

# WATER IN THE MEDIEVAL HISPANIC SOCIETY



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# Water in the Medieval Hispanic Society

Economic, Social and Religious Implications

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# QUARTERS, RELIGIOUS SPACES AND WATER IN THE RURAL AREAS OF NASRID GRANADA: THE CASE OF ACEQUIAS (VALLE DE LECRÍN, GRANADA)

MARÍA AURORA MOLINA FAJARDO

## Introduction

The arrival of Islam in the Iberian Peninsula brought with it a new agriculture in which water was principal. The introduction and adaptation of new Eastern and African crops (such as rice, sugarcane, citrus fruits, cotton or millet) led to a major reorganisation of the previous agrarian space. These species, originally from mid-subtropical climates with a high level of humidity, demanded the creation and maintenance of an effective irrigation system able to provide a continuous water flow. The design of hydraulic sets mainly using the force of gravity (with efficient catchment systems, canals, flow divisions, ponds, associated farmlands, etc.) drastically affected every sphere of the former territory and may be considered not only an important technological advance but also a social development altering both work and human organisation.<sup>1</sup>

In this way, the Andalusí irrigation spaces should be understood as the result of a very carefully designed plan, which shows the identity of the new community. Even the design of a modest hydraulic cluster must be considered by taking into account many factors such as its geographical position, the ecosystem of the area, and the particular socio-cultural environment in which it was originated.

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<sup>1</sup> Some pioneering and classic studies linking the development of these agricultural spaces and their hydraulic clusters with the specific features of the Andalusí society are Glick 1970; Bazzana & Guichard 1981: 115–140; Guichard 1998; Barceló i Perelló 1989: XV–XLXI.

In this particular case, the community was a peasant Muslim society (categorised as taxpaying and commercial) which – at least in its origins – was characterised by strong familial links, along with agnatic and endogamous relationships.<sup>2</sup> Those people presumably worked together in the development of these irrigation projects, not only in their construction, flow distribution and continuous maintenance, but also in the decisions and calculations about the water needed to irrigate the chosen perimeter of lands. We can thus understand these hydraulic groups not only from their functionality but also as closer to the concept of an agroecosystem (Malpica Cuello 2012), connecting the watering infrastructures to their territory, economy, social order and even their religious domain. In fact, we can think about the Andalusí territorial organisation and, in this case, the Granadian one through the existence of *alquerías* (or villages) that were mainly structured around an irrigation area (Glick 2007).

The purpose of this essay is to present and study how two principal territorial landmarks, Andalusí religious spaces (mosques, *rábitas* or small shrines, etc.), and some medieval urban hydraulic structures (mainly cisterns or flow division points), had an important interrelationship in the rural settlements of Granada, at least during the Nasrid period. In order to contextualise this connection, the paper will examine the specific case of the village of Acequias (Valle de Lecrín, Granada), taking into account not only their medieval temples and water points, but also its town planning which, as it will be shown, was strongly influenced by its irrigation cluster. Similarly, following the described association between the medieval religious spaces and specific water points, this work will suggest the potential locations of the three (currently lost) Muslim temples of Acequias.

The primary sources available for this study have been exclusively Catholic because most of medieval Andalusí documentation is lost. Although the documents used for this essay were mainly written in the mid-16th century, they offer relevant information with which to understand the described phenomenon. The Islamic religious spaces and the watering infrastructures were the principal urban points adopted, used, and sometimes renovated by the new Catholic population. The documentation consulted can be divided into two groups: the *habices* or *habūs goods* records of some villages of Granada,<sup>3</sup> and the books of *Apeo y Repar-*

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<sup>2</sup> For understanding the Nasrid rural sphere and the relationship between water, territory and society Trillo San José 2004 is a very complete work.

<sup>3</sup> This documentation is heterogeneous, including very diverse deeds and books listing and depicting a huge amount of Muslim heritage that was donated by the Catholic monarchs to the Catholic Church. This historical material can be consulted in the Diocesan Archive of Granada.

