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# New Uses for Traditional Buildings: The Olive Oil Mills of the Karpas Peninsula, Cyprus

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#### **ABSTRACT**

Traditional agro-industrial buildings in rural areas reflect the way of life of past communities and their dependence on agriculture. Although conservation is critical for the transfer of knowledge about past generations and in sustaining community identity and development, many of these building types worldwide are threa-tened by dereliction due to the emergence of new technologies that cannot be housed in the old buildings. This study suggests that their reuse for tourism purposes, especially in countries of limited resources and opportunities, can help rural development by attract- ing both people and investment. The claim is exemplified by the case of traditional olive oil mills in Cyprus, which are considered significant elements of the rural landscape. The research focuses on the Karpas Peninsula, where the majority of traditional olive mills are either derelict or in poor condition, though where some have already been destroyed. A brief literature review of industrial heri-tage and alternative tourism forms the basis for the evaluation of the case study. The research highlights the significance of olives and olive oil for the Cypriot community, and discusses the current social and economic dynamics of the Karpas Peninsula through an exam-ination of the potential of 18 traditional olive mills. The study suggests the reuse of traditional olive mills through alternative tourism and the development of thematic heritage routes.

#### **KEYWORDS**

Industrial heritage; reuse; alternative tourism; policymaking; olive oil mill; Cyprus

#### INTRODUCTION

The dereliction of industrial buildings due to the emergence of new technologies raises the issue of future uses for them. Although some of the better examples are now protected under law, other more modest examples have fallen into disrepair through neglect. In order to ensure the sustainability of conservation policies, appropriate refunctioning of the buildings is essential. If it is not possible to continue their original use, the buildings should be assigned compatible new uses that will benefit local communities. Pe-using agro-industrial buildings can have positive benefits such as increasing employment opportunities and generating economic activity. One approach to this is the promotion of alternative rural tourism, which can offer benefits to the economy, to heritage protection, to local communities and to the wider society. The main sociocultural benefit in both rural and declining industrial areas is the recognition and celebration of past ways of life, giving relevance to the lives and memories of older inhabitants, and linking those lives to the present day and to the future.

Traditional olive oil mills in Cyprus offer a challenging case for sustainable reuse and their situation calls for urgent conservation measures. They once played a significant role in the rural areas of Cyprus, and represent a rural lifestyle, the technology of their time and the traditional production process of olive harvesting. Although olive oil is still an

important ingredient of the local cuisine, the harvesting and oil production system has been replaced by new technologies over the last seven decades, leaving the traditional mills abandoned. Given the cultural significance of these buildings and the current political situation of northern Cyprus, 11 this study aims to find ways to link potential new uses for derelict olive oil mills which is consistent with conservation aims, economically attractive and offers an alternative to the popular sea-sand-sun holiday. It argues that the sustainable conservation of rural olive oil mills could take place within the 'alternative rural tourism context' in the Karpas, a region that contains the largest olive groves and many traditional olive oil mills.

According to the administrative divisions of northern Cyprus (see Figure 1), the study area – geographically known as the Karpas Peninsula – is within the boundaries of İskele County. The region has been one of the main areas of olive farming and olive oil production in Cyprus. Olive oil production has ancient origins and developed into an industrial-scale activity due to its favourable geological environment and climate. It is an important part of Mediterranean culture. Nevertheless, the use of machinery, the increase in labour costs, the high cost of maintenance of olive groves and the broad movement of people from rural to urban areas in the region recently have resulted in the loss of olive oil production. Among 35 villages situated in the region, 20 olive oil mills were found in 14 villages (see Figure 1). Of these, 18 olive oil mills were operating until the mid-twentieth century but most are now derelict or in poor condition with the exception of three mills – two of which are museums and one that has been converted for residential use. Two mills Kaplıca and Dipkarpaz 2 could not be included for measurement and analysis due to being full of straw.

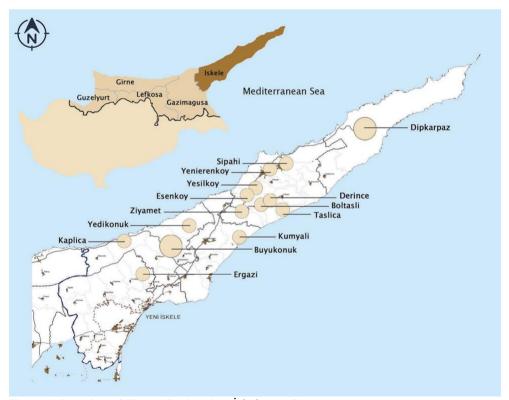


Figure 1. Location of Karpaz Peninsula – İskele- on Cyprus map

Within this context, this study is structured under six headings. The present section provides a background to the research. It is followed by a thorough literature review

covering the conservation of industrial heritage focusing on agro-industrial and specifically the olive associated heritage sites and their links to tourism. The third section provides the methodologies used in the research and site survey. The case study area and the surveyed olive oil mills are examined under the fourth heading. This section first provides the current policy context for heritage preservation and development in the case study area, and then describes the architectural characteristics of olive oil mills. The evaluation of their reuse potential is set out in the fifth section. The conclusion suggests that the conservation and adaptive reuse of traditional olive mills can attract investment and help sustainable conservation through connecting them via cultural—heritage—thematic routes as products of rural tourism.

#### Literature Review

The original architectural, historical, social, technological and scientific values where the manufacture of products and services are performed through mechanical means and mechanisms can be defined as industrial heritage. Stores, farmhouses, factories, stations, workshops and mining sites are some of the heritage sites that can be studied under the heading of industrial heritage. Their conservation has in many cases been instigated since the inauguration of The International Committee for the Conservation of Industrial Heritage (TICCIH) in the UK in 1979.

