuna*. Pro gradu -tutkielma. Helsingin yliopisto, kulttuurien osasto.

Literature

Banks, Iain. 2020. Conflict archaeology. Jr. Orser, A. Zarankin, P. Funari, S. Lawrence & J. Symonds (eds.), *The Routledge Handbook of Global Historical Archaeology*. Taylor and Francis, Milton: 192–214.

Carpentier, Vincent & Marcigny, Cyril 2013. Les camps de prisonniers allemands. Un nouveau champ de recherche pour l'archéologie française. *Archéopages*, 39: 64–69.

Doyle, Peter, Pringle, Jamie, Babits, Lawrence E. 2013. Stalag Luft III: The Archaeology of an Escaper's Camp. H. Mytum & G. Carr (eds.), *Prisoners of War. Contributions To Global Historical Archaeology*. Springer, New York: 129–144.

Early, Robert 2013. Excavating the World War II Prisoner of War camp at La Glacière, Cherbourg, Normandy. H. Mytum & G. Carr (eds.), *Prisoners of War. Contributions To Global Historical Archaeology*. Springer, New York: 95–115.

Fast, Jan, Väisänen, Teemu & Rikkinen, Aleks 2021. Kranaatiniskemien kertomaa. Bengtskärin taistelun jälkien inventointi. *Ta Plats*, 23: 40–46.

Fast, Jan & Väisänen, Teemu 2023. Three soldiers in a dugout: the modern conflict archaeology of a burnt down Second World War underground structure on the Hanko Front. A. Lahelma, M. Lavento, K. Mannermaa, E. Holmqvist & K. Nordqvist (eds.), *Moving northward. Professor Volker Heyd's Festschrift as he turns 60*. Monographs of the Archaeological Society of Finland 11: 351–363.

Herwig, Holger H. 1972. An Introduction to Military Archives in West Germany. *Military Affairs*, 36(4): 121–124.

Ikäheimo, Janne & Seitsonen, Oula 2021. Maanmittauslaitoksen uusi ja tarkempi laserkeilausaineisto (Laserkeilausaineisto 5p) kuoppajäännösten tutkimuksessa. *Muinaistutkija*, 2/2021: 2–18.

Laakkonen, Simo, Tucker, Richard P. & Vuorisalo, Timo 2017. Conclusions: World War II and Its Shadows. S. Laakkonen, R. P. Tucker & T. Vuorisalo (eds.), *The Long Shadows: A Global Environmental History of the Second World War*. Oregon State University Press, Corvallis: 315–332.

Moshenska, Gabriel 2019. *Material Cultures of Childhood in Second World War Britain*. Routledge, Abingdon.

Niukkanen, Marianna 2009. *Historiallisen ajan kiinteät muinaisjäännökset. Tunnistaminen ja suojele*. Museoviraston rakennushistorian osaston oppaita ja ohjeita 3. Museoviraston rakennushistorian osasto, Helsinki.

Peltonen, Martti 1983. Ilmasota saksalaisia vastaan 1944–1945. *Tiede ja ase*, 41, 104–162.

Rak, Michal 2010. Aeroarcheologie – výzkum havarovaných letounů. *Acta Fakulty filozofické Západočeské univerzity v Plzni*, 4/2010: 249–265.

Seitsonen, Oula 2010. Hylkyretkiä Pohjolaan. Book review. *Fennoscandia archaeologica XXVII*: 103–105.

Seitsonen, Oula & Herva, Vesa-Pekka 2011. Forgotten in the Wilderness: WWII German PoW Camps in Finnish Lapland. A. Myers & G. Moshenska (eds.), *Archaeologies of Internment*. Springer, New York: 171–90.

Seitsonen, Oula. 2018. *Digging Hitler's Arctic War: Archaeologies and Heritage of the Second World War German military presence in Finnish Lapland*. University of Helsinki, Helsinki.

Stichelbaut, Birger, Thomas, Suzie, Seitsonen, Oula, Gheyle, Wouter, De Mulder, Guy, Hem-

- minki, Ville & Gertjan, Plets 2021. Operation Northern Light: a remote sensing approach to Second World War Conflict archaeology in Northern Finland (Kilpisjärvi, Enontekiö). N. Saunders & P. Cornish (eds.), *Conflict Landscapes: Materiality and Meaning in Contested Places*. Routledge, Abingdon: 202–220.
- Taivainen, Jouni 2013. Muinaismuistolain suojelema tai ei – Metsien kulttuuriperintö on moninaista ja arvokasta. J. Enqvist, J. Ruohonen & M. Suhonen (eds.), *Arkeologipäivät 2012. Suomen muinaismuistolaki 50 vuotta: vetreä keski-ikäinen vai raihnainen vanhus & Arkeopeda - opetusta, opastusta, oppimista*. Suomen arkeologinen seura, Helsinki: 26–28.
- Theune, Claudia 2018. *A Shadow of War: Archaeological approaches to uncovering the darker sides of conflict from the 20th century*. Sidestone Press, Leiden.
- Thomas, Suzie, Wessman, Anna, Siltainsuu, Jenni & Perttola, Wesa 2015. Understanding metal detecting and archaeology in Finland. *Cuadernos de Prehistoria y Arqueología de la Universidad de Granada*, vol. 25: 187–199.
- Thomas, Suzie, Seitsonen, Oula & Herva, Vesa-Pekka 2016. Nazi memorabilia, dark heritage and treasure hunting as “alternative” tourism: Understanding the fascination with the material remains of World War II in Northern Finland. *Journal of Field Archaeology*, 41(3): 331–343.
- Valtonen, Hannu 1997. *Luftwaffen pohjoinen sivusta: Saksan ilmavoimat Suomessa ja Pohjois-Norjassa*. Keski-Suomen Ilmailumuseo, Jyväskylä.
- Van der Schriek, Jef & Van der Schriek, Max 2014. Metal Detecting: Friend or Foe of Conflict Archaeology? Investigation, Preservation and Destruction on WWII sites in the Netherlands. *Journal of Community Archaeology & Heritage* 1(3): 228–244.
- Vařeka, Pavel (ed.) 2013. *Archeologie 19. a 20. století. Přístupy Metody Témata*. Fakulta filozofická Západočeské univerzity v Plzni, Plzeň.
- Väisänen, Teemu 2020. Feldluftpark Pori: Luftwaffen huoltokenttää tutkimassa. *SKAS*, 1/2020: 64–68.