*timiento*<sup>4</sup> (containing surveying and demarcation plans) which were written by the royal civil servants in charge of resettlement after the *Morisco* expulsion of the kingdom. In the case of Acequias, a judicial decree dated on 1542 has been also examined.<sup>5</sup> Finally, other methodologies (such as extensive fieldwork, including archaeological analyses) have also been applied to obtain a clearer perspective.

## The Granadian *alquería* and the Relationship between Its Religious and Hydraulic Spaces

### *Alquería and Its Quarters*

The *alquería* (or *qarya*) can be defined as a rural settlement that is dependent on a major town (*madīna*) or a local fortress (*hiṣn*). Occasionally, an *alquería* might have an important extension and was sometimes it a fortified site (Guichard 2001: 205–206). Their origin can probably be dated from the first half of the 10th century, a peaceful period where Islamisation and the Caliphal rule were established. Although the *alquerías* were configured during the Islamic period, many had been inhabited since ancient times (Luna Díez 1988: 82). With the arrival of Islam, parts of these villages were frequently founded or occupied by tribal groups often distributed in neighbourhoods (Trillo San José 2006: 227–228). These “familiar” quarters sometimes had a considerable size and autonomy more closely resembling a hamlet than a local sector. In this primitive territorial organisation, far removed from the European feudal system, defence played a major role.<sup>6</sup> Similarly, the location of these places in relation to the development of their permanent hydraulic systems was key: the creation of such complex clusters of infrastructures was absolutely connected to the position and planning of the settlement<sup>7</sup> and, sometimes all the surrounding lands and villages. In fact, several different *alquerías* very often shared the water flow and parts of the watering constructions, establishing relationships through their bordering irrigated territories.

These settlements were usually located in slightly inclined geographical positions, at the foot of mountains and in the vicinity of rivers or other natural water

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<sup>4</sup> The books of *Apeo y Repartimiento* – also known as *Libros de Población* – are preserved in the Provincial Archive of Granada.

<sup>5</sup> Archivo Histórico Diocesano de Granada (AHDGr), Acequias-572F.

<sup>6</sup> Some books useful for understanding this point are for example: Malpica Cuello 1996; Martín García et al. 1999; López Guzmán 2002.

<sup>7</sup> The researcher who proposed this thesis was Miquel Barceló. Among his works can be cited Barceló i Perelló et al. 1996. For a further discussion on the meaning of the term *alquería*, see Malpica Cuello & Martín Civantos 2007: 354–356.

sources. Settled as compact townships, they were divided into several quarters with attached homes forming close blocks. The blocks were often separated by narrow and irregular streets, and supported domestic orchards and vegetable gardens among the buildings. When the German traveller Hieronymus Münzer visited Granada two years after its conquest (1494) he thus described the kingdom as a territory with a vast number of vegetable gardens, orchards and *alquerías*, which were permanently inhabited and irrigated by channels (Münzer 1952: 357).

A key point to understanding the connection between the local religious spaces and certain hydraulic points within these villages lies in how the rural neighbourhoods were defined. As noted, the *alquería* were comprised of several quarters, which at least in their origins were occupied by tribal groups. This kind of familiar settlement clearly existed during the first centuries of the Islamisation (at least until the 10th century), but it was not an immutable fact and the clannish society progressively evolved towards rural communities linked through neighbourly relationships. During the Nasrid period primitive social organisation appears to have dwindled – although it was still alive – in many areas of the kingdom. (Trillo San José 2004: 27.)

In this context, the *alquería* urban organisation via quarters can be related to the gentile society that shaped it. These neighbourhoods used to be relatively distant and had their own infrastructures and services, such as minor mosques or shrines (generally *rábitas*<sup>8</sup>), an oven, cisterns and sometimes a fortress or tower. Additionally and closely related to the precepts of Muslim religion, the village could have a major mosque (also known as *aljama*), used every Friday by all believers. This building was customarily located in a central urban position, with the main shops grouped around it and with the market and the largest streets leading away towards the residential areas.<sup>9</sup>

#### *Some Information about the Relationship between the Muslim Temples and Specific Hydraulic Points in Granada*

On the basis of the spatial configuration described and considering the way that water was distributed within the Kingdom of Granada, some authors have suggested that two essential urban landmarks – mosques and cisterns – presented a certain level of association or connection in the town of Granada. This cor-

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<sup>8</sup> The term *rábita* can be confusing and can have various meanings. In the context of the Kingdom of Granada we understand a *rábita* as a Muslim shrine, chapel or hermitage with a principally religious function but sometimes also working as a school, shelter or hospital. The *rábitas* used to be situated at the borders of villages or quarters near main paths, but also within the village as the epicentre of the local life between homes, public baths or markets.