The European Route of Industrial Heritage (ERIH) aims to transform former industrial buildings and sites into touristic attractions by identifying 'industrial heritage routes' and 'destinations', which have authentic historical and symbolic values. Through the agency of these routes and destinations, public transportation networks by road, cycling, sea, private transportation networks, connections for cars and tour buses can all provided. <sup>14</sup> The heritage route itself is described as a mode of presentation that connects objects and places according to an established criterion or theme which is a distinctive and symbolic whilst representing the regional cultural heritage of a given region, community, ethnic group, national minority or a nation. <sup>15</sup>

ERIH categorises industrial heritage routes under two main heading which are thematic (iron, textiles, water, mining, landscape) and regional (buildings that represent European history of industrial revolution). There are 18 regional routes – 11 in Germany, 4 in the UK, 2 in Holland and 1 each in Austria, Spain and Poland that have been established by 2018. Although North Cyprus is not a member of the EU or ERIH; The Museum of the History of Cypriot Coinage in Nicosia and the Cyprus Jewellers' Museum in Nicosia are incorporated as destinations into the Southern Cyprus route of this industry. Olive and olive oil production is considered under the title of 'production' within the themes identified by ERIH, and the Museum of Industrial Olive Oil production in Greece (Agia Paraskevi – Lesvos) is the only olive oil production building on the list. ERIH added the building to the list not only because of its architectural features (the machines have been restored to their original condition), but also because it emphasises the importance of olives and olive oil production so that visitors can appreciate the cultural and social traditions of the villagers.

Another example that is not included in ERIH but has been suggested by Turkey's Tourism Strategy 2023 report is an 'Olive corridor'. This has been designated as one of the seven 'Tourism Development Corridors' proposed under the strategy of 'Developing touristic routes based on specified themes by reorganizing its natural and cultural texture' These 'thematic corridors' produce healthy and gastronomic products such as grape, carob and olives producing carob juice, wine and olive oil. 17

Olive oil products such as black and green olive soap, oil and its related uses; grape products such as wine, grape molasses, grape juice; carob and its products such as the juice of the carob pod known as 'carob honey' and their warehouses have the potential to become the focus for tourism representing the cultural heritage of the Karpas area. All these products and their buildings, such as olive oil mills, grape yards and carob warehouses, in the Karpas area can be promoted through thematic heritage routes. They can bring together a variety of activities and attractions under a unified theme and provide micro entrepreneurial opportunities through the development of additional products and services. <sup>19,20,21</sup> This type of tourism has the potential to bring benefits to the area supporting local economies and possibly mitigating the migration from rural area. <sup>22</sup>

The conservation of rural settlements needs to transform neglected conditions through economic innovation and technological development in agriculture in order to maintain their present communities and encourage those who have left to return. Rural tourism requiring minimal investment from government or investors can be considered a tool of rural development<sup>23</sup> and the source of profit in rural environments. Visitors are interested in seeing authentic rural heritage and products within a local context.<sup>24</sup> The promotion of local products, lifestyles and landscapes acts as mean to generate alternative tourism that helps to preserve authentic values. In this context, alternative tourism, sustainable tourism and agro-industrial tourism have been used in European rural areas as a part of their conservation—adaptation strategies.

The common characteristics of these tourism types are that they respect and protect local social, physical and cultural values. In this regard, the National Physical Plan-Turkish Republic of Northern Cyprus (TRNC 2015) highlighted the lack of grant funding for improving cultural resources, a lack of resources to produce a register of cultural built heritage (especially those located in rural sites such as warehouses, olive oil mills, silo buildings), and the construction of poorly designed new buildings in the rural land-scapes in Cyprus. The plan also highlighted the declining tourism sector and lack of awareness about the importance of cultural heritage sites that resulted in damage and led to obsolescence in the Karpas region. Consequently, the conservation of rural heritage is seen as essential to promote the sustainability of rural villages through tourism in the area.

## Methodology

The methodology of the study comprises of five main parts.

The first element was literature review, which covered industrial heritage, alternative tourism, olive oil processes and mills in Cyprus and elsewhere. It was intended to form an evidence base for the potential conservation and reuse of olive oil mills through the examination of previous studies on the subject and the current policy context in northern Cyprus. The results of the review revealed that industrial heritage in the context of alternative tourism are widely used in Europe for promoting rural sites. For the conservation of rural heritage in Cyprus, there is only one study and that covers rural carob warehouses.<sup>27,28</sup>

The second aspect, archive research, sought to find the legal conservation status of the mill buildings, archival documents and old photographs that were investigated at the Department of Antiquities. The research revealed that 3 of the 18 buildings, which are located in the garden of churches, have been listed and have already been restored, while the other 15 mills have not been designated as heritage assets.

The third component, fieldwork, was restricted by the geographical boundaries, framed according to the current political dynamics in which Cyprus is divided into

two sectors: Greek Cypriots living in southern part and Turkish Cypriots in the north. Because of potential legal complications between the two sectors and the difficulties of access to the case study buildings, the fieldwork was carried out in the northern part Cyprus. According to the Agricultural Master Plan prepared in 2017, the Karpas Peninsula contains the largest number of olive groves in northern Cyprus, including 20 buildings in urgent need of attention. Of these, 18 of the 20 mills were studied with 2 of them inaccessible. These 18 mills include technical equipment such as stones, presses and engines.

Three architects, specialising in urban conservation, architectural conservation and structural analysis, carried out the field survey. The major part of the fieldwork was completed between June and August 2017 with some extra visits later in September and November. The fieldwork covered the examination of buildings and interviews with the local population. First, the locations of olive oil mills in the study area were determined and location maps were prepared. The observations were recorded in inventory charts, which included photographs, sketches and notes on physical and structural properties of the buildings together with the level of deterioration. The accessible olive oil mills were measured; plans, sections and elevations were prepared at 1/100 scale. Interviews were carried out with the responsible local authorities, owners and/or locals, in order to obtain information about olive oil mills and understand the needs of the villages in which they were located.

In the fourth element, analysis and evaluation of data, the olive oil mills were classified according to their village locations, their architectural characteristics and the machinery they housed in order to form an architectural typology. The needs of the villages were determined through interviews and current policy context analysis. The opportunities for the reuse of olive oil mills were evaluated using a holistic approach, which considered them both individually and as a group.

The final aspect of the survey was the conservation decision. In order to present the heritage significance of olive oil mills, a holistic conservation approach was developed within the context of 'alternative tourism' and a thematic route (olive route). Then, proposals for the reuse of each building were identified together with conservation proposals for addressing material decay and structural failures.

## Tourism Potentials of Olive Oil Mills in Karpas Area – Thematic Routes

#### Karpas Region and Its Tourism Potential

The Karpas Peninsula is an area of unspoilt landscapes and traditional values where tourists may experience rural villages and their architectural character, local life style, agricultural and fishery. The peninsular accounts for 39% of the olives cultivated throughout northern Cyprus, which is why olives have such a significant social value in the region.

In the Karpas Area Local Development Strategy (2010),<sup>29</sup> traditional agricultural production is very important to diversifying economic activities in rural areas and villages; this can help to promote entrepreneurial activity and develop the economic structure of the region through the creation of new employment opportunities. The region has recently witnessed a growing number of entrepreneurs and associations established in the eco/rural tourism sector, and a participative approach to local rural development. According to the development strategy, the activities that are supported and funded by the authorities in the Karpas area are:

- Set-up of new tourism-related initiatives (diving centres, sport-angling, horse-riding, biking, bird/flora/fauna watching, cultural heritage and wine-gastronomic tours)
- Equipping traditional fishing boats with safety measures to offer fishing trips to tourists.
- Restoring and/or furnishing traditional and cultural sites of interest for rural tourism purposes (old cellars, olive oil mills, carob houses, wine/zivania tasting rooms)
- Renovation/Upgrade, refurbishment of existing farm/village buildings for tourist purposes (Rural tourist pensions and small hotels (with a minimum of 5 and a maximum of 10 bedrooms), traditional restaurants, workshops and selling points for local products and handicrafts).

The Agricultural Master Plan (2017)<sup>30</sup> presents the current situation in Northern Cyprus of plant and animal production, their problems and potential through SWOT analyses. The plan has a long section related to the Karpas area's strengths and opportunities. It was prepared to increase the competitiveness of the agriculture sector by providing a direction for natural resources and improvements to the living conditions of rural communities. Based on these aims, the following principles were proposed:

- Improving the domestic production and preservation of market opportunities with related laws.
- Increasing the quality of export products and their branding in order to establish a competitive agricultural sector,
- Developing environmental friendly, organic farming practices and encouraging certified production,
  - Restructuring village cooperatives,
  - Aiming to establish a sector that cares about rural development,
  - Supporting incentives and restructuring of loans used in agriculture and animal production,
  - Protection of natural and built environment,
  - Proposing long-medium-short-term development activities,
  - Incorporating agriculture and fisheries' activities with other sectors such as environment, tourism and industry,
  - The protection of agricultural land and the prevention of its unplanned use,
  - Providing public, private and university consultancy services.

Agro-tourism was identified for its potential to contribute to the integration of deprived rural areas and to narrow the gap that endures between rural and urban areas. The Karpas region can be regarded as a high-priority area for an agro-tourism development strategy<sup>31,32</sup> for the following reasons:

- Its ecological and cultural value,
- The attractiveness of its beaches, which brings with it the threat of unsustainable mass tourism development,
- Problems of depopulation and low income in the villages,
- Agricultural decline due to lack of markets for local products.

The National Physical Plan (2015)<sup>33</sup> states that local micro economies will be promoted with enterprises such as hotels, pensions, restaurants and cafes that can be operated by local villagers and can contribute to the economy of the rural Karpas region. The plan also promotes higher standards in new building designs, improving social and technical

infrastructures and encourages promotional activities such as festivals that present traditional and local foods, drinks and handcrafts. The plan aimed to develop and diversify the economy, and focuses more on agriculture and tourism as follows:

- Local micro and small enterprises that are related to tourism and agriculture will be supported and encouraged,
- Natural and cultural heritage will be conserved, developed and used,
- Social and technical infrastructure will be developed and encouraged for increasing the quality of life in these areas,
- Cultural tourism will be developed and encouraged.<sup>34</sup>

The transformation of olive oil mills as examples of industrial heritage presents olives and olive oil production as a cultural and social tradition with the potential to create sustainable rural tourism. However, agriculture in general and production in particular has declined in recent decades in Karpas. The main products are barley, milk and meat (from both sheep and goats) and, in specific areas olive, potatoes, carob, grapes and honey. Since the local community has less knowledge of alternative tourism, they lacked strong motivation to participate in the development process of rural tourism in the region.

#### Current Conservation Policy Framework

The existing laws and regulations currently do little to support the natural and cultural significance of the area and to promote eco- and agro- tourism. Initially, the British established conservation policies during the colonial period (1878–1960). Most of these focused on ancient monuments, as elsewhere in Europe, and only related to buildings, monuments and archaeological remains built prior to 1700. This 'Antiquities Law' which was enacted in 1949 (Cap.31) was superseded by an 'Ancient Monuments Law' in 1975, which was still rather limited in scope and focused on the conservation of monuments. Ancient Monuments law (35/75) was replaced in 1994 by a new 'Antiquities Law' which was administered by a 'Board of Antiquities' and had support from the Antiquities Department. This went further by designating conservation areas in addition to establishing the grading of heritage resources and defining the rights and duties of owners and antiquities authorities.