<sup>9</sup> For more information about the genesis and evolution of Andalusí towns, see Navarro Palazón & Jiménez Castillo 2007.



relation was found in the setting of a quarter (especially in the Albaicín sector), which meant that the social and human context had to be taken into account. The first author to make reference to this relationship was Luis Seco de Lucena in his study of Granadian town planning in the 15th century (Seco de Lucena Paredes 1975: 118).<sup>10</sup> In their book dealing with the Islamic cisterns of Granada, Antonio Orihuela and Carlos Vílchez studied twenty-eight cisterns, half of which presented a nexus with former mosques (Orihuela Uzal & Vílchez Vílchez 1991: 51). More recently, Carmen Trillo has researched the Granadian Aynadamar Canal, noting and theorising about the same type of correspondence (Trillo San José 2007; 2008).

The rural Nasrid religious spaces remain unknown. Measurable and focused analyses of contextualising ideas, such as the implications and involvement of those religious domains within their urban or social sphere, are scarce and cannot be extended to the whole province of Granada. Developing a complete study of this topic, providing quantifiable data, is a work that at present needs to be explored. In my opinion, however, there are indications that could help to determine how the associations discovered between Muslim temples and water infrastructures already studied in Granada could also be relevant to the countryside areas.

A closer look at the historical documentation of the 16th century<sup>11</sup> reveals, in some way, records about this interrelationship. Fieldwork carried out in certain villages also seems to point out this association. This is particularly the case in Acequias, explained in the next section, and can also be extended to other localities of the Kingdom.

In the documentary sources it is very common to find toponyms that suggest the aforementioned association, such as *Rábita Alfaqüara* (from the Arabic *fawwāra* or “water dispenser”; Albarraçín Navarro & Martínez Ruiz 1989: 102), *Rábita Alcana*<sup>12</sup> (Arabic *qanā* or “canal”; *ibid.*) or *Acequia de la Mezquita* (“mosque’s canal”; Ferrer Muños 2003: 115).<sup>13</sup>

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<sup>10</sup> Luis Seco de Lucena found that in the *La Alcazaba* quarter there were 26 temples (18 mosques and 8 *rábitas*), seven of which had a nearby water tank. In the neighbouring district of the *Albaicín* the author counted 38 temples (32 mosques and 6 *rábitas*). In this case fifteen were connected with a cistern.

<sup>11</sup> Documents describing the *habices* goods of the local mosques, together with the surveying and demarcation books (*Libros de Apeo y Repartimiento*), were made for every place after the expulsion of the *Morisco* population.

<sup>12</sup> “Una ravita, solar, que se dize la ravita Alcana, con un macaver, que sube de la dicha ravita por un çerro arriba hasya ençima y alrededor del y deçiende hasta el macaver avierto suso” (Espinar Moreno & González Martín 2008: 34).

<sup>13</sup> “Dásele mas un Moral que está junto a el Acequia de la Mezquita, que está junto a Macaber Alcazar.”

In the same manner, through descriptions of the villages and their elements, written by the Catholic civil servants of that century, I have found that an important number of these religious buildings were registered in the area around significant water structures. These were principally cisterns, wells, water partitions, canals, streams, fountains, ponds or baths.