From a broader perspective, the current Town Planning Law of 1989 (relating to both urban and rural areas) provides the framework for the above policies including a grant scheme for owners of buildings that have been included on the historic buildings register. It is also charged with establishing development control policies, designating conservation areas and developing conservation plans.

As zoning plans are the responsibility of the Town Planning Department, municipalities are prevented from overseeing the conservation of land and natural resources locally within the Karpas region.

Although the Antiquities Law (Cap.31) and the Town Planning Law (55/89) are directly related to the conservation of buildings and sites, the action plans cannot be implemented due to the lack of a co-ordination among the responsible stakeholders and lack of technicians and expertise in conservation. The Town Planning department, which should be working at a long- term strategic level, can be negatively affected by such variations.<sup>38</sup> Also, the proposals set out in this paper call for a more robust policy framework for the conservation and management of rural settlements in North Cyprus.

It is evident that olive cultivation and olive oil production, together with carob and carob juice, grape and grape juice and marmalade production, have been carried out for

centuries in the Karpas region. In part this is due to its fertile soil, which provides a reason why the income of most families derived from agriculture. It makes the region a particularly suitable destination for agro-tourism (oleo tourism) and suggests the potential of a themed heritage route, for example, focusing on olive oil production. With comprehensive planning, olive oil mills, which are a symbol of the cultural and industrial life of such communities, may be converted and used in the promotion of tourism. With this in mind, the architectural features of 18 mills have been recorded in a way which highlights their significance, setting, plan layout, architectural elements, structural system, and construction techniques, machinery, alterations, material decay and structural damage.<sup>39</sup>

## Cultural Significance of Olive Oil Mills

Olive oil mill buildings are examples of food processing and were therefore an economic resource, which represents past generations, their life styles and production methods. In the past, they had a positive impact on the economic development for villages and villagers. Therefore, mills have an important symbolic value since they reflect the importance of olive oil production to the Cypriot lifestyle.

The olive oil mills studied in this research comprise an important part of the island's rural industrial archaeology. Most of these buildings are currently derelict. They are no longer used as mills, no longer required for this purpose and have been abandoned. Therefore, the conservation process implies identifying adaptive reuse opportunities that will respect their emotional, historical, technical and architectural values.

From the outset, the architectural character and the age of the buildings call for their conservation. Representing the main type of natural stone used as traditional building material in Cyprus, yellow-cut stone, mainly the calcarenites, is used for external and internal walls, and as modest single-storey stone units, they represent the rural character of the Karpas peninsula and allow people to understand and appreciate more of the architectural features of the period in which they were built. These characteristics provide information about earlier patterns of life and the Cypriot production. Rural mill buildings are examples of the technology and use of traditional construction materials and their techniques. Since most of the mills still retain their original mechanisms, though fallen into disuse, they retain their historical importance.

## Ownership, Setting and the Architecture of Olive Mills

Due to the topography of the region, the olive groves and mills in the Karpas peninsula are located close to nearby mountain ranges. Here, we define three different settings and three types of ownership (Table 1).

The first category refers to those located within the courtyard gardens of the early Christian and Byzantine churches. <sup>40</sup> These were harvested and generated income from the sale of the oil and it is likely that this continued until quite recently. As these fell within the boundaries of the church, they are now registered and administered by the Evkaf Foundation who are responsible for managing property formerly owned by past administrations such as those built during the Greek, Roman, Byzantine, Lusignan, Venetian, Ottoman and British periods prior to the establishment of the Republic of Cyprus in 1960. The Evkaf Foundation was established during Ottoman times but continues to manage a large portfolio of property.

Table 1. Ownership status and location of studied olive oil mills.

Village	Ownership	Location	
Taşlıca	Cyprus Evkaf foundation (3)	Church (3)	
Esenköy			
Kumyalı			
Ziyamet	Village cooperative (9)	Village centre (11)	
Sipahi			
Yenierenköy			
Yedikonuk			
Büyükkonuk 2,3,4			
Dipkarpaz 1			
Boltaşlı			
Derince	Private (2)		
Büyükkonuk 1	,		
Büyükkonuk 5	Private (4)	House garden (4)	
Yeşilköy	,	<b>5</b> ( )	
Ergazi 1,2			
Total 18			
10 10			

The second category consists of those olive mills that are located within village centres, with most villages containing one or two mills. Out of our sample of 18 mills, 10 are owned by village cooperatives, a system established during the British period that still remains today. The first cooperative was created by local villagers in 1909, and this was followed in 1914 by the 'Law on Cooperatives'. In order to purchase the necessary machinery for agricultural production, most of which were developed during the British period, cooperatives were set up in order to meet the costs. Cooperatives were not limited solely to agricultural production, but also used in other sectors such as retail and wholesale marketing, import/export, housing and banking.

The third setting refers to olive presses that were located in the courtyards of larger houses owned by wealthy families. These mills tended to be smaller but allowed oil extraction to be carried out locally. Some of these mills in the current study are still privately owned (Buyukkonuk 5, 1, Yesilkoy, and Ergazi 1 and 2).

#### Architectural Character Appraisal

The architectural character of the mills is largely dependent upon the machinery used to extract the oil. At the simplest pre-industrial level, the olives were crushed by a stone wheel, which was pulled around a stone channel either by donkeys or by local people. These were generally sited out in the open but sometimes had a canopy to protect against the elements. Generally, these were sited in private gardens. Other examples saw the mill and press housed within small single-storey rectangular buildings that later grew in size but maintained their simplicity. These buildings were generally constructed of stone or less commonly mud brick with low-angle pitched roofs. Some have been extended over the years either due a need for extra accommodation or to repair structural failure. These additions have been recorded elsewhere.<sup>41</sup>

The buildings in the case study have been categorised under two types:

## Type A

This refers to buildings housing pre-industrial machinery. These were constructed of stone or mud brick and were typically either  $5.5 \times 6$  m or  $6 \times 7$  m in plan (Figure 2) with a flat or pitched roof, supported by an arch or a timber ridge beam (Table 2).

## Type B

These were larger – typically  $8 \times 16$  m (Figure 3) as they had to house more sophisticated diesel or electric engines, and often incorporated a storage area. As with the Type A mills, the roofs are either flat or pitched with some of the larger examples incorporating a timber truss (Table 3).

The measured drawings produced for this paper show the buildings as they existed at the time of the survey.

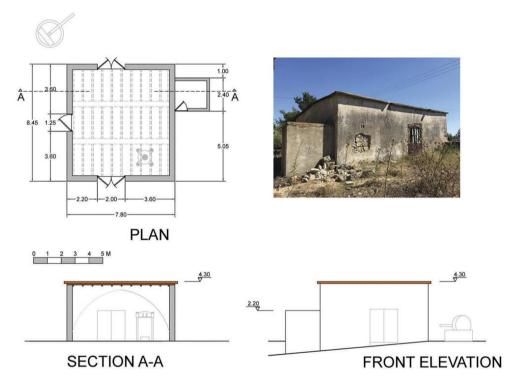


Figure 2. Type A – Pre-industrial mill Taslica.

#### Evaluation of Reuse Potential for Tourism Purposes

Alternative tourism in the Karpas area, which may include olive cultivation and production, grape cultivation and grape paste production, and carob cultivation and carob honey (pekmez) production, should play an equal part in all tourism activities in order to implement a comprehensive tourism strategy. These activities have existed in the Karpas region for centuries and constitute an important part of the regions cultural heritage.

The 'sun and sea' model of mass tourism over the past 15 years has caused untold damage to the biodiversity and affected local conservation in the Karpas region. <sup>42</sup> This paper proposes an alternative and more sustainable approach, which is embedded in local culture. The past piecemeal approach to the conservation of such cultural heritage has not brought benefits in cultural, social or economic terms. The current state of the buildings together with the surrounding natural and built environment, accessibility and architectural characteristics are all-important components in such a comprehensive approach.

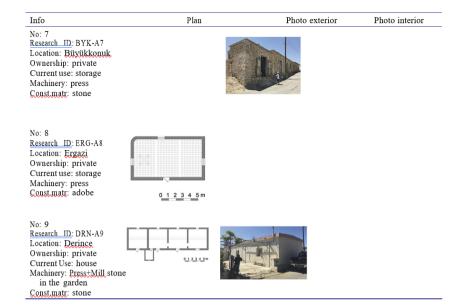
In the process of re-using the olive oil mills for alternative tourism (agro-tourism), the buildings may need to be enhanced. Initially, this will entail the restoration of the mills including walls, architectural elements, roofs and technical equipment. Following this,

new annexes may be required dependent upon their new function (tasting, marketing, sales units, cooking, workspaces, education spaces). The proposals should be developed within the context of the thematic olive route suggested above. So far, 2 of 18 identified mills (Dipkarpaz and Buyukkonuk 4) have already been transformed into new functions as museums; 4 out of the 18 mills have lost their authenticity due to earlier interventions (Derince, Buyukkonuk 2 and 3) whilst one has been demolished (Buyukkonuk 5). The four mill buildings that cannot be restored to reflect their historic character are not considered appropriate to the thematic route, whilst the four privately owned mills (Ergazi 1, 2, Yesilkov and Buyukkonuk 5 (already destroyed) have also been excluded from the route due to their ownership status. It is proposed that the olive route would include 11 stops – starting from Buyukkonuk (village has 2 stopping points) and ending in Dipkarpaz village (Figure 4). An information panel can be provided that might include information about location and address of the mills, their construction system, building material and machinery type; location where tourists can see the processing of local products such as grape, carob juice and olive oil and the archaeological and architectural heritage sites near the mills. In this way, both olive landscapes and vernacular contexts (natural and man-made) can be experienced along the route.

Table 2. A-type olive oil mills (with pre-industrial machinery).

Plan Info NO:1 Research ID: YSK-A1 Location: Yesilköy Ownership: private Current use: Derelict machinery: Press+Mill stone in the garden Const.matr: stone No: 2 Cannot enter Research ID: ESK-A2 Location: Esenköy Ownership: Eykaf Current use: storage Machinery: press Const.matr: stone Research ID: BLT-A3 Location: Boltasli Ownership: cooperative Current use: storage machinery: Press+Mill stone in the garden Const.matr: stone No: 4 Research ID: TSL-A4 Location: Taslica Ownership: Eykaf Current use: Storage machinery: Press+mill stone in the garden of church const.matr: stone No: 5 Research ID: BYK-A5 Location: Büyükkonuk Ownership: cooperative 0 1 2 3 4 5 m Current use: museum&workshop Machinery: pres+mill stone const.matr:adobe No: 6 Research ID: BYK-A6
Location: Büyükkonuk
Ownership: private Current use: Derelict Machinery: Press

Const.matr: adobe



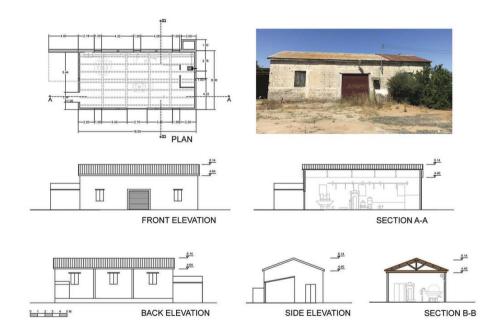


Figure 3. Type B – Industrial mill – Sipahi.