For example, a *rábita* close to a cistern is described in the lower neighbourhood of Ogíjares (cited as *Ugíjar la Baja*) (Espinar Moreno & Abellán Pérez 2004: 186). A preserved example of a rural mosque adjacent to a water tank is located in the ancient lower quarter of Nigüelas. Currently only two parts of this Nasrid sanctuary survive: its minaret, today part of a private dwelling, and the nearby cistern. This infrastructure must have been important for the mosque itself and the entire urban sector (Molina Fajardo 2013: 18–20). Another feature is that both elements were situated in one of the local water partition, important for the irrigation of some groups of lands (parcels of *El Camino Bajo*, *El Ramil* and *La Mojenera*). (Figs. 1 & 2).

There were also temples near public wells for local supply, as in Albolote, which in its lower area, had a shrine adjacent to two main streets and a well (Espinar Moreno & Abellán Pérez 2004: 188).

Another association noted in the documentation is that some *rábitas* or mosques were placed near the main watering canals or watercourses. A *rábita* near the main channel of the village is described in the *alquería* of Alhendín (1547) (*idem*, p. 187). Another *rábita* is registered being adjacent to a canal in the high district of Pinos del Valle.<sup>14</sup> In the Alpujarra, particularly in Timen (today known as Tímar) two shrines were found: the first with a water channel just in front of its door (p. 195); and the second, named *Rábita Alayón*, near a creek. In the same region, in Fondón, a canal named *Leuz* or *Feuz* is mentioned, with a *rábita* and a *mosque* in its vicinity (p. 204).

The documentation also explains how some of those temples were sited in the surroundings of fountains. In Lanjarón, in the medieval path leading to Órgiva, a small *rábita* near a bridge and a spout is described (Ferrer Muños 2001: 162). A temple near the main water fountain of the village is mentioned in the lower quarter of Juviles (Espinar Moreno & Abellán Pérez 2004: 195). In Bérchules two temples are noted: a *rábita* named Alfaguara, close to a fountain and the Catholic church (built on the site of a former Muslim shrine) also near a fountain, a dewpond, and a cliff where water used to run (*idem*, pp. 195–196). There is also

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<sup>14</sup> AHDGr (1547–1554), Libros de Archivo, Caja 44, fol. 230v. “Paga Hernando de Cobaleda y maria de pisa su mugger onze rreales de çenso cada año por una rrabita questa en el barrio alto de pinos que alinda con una açequia y con el camino que va a motril [...]”.



*Fig. 1.* Minaret of the ancient mosque of Nigüelas, Granada. Today it is part of a private home. Sited in La Cruz quarter, near Plaza de la Trinidad of Nigüelas, Granada.



*Fig. 2.* Medieval cistern of Nigüelas mosque located in Plaza de la Trinidad (photo by José Luis Burgos López).

an association between some Muslim shrines and dewponds or pools (for flax or esparto retting). In the middle quarter of Trevélez a *rábita* called *Mituet* or *Mataite* is said to border both the local fountain and a pond for the water retting of flax (p. 194). The same relationship is also noted in Cádiar, where, in its *Albayar* neighbourhood, there was a *rábita* close to a dewpond (p. 195).

Finally, as mentioned, mosques were positioned in a central local site, near a *plaza*, the main streets and sometimes the market and public baths. This was the case in Cádiar and its neighbourhood *Haratalçoco* (translated as quarter of the souk or bazaar), which had a *rábita* just in the plaza also adjacent to the communal baths (p. 195).

At this point, it would be natural to ask why this apparent association existed. The first issue to consider is the value of water in the Islamic world. In the Muslim faith water is considered a gift from God and therefore its presence was a basic requirement when founding a sacred place. A water supply was also needed inside mosques, as it was a key part of the ritual ablutions.

On the other hand, the distribution of a water flow was frequently a difficult issue. As a precious and necessary asset in these agrarian communities, its fair and equal division was sometimes a point of disagreement. As described, two or more *alquerías* could share the same irrigation cluster, thus dividing the water use into turns or *dulas*.<sup>15</sup> It is thus likely that water allocation (both within the village and with other places) was something that had to be absolutely regulated and controlled since it could be a point of conflict between diverse communities. In this sense, it is possible to conjecture that the Muslim temples – landmarks for these rural environments – had some involvement (even if it was indirect) with this delicate issue, exercising some influence or arbitration regarding distribution. The mosques or shrines might have had a strong interest in a fair distribution, since they used to own part of the flow, which was then rented or sold.<sup>16</sup>

Water was thus traditionally managed through “temporal irrigation turns”. Every plot or piece of land had a fixed assignation of water that was often measured following the Muslim prayer times which were regularly announced from the minarets. This temporal distribution, ruled by the Muslim calls, seems to have been quite common in the Kingdom of Granada (Trillo San José 2002–03: 281).<sup>17</sup>

<sup>15</sup> This was true in the city of Granada (Trillo San José 2007), and has been equally studied in the Alpujarra Almeriense (idem, p. 319). The same phenomenon is also common in the region of Valle de Lecrín where all the villages, with the exception of Lanjarón, Ízbor, Pinos del Valle, and Tablate, were connected by their hydraulic systems (Villegas Molina 1972: 59–85; García Pérez 2015).

<sup>16</sup> A paper dealing with a judicial decree showing these kind of practises is Espinar Moreno 2007.

<sup>17</sup> An example of this casuistry was the *rábita Malata* of Almería (dating to 1216), which had a yellow stone, used both as a sundial and for the division of the water supply between differ-

It is thus clear that one of the varied roles of the Islamic religious centres was a temporal regulation of irrigation water, which was a key to guaranteeing the peaceful coexistence of the communities, as well as the development of peasant society.

### The Case of Acequias, an *alquería* of the Valle de Lecrín (Granada)

An interesting example to illustrate how an irrigation system defined a complete settlement, connecting among other things some of its main watering points with its Muslim religious centres, is the *alquería* of Acequias.<sup>18</sup> This small town is part of the historical district of Valle de Lecrín, a rural and strategic zone in the southern part of Granada (Spain). Acequias is sited at the foot of the Sierra Nevada mountains, on a gentle slope bordering the River Torrente to the west and El Pleito Cliff (*Barranco del Pleito*) to the east. It lies 872 m above sea level and has 101 inhabitants.<sup>19</sup> The first information about this place, although dating from the 16th century, refers to the mid-15th century and, interestingly, is related to a conflict about water distribution.<sup>20</sup> In fact, these two factors (the water and its troubled regulation with other neighbouring villages) have been very significant for this site. This is even noticeable in its major toponymy: the name *Acequias* (from the Arabic term *al-sāqiya*) means “irrigation canals”, and *El Pleito* (the point where water leaves Acequias and flows on to the next village, Mondújar) can be translated as “the dispute” (*Fig. 3*).

#### *Neighbourhoods and Water Supply of Acequias*

According to historical documentation, the medieval *alquería* of Acequias was organised into two different neighbourhoods: the High District (*Barrio Alto*)<sup>21</sup> and the Lower District (*Barrio Bajo*)<sup>22</sup>; also a third place called the Middle Quarter (*Barrio de en Medio*)<sup>23</sup> is occasionally mentioned. Nowadays, this

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ent villages (Trillo San José 2004: 128). Another example of water distribution depending on prayer times (during the last years of the Nasrid period and the 16th century) has been studied in the village of Casarabonela (Retamero i Serralvo 2014).

<sup>18</sup> More information about Acequias and its watering system can be consulted in Molina Fajardo 2012: 147–166; 2017.

<sup>19</sup> Population data for 2014, from the website of the Spanish National Institute of Statistics [www.ine.es].

<sup>20</sup> AHDGr, Acequias-572F.

<sup>21</sup> “[...] y una higuera que alinda con el mismo horno y una tienda del dicho Diego Maldonado y por la otra, calle y camino que yva del lugar alto al baxo” (AHDGr, Signt. 572-F fol. 7r).

<sup>22</sup> “[...] le cupo la suerte primera que se hizo en dos pedaços que alindan con hazas de Françisco de Medina y con las cassas del varrio bajo [...]” (Archivo Histórico Provincial de Granada (AHPGr), Libros de Población del Reino de Granada, Acequias-6393, fol. 26r).

<sup>23</sup> AHPGr, Libros de Población del Reino de Granada, Acequias-6393, fol. 68r.