Γable 3. B-type olive of Info	Plan	Photo exterior	Photo interior
No: 1 Research_ID: ERG-B1 Location: ergazi Ownership: private Current use: storage Machinery: industrial machinery Const.matr; adobe	0 1 2 3 4 5m		
No: 2 Research ID: BYK-B2 Location: Büyükkonuk Ownership: cooperative Current use: storage Machinery: industrial machinery Const.matr: stone			
No: 3 Research ID: BYK-B3 Location: Büyükkonuk Ownership: cooperative Current use: derelict Machinery: industrial machinery Const.matr: stone&adobe	251 B		
No: 4 Research ID: YDK-B4 Location: Yedikonuk Ownership: private Current use: storage Machinery: industrial machinery Const.matr: stone	012345		A A
No: 5 Research_ID: KMY-B5 Location: Kumyali Ownership: Eykaf Current Use: storage Machinery: Industrial machinery Const.matr: stone	012345		
No: 6 Research ID: ZYM-B6 Location: Ziyamet Ownership: private Current use: storage Machinery: industrial machinery Const.matr: stone		0.12.3.4.5m	
No: 7  Research ID: YNE-B7  Location: Yenierenköy  Ownership: Cooperative  Current use: derelict  Machinery:: industrial machiner  Const.matr: stone&sea-sand brief		000	
Info	Plan	Photo exterior	Photo interior
No: 8 Research ID: SPH-B8 Location: Sipahi Ownership: cooperative Current use: derelict Machinery: industrial machinery Const.matr: stone&sea-sand bric		222	
No: 9			

No: 9
Research ID: DOK-B10
Location: Dipkarpaz
Ownership: Cooperative
Current use: museum
Machinery: industrial
machinery
Const.matr. stone







The proposed routes could be advertised and publicised in tourist brochures and signage. It could also, with the support of local authorities, be integrated into the ERIH, where it would be eligible to apply for EU support. In view of current tourism trends, the reuse of inactive mill buildings as industrial heritage assets has significant potential to contribute to tourist activities in their settings. The following reuse proposals are suggested for 11 of them (Tables 4 and 5).

The visual evaluation of the olive oil mills in the Karpas Peninsula has shown that much of the material decay has been caused by natural and human factors, principally neglect through abandonment. The disappearance or loss of some parts of the windows, doors and roofs, and the deterioration of the bonding of the stone masonry has led to water penetration, plant growth, animal attacks and corrosion of iron equipment. Inappropriate materials have been employed such as cement mortar and plastering in repairs. In order to begin the restoration process, the replacement of lost stone, doors and windows, the removal of unwanted plant material, treating the corrosion from iron machinery and window bars and treating the mould growth on the façade should be carried out.

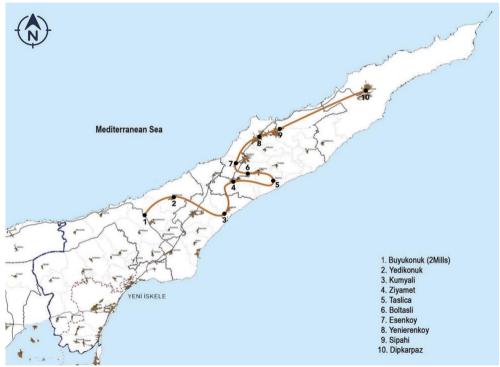


Figure 4. Eleven stops along the proposed Oleo tourism route in Karpas.

Both major and minor structural damage have been assessed. Major damage includes cracks which are larger than 1 cm and some collapsed parts in the structural walls. These will require partial reconstruction of the collapsed sections, the insertion of a frame system to carry the roof, reconstruction of the original roof structure and repair of the walls depending on the wall material. Minor structural damage with smaller cracks and no collapsed parts will not require any reconstruction or the use of anchors and metal tendons to stabilise walls.

The measures against material and structural damage, as listed above, could allow the buildings to be appreciated and enjoyed within the context of thematic olive route and act

as a catalyst for further development. Along this route, the villages could create additional commercial and cultural facilities and tourist accommodation in addition to the oliverelated services. This type of tourism has the potential to stimulate the participation of different local stakeholders such as farmers, villagers, village cooperatives and small businesses, which were already demonstrated by some initatives such as family-run guest-houses, boutique hotels, traditional handicraft and agricultural goods production and sales. Such initiatives have been supported by EU through Rural Development Sector Programme specifically tailored Turkish Cypriot community since 2009.<sup>43</sup>

Info	Photo Exterior	Structural damage/s	Suggestions for material damage/s	Reuse proposal
No: I Research ID: ESK-A1 Location: Esenköy, Ownership: Eykaf Current Use: storage Machiner: press Const.matr; stone	II.	Need for structural restoration due to high damage in roof and walls	Replacement of lost stone and plaster	Since the building is in a Church garden, it could be used as small mill museum for tourism purpose.
No: 2 Research ID: BLT-A2 Location: Boltash Ownership: cooperative Current use: storage Machinery: press Const.matr; stone		Need for structural restoration due to high damage in roof and walls	Replacement of damaged, lost stones, plaster, doors, windows Replacement of deteriorated roofing material	It could be converted to a small workshop unit for the villagers to produce soap from the olives.
No: 3 Research_ID: TSL-A3 Location: Tashca Ownership: Eykaf Current use: storage Machinery: press Const.matr; stone		Need for structural restoration due to high damage in roof and walls	Cleaning the use of inappropriate cement plaster and applying traditional plaster. Cleaning corrosions on metal doors. Cleaning fungal attacks on facade	The building could serve as a small souvenir sho that sells olive oil and souvenirs in the Churc garden. Serving visitors of the church and villagers
No: 4  Research ID: BYK-A4  Location: Buyükkonuk  Ownership: cooperative  Current use: museum& workshop  Machinery: press  Const.matr: adobe		No material damages recorded	Already used as olive oil museum and	workshop
No: 5 Research ID: BYK-A5		Need for structural restoration due to	Replacement of lost/damaged stones, plaster and doors, windows.	The village has six inactive olive mills. This building could be activated as an olive mil

high damage in roof Replacement of deteriorated roofing

machinery-Press

and walls

material Replacement of broken

the beginning of the olive route.