Fig. 3. View of Acequias (Granada) from *El Cerrillo de la Cruz*.

medieval perimeter – totally connected to the existing water canals – has been partially maintained. *Barrio Bajo*, today known as *Pago de las Casillas* (Estate of Small Houses) has completely disappeared and has become farmland. In the last decades of the 20th century the village underwent some transformations and its eastern side, traditionally a place of threshing floors, was urbanised and consequently named *Barrio de las Eras* (Threshing Floor Quarter). Curiously, between this newer district and the proper medieval hamlet there is a middle space, which is designated as *Barrio Seco* (Dry Neighbourhood) because of its lack of water channels.

The irrigation and civil supply of Acequias is entirely provided by the River Torrente flow<sup>24</sup> which, after rising in the nearby mountains of the Sierra Nevada, crosses the region through a deep valley, spreading out its water across eight different villages including Acequias.<sup>25</sup>

<sup>24</sup> “El dicho lugar tiene una azequia de agua con que rriegan todas las heredades y de que bebian los vecinos del pueblo, tomanse del rrio del torrente e solamente rregavan con ella de dia e no de noche porque es la dicha agua de noche del lugar de Mondujar en tiempo de moriscos rregavan desta manera que a cada marjal de tierra se le dava un quarto de ora de agua una vez cada semana e al presente no ay horden porque como dicho es no esta poblada ni ay vezinos.” (AHPGr, Libros de Población del Reino de Granada, Acequias-6393, fol. 16r).

<sup>25</sup> General information about the irrigation in Valle de Lecrín can be found in: Villegas Molina 1972: 59–85.

The water catchment is located in the vicinity of the town of Nigüelas<sup>26</sup> and, at this point is divided between Acequias and Nigüelas. The water used to be carried to Acequias by a gallery system (today substituted by a pipe) bored into the rock (*qanāi*) due to the steep terrain.<sup>27</sup> Through 79 m long gallery water reaches a pond (*desarenador*) where the flow becomes calm and loses some of its sediment. Next, the flow goes into a canal and, after 20 m, it continues through another covered gallery with various overflow channels. Once the waterway crosses the river's cliff, it arrives in Acequias from its northern side, following roughly the same route as the footpath from Nigüelas.

This first section, known as the *Acequia Alta* (High Canal) first divides in a place near the town known as the *Molino Viejo* (Old Mill).<sup>28</sup> The partition results in one channel for the village and its civil supply and a second one, named the *Acequia de las Eras* that irrigates the eastern farmlands.

The canal continues to the urban area, where it has contributed since the medieval period to the development of a zone of hydraulic mills<sup>29</sup> and some ponds for retting of flax and esparto.

After leaving this area of local industry, the flow enters the residential area arriving at the site that used to be the medieval High District, probably the most important one during the Andalusí period and the favoured one during the repopulation of Acequias. The core of this neighbourhood is a wide domestic group around a plaza, in which a medieval vaulted cistern for public provision was filled with water from the channel.<sup>30</sup> Today this tank is partially preserved under a modern public construction.

From this point on, the canal is divided again into two sections, running through the two main local streets. The eastern one is known as *La Seculilla* and carries the water across the settlement towards the former Lower District. Near this ancient district and after irrigating these middle lands, *La Seculilla* reaches the canal of *Las Eras* where the two join to become a single conduction. Meanwhile, the western canal enters *Calle Real* (Royal Street) arriving just in front of the local church, a place which can be identified as the medieval Middle Quarter.

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<sup>26</sup> Geographic coordinates: longitude 03° 31' 38" W and latitude 36° 59' 10" N.

<sup>27</sup> Similar water catchments have been described in the neighbouring district of Las Alpujarras. See Cressier et al. 1989.

<sup>28</sup> Geographic coordinates: longitude 03° 32' 15" W and latitude 36° 58' 14" N.

<sup>29</sup> Today there are three mills and one old plot, a former mill, preserved in Acequias: two oil ones named *Molino Viejo* and *Molino del Olivar*, and two flour mills known as *Molino de las Alberquillas* and *Molino del Sevillano*.

<sup>30</sup> "Una cassa que es la que hera de Rroman Castellanos en la plaza y otra cassa que hera de Miguel Castellanos linde de la suso dicha y de la açequia y del algiue [...]" (AHPGr, Libros de Población del Reino de Granada, Acequias-6393, fol. 68r).



Fig. 4. A) Old Mill plot; B) High quarter (plaza and cistern and possible location of a lost *rábita*); C) Church; D) The Old Church plot and the Small oven terrace (Lower neighbourhood); 1) “Las Alberquillas” Mill; 2) “El Sevillano” Mill; 3) “Del Olivar” Mill; 4) Former area with dewponds.

Once the Royal Street channel reaches the church, it divides into two parts: the western one for the irrigation of the farmlands of Acequias feeding into the river, and the second one, known as the *Acequia de las Viñas* (Vineyard Canal) which follows the ancient pathway between the medieval neighbourhoods of Acequias and arrives at the Lower District. Here, the flow joins the water coming from the union of *Las Eras* and *La Seculilla*, and forms one single canal, which follows the direction of the old medieval path to the nearby town of Mondújar.

Thus, it can be observed how the route of the water channels is connected with the configuration of local streets, which is a useful tool for understanding the partially lost medieval urban distribution (Fig. 4).

#### *Conflicts, Water and Muslim Religious Centers in Acequias*

Along with the described link between the irrigation set of Acequias and its territorial and urban organisation, I detected a strong interrelation between the location of the primitive medieval sacred spaces (most of them totally or partially ruined) and the most significant nodes of the local water distribution system. This correlation makes me consider the possible influence of the mosques of Acequias on the partition of the flow. A division, which according with the documentation, was extremely troubled.



As stated, Acequias shared its hydric resources with the nearby Mondújar. The position of this second *alquería* within Torrente's watering cluster together with the recurrent loses of flow (through evaporation or the abusive practices of the farmers) made the place poorer in water. This fact has resulted in numerous legal disputes between both towns over the centuries.

The ideas presented here are based on the observation of some features of the local irrigation system and on the study of historical documents and various toponyms from the area.

Probably the first information dealing with Acequias and its irrigation practices is a legal case from 1540.<sup>31</sup> The dispute involved neighbours from Acequias and the village of Mondújar and related to the use of water for a certain number of hours. The root of the problem dates back to 1440 when Mahomad Abencaxon, native of Mondújar, decided to donate his allocated water (half night of Mondújar's flow) to Acequias' mosque, because of his poor relationship with his neighbours. In this manner, he broke with the established secular arrangement of water distribution, thus favouring Acequias, and impoverishing the already modest supply of Mondújar. Before that time and according to the manuscript, Acequias and Mondújar had the same number of hours of water supply assigned, since Acequias irrigated every day during the daytime and Mondújar did so during the night. Hence, Abencaxon's endowment (corresponding to Mondújar's entire supply on Sundays from sunset to the middle of the night) involved the removal of a flow from its original croplands located in Mondújar and their subsequent damage. At the same time, the mosque of Acequias got an additional supply of water, which not only enriched its lands but also its resources, since the water was an attractive asset to be rented or sold to other localities.<sup>32</sup> In fact, this economic practice is registered in the document, which shows how in rainy years Acequias used to rent this water to poorer villages such as Mondújar, Chite, Talará or Murchas (Espinar Moreno 2007: 77). The cited lawsuit describes how a century later this water distribution conflict between Acequias and Mondújar had become a chronic issue, and even refers to several violent encounters between neighbours for obtaining the supply.

Beyond its historical value, this document is also interesting because it provides a wide collection of data, which invites us to think about an interrelation between the sacred sphere and local irrigation. During my fieldwork I observed how the two main water distribution nodes (between Acequias and Mondújar) were located near the local medieval sanctuaries. According to the record of

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<sup>31</sup> AHDGr, Acequias-572E. A paper describing this lawsuit, see Espinar Moreno 2007.

<sup>32</sup> A paper about the trade of water resources is Segura Grañío & de Miguel Rodríguez 2000.