Location: Büyükkonuk

Ownership: private Current use: storage

Machinery: press Const.matr: stone

Table 5. Reuse proposals for Type B Mills

INFO	Photo exterior	Structural damage/s	Material damage/s	Reuse proposal	
No: 1		Need for structural restoration Cleaning the cement		It could be converted to workshop and olive oil taste units	
Research ID: YDK-B1 Location: Yedikonuk Ownership: private Current use: storage Machinery: press Const.matr; stone		due to medium damage	plaster on façade. Replacement of damaged stones, plaster and doors, windows		
No: 2 Research ID: KMY-B2 Location: Kumyah Ownership: Eykaf Current use: storage Machinery: press Const.matr. stone		Lost character – No need for	restoration – Used as house	Since it has well-protected technical equipment and was active within last five years, it could be converted to olive mill again.	
No: 3 Research ID: ZYM-B3 Location: Ziyamet Ownership: private Current use: storage Machinery: press Const.matr; stone		Need for structural restoration due to high damage in roof and walls	stones, plaster and doors, windows. Reopening the changed/ closed windows. Cleaning trees near the building that causes cracks on the walls. Cleaning corrosion from steel machines and	It could be converted to a training <u>centre</u> as it is the midpoint of the suggested olive route.	
No: 4 Research ID: YNE-B4 Location: Yenierenköy Ownership: cooperative Current use: derelict Machinery: press Constituate; stone & sea-sand brick		Need for structural restoration due to medium damage	irons bars in windows. Replacement of the doors and windows. Clearing trees near the building, solving the problems due to slope Cleaning corrosion from steel machines and irons bars in windows	Because of the large space and well-preserved technical equipment, it could be used for olive oil production, and the cultivation of organic herbs.	
No: 5 Research ID: SPH-B5		Need for structural restoration due to high	Replacement of the doors and windows.	Due to having different ethnic groups living in the village, it attracts tourists already. It could be used as a restaurant	
Location: Sipahi Ownership: cooperative Current use: derelict Machinery: press Const.matr: stone & sea-sand brick	117	damage in roof and walls	Cleaning trees near the building, solving the problems due to slope. Cleaning corrosion from steel machines and irons bars in windows	and olive oil tasting units.	
No: 6 Research ID: DPK-B6 Location: Dipkarpaz, Ownership: cooperative Current use: museum Machinery: press Const.matr: stone	Liber	No material damages recorded	Already used as Olive oil m	useum	

#### Conclusion

Many traditional buildings used for agricultural production have lost their function with the emergence of new technologies. The transformation from derelict into economically sustainable landscapes is a challenge for conservation architects and planners, who are responsible for evaluating opportunities for both their reuse and local revitalisation. In this sense, tourism is considered as a catalyst that stimulates social renewal and improves the living conditions of rural communities by increasing their economic viability. Less developed countries suffering rural poverty nevertheless have an important potential to attract tourism to develop new and authentic experiences in areas of cultural richness. Due to the economic difficulties caused by the political situation in Northern Cyprus development, especially in rural areas, is an important issue in the region already threatened by the influence of mass tourism. In this context, the region's unique qualities, including its natural beauty, provide opportunities for the development of alternative tourism projects with community participation and public sector support. Playing an important role in the rural identity of the region, the restoration of olive oil mills has been considered as the focus for opportunities centred on alternative tourism.

The Karpas region is currently one of high unemployment. To address this, it is necessary to generate alternative micro-economies and promote entrepreneurship. For this to happen, the following actions are proposed:

- A reconciliation of existing 'mass tourism' with the smaller scale regional tourism development outlined in this paper.
- Improving the variety of facilities in a way that respects and enhances authentic cultural values and existing natural and physical resources. Implementing training initiatives that will help diversify local economies without having a negative impact on the natural beauty of the region.
- Creating and implementing laws that protect the natural environment and its cultural uniqueness.
- Regenerating small-scale locally based agricultural processes such as carob juice, black honey, olive oil, grape paste, wheat and potatoes.
- Protecting, promoting and enhancing both the tangible and intangible heritage of local villages in the area.
- Providing funding mechanisms to pay for the upgrading/restoration of existing buildings as detailed above, thereby creating a village network within the wider context of the proposed routes, including the establishment of sale points, workshops and services.
- Create opportunities to train local people to work effectively within the context of small-scale eco-tourism initiatives.

The survey suggests that olive oil production within these traditional mills could be reactivated to promote the Karpas area and attract tourism with the restoration and re-functioning of the buildings within the context of a comprehensive plan. Many of the piecemeal restorations that have been carried out have damaged the authenticity of the buildings and have not contributed to the region in cultural, social or economic terms, yet olive oil production and related small industries could generate micro economies in rural villages by contributing to the tourism sector. As stated by TICCIH (2003),<sup>44</sup> the technical equipment of these buildings is also important, and the conservation and continued use of these is desirable for traditional olive oil production and where possible this should remain in its original location.

In line with the strategic planning policies that developed in the National Physical Plan-TRNC (2015)<sup>45</sup> and the literature review, olives as a 'tourism product' creates a link between the stakeholders and reinforces a related narrative about authenticity and local distinctiveness. The involvement of local communities, developers and local authorities as stakeholders has the potential to distinguish possible uses for the buildings, as well as support community needs and financing mechanisms.

Both the Antiquities Law (Cap.31) and the Town Planning Law (55/89) in Northern Cyprus have the potential to support and develop regulations and guidelines for high-quality restoration of these buildings where the appropriate materials and building techniques should be used to fully conserve their architectural character.

The proposed new functions along the route (workshops, tasting units, restaurants, sales unit) may generate the need for extra new spaces though care will be needed to ensure that these will not conflict with the original structures. The proposed new uses should reflect contemporary culture, which of course includes valuing architectural heritage, and promoting a greater environmental awareness. In the case of oleo tourism, this should include arrangements for collective work to develop sustainable tourism.

Combining the olive route with the carob route could eliminate the negative impacts of sea-sun-sand tourism, which dominates the region between June and September in the Karpas area. Carob cultivation starts in mid-August and ends in September and olive oil production is in November–December, storage in January–February and maturing in March suggesting a longer and more sustainable tourist season. The proposed olive

route to be supported by the Ministry of Tourism and Culture together with local authorities could be included in the ERIH and widely advertised with the potential to develop as a significant example of heritage-led regeneration.

#### **Notes**

- 1. Bullen "Adaptive reuse and sustainability of commercial buildings."
- 2. Kohler and Uta "The building stock as a research object."
- 3. Ball, "Re Use potential and vacant industrial."
- 4. Bon and Hutchinson. "Sustainable construction."
- 5. Ball, "Developers, Regeneration and Sustainability Issues in the Reuse of Vacant Buildings."
- 6. Fuentes, Gallego, García and Ayuga, "New uses for old traditional farm buildings."
- 7. Garcia and Ayuga, "Reuse of abandoned buildings and the rural landscape."
- 8. Cunnington, Change of use.
- 9. See note 7 above.
- 10. Taksa, "Machines and Ghosts."
- 11. Reigned over by several cultures, the island of Cyprus taken over by the British from the Ottomans in 1878 and was formally annexed by Britain in 1914. In 1960, the constitution of the Republic of Cyprus was adopted. After a period of unrest, the island was divided into two sectors in 1974 following the conflict. The two major communities were forced to displace; Greek Cypriots were located to the southern part of the island and Turkish Cypriots to northern sectors where it has remained. The self-proclaimed Turkish Republic of Northern Cyprus was created in 1983 but this was widely condemned and only recognised by Turkey. Major political differences still exist without any resolution to date.
- 12. TICCIH, "The Nizhny Tagil Charter for the Industrial Heritage." https://www.icomos.org/18thapril/2006/nizhny-tagil-charter-e.pdf
- 13. Douglas, Building adaptation.
- 14. Köksal, Kültürel Miras Yönetimi, Kültürel Miras ve Endüstri Mirası Yönetimi, 126.
- Gaweł, "Strategic Management of a Cultural Heritage Route with Reference to the Concept of Stakeholders." Accessed March 18, 2018. http://www.turystykakulturowa.org/pdf/2012\_ 10\_03EN.pdf
- "Tourism Strategy of Turkey 2023 and Activity Plan for Tourism Strategy of Turkey 2007-2013." Accessed December 22, 2017 http://www.kulturturizm.gov.tr/genel/text/eng/ TST2023.pdf
- 17. Manisa and Yerliyurt, "Re-use of Traditional Olive Mills in the Context of Alternative Tourism for Sustainable Social and Ecologic Environment."
- 18. National Physical Plan- 2015, "Town Planning Office, Ministry of Internal Affairs, Turkish Republic of Northern Cyprus." http://spd.gov.ct.tr/tr-tr/yanmenu/%c3%bcfp1.aspx
- 19. Greffe, "Is Rural Tourism a Lever for Economic and Social Development?"
- Long, Perdue and Allen, "Rural Resident Perceptions and Attitudes by Community Level of Tourism."
- 21. Gunn, Tourism Planning.
- 22. TRNC, "Ministry of Agriculture and Natural Resources." Agricultural Master Plan 2017. http://www.tarim.gov.ct.tr/Portals/1072/MasterPlan/Tar%C4%B1m%20Master%20Plan%C4%B1%202017\_1.pdf.
- 23. Gannon, "Rural tourism as a factor in rural community economic development for economies in transition."
- 24. Yagüe, "Rural tourism in Spain."
- 25. Yüceer and Vehbi, "Adaptive Reuse of Carob Warehouses in Northern Cyprus."
- 26. See note 18 above.
- 27. See note 25 above.
- 28. Vehbi, Yüceer and Hürol, "Rural Carob Warehouses in Northern Cyprus: An Assessment of Architectural and Structural Characteristics."
- 29. Karpaz Area Local Development Strategy Accessed June 21, 2018. http://www.tccruraldevelopment.eu/wp-content/uploads/2014/04/local\_development\_strategy\_karpaz\_area.pdf

- 30. See note 22 above.
- 31. See note 29 above.
- 32. Scott, "Identity, visibility and legitimacy in Turkish Cypriot tourism development."
- 33. See note 18 above.
- 34. Ibid.
- 35. Ibid.
- 36. See note 29 above.
- 37. Ibid.
- 38. See note 25 above.
- 39. Yüceer, Vehbi and Hürol, "The conservation of traditional olive oil mills in Cyprus."
- 40. Hadjisavvas, Olive Oil Processing in Cyprus, 132.
- 41. See note 38 above.
- 42. Besim et al, "Postmodernist Hotel-Casino Complexes In Northern Cyprus."
- 43. Rural Development Sector Programme Accessed October 29, 2018. http://www.tccruraldevelopment.eu/en/.
- 44. See note 12 above.
- 45. See note 17 above.

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