*habices* goods in 1502, Acequias had a former mosque already consecrated as the local church, and two *rábitas* (cited as *Alguazta* and *Alolia*) converted into Catholic shrines (Espinár Moreno 2009: 64) whose precise location is unknown. The documentation describes how the church was located on the site of the mosque (Espinár Moreno 2007: 71), in a place between the two neighbourhoods which had been the physical centre of the town. Just in front of the church of Acequias, as previously mentioned, there is a main water division, which distributes the flow of *Calle Real* between the western farmland and *Barrio Bajo*. This second channel, known as *Las Viñas Canal*, used to run to Mondújar after leaving the Lower District of Acequias (today this channel is disused) (Fig. 5).

In order to locate the other two sanctuaries, I consulted a group of documents from 1592 related to the *habices* goods of Acequias.<sup>33</sup> In the inventory of these endowments, I found information about a variety of buildings in the ancient *Barrio Bajo*, including the mention of the approximate location of one of the shrines. More specifically, the document describes a ruined bread oven near a main street, and a *rábita* adjacent to that oven and the path between the two local quarters.<sup>34</sup> This particular *rábita* is sometimes cited as *yglesia menor* (minor or secondary church) and it is therefore likely that it was converted into a Catholic shrine, perhaps used while the main church was being built. After working on this abandoned settlement following the historical sources along with two local toponyms, I identified the location of this medieval *rábita*: it was situated on a plot (today an olive grove) adjacent to the old path that used to link the Lower District with the High District and Mondújar.<sup>35</sup> Remarkably, this site is known as *Pago de la Iglesia Vieja* (Old Church's plot) and includes a preserved piece of wall approximately 9 m long and 1.5 m high built on compacted earth. This archaeological remnant is possibly a side wall of the shrine (Fig. 6). In addition, this plot is adjacent to a semicircular terrace named *El Bancalillo del Horno de Poya* (Small Oven's Terrace),<sup>36</sup> which together with the sources mentioned increases my belief that this was the precise location of the two medieval places. The location I propose for this shrine is again in front of the junction of several canals, specifically those carrying the supply to Mondújar. Once again, a sanctuary was situated on a significant flow distribution point, susceptible to disputes and where arbitration over water supply might have occurred.

<sup>33</sup> AHDGr, Acequias-572F, Escritura 134.

<sup>34</sup> AHDGr, Acequias-572F, Escritura 134, fols. 7r, 7v.

<sup>35</sup> Geographic coordinates of *La Iglesia Vieja* plot: longitude 03° 32' 25.30" W and latitude 36° 57' 57.16" N.

<sup>36</sup> Geographic coordinates of *El Bancalillo del Horno de Poya* plot: longitude 03° 32' 25.39" W and latitude 36° 57' 57.68" N.

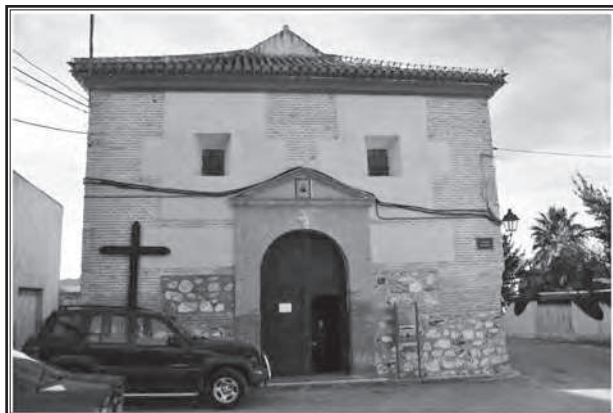


Fig. 5. The church of Acequias built on the old local mosque plot (1546–1551).



Fig. 6. The Old Church plot with the ruins of a former *rábita*.

With respect to the third sanctuary, its exact location is unknown. In this case the documentation is not very descriptive and no ruins of it have been preserved. Nevertheless, the *habices* goods of Acequias of 1592 indicate that this *rábita* (already destroyed by that time) was sited near two watering canals.<sup>37</sup> According to the local morphology, urban distribution, and irrigation system, I expect it was

<sup>37</sup> Un sitio de una Rábita y un moral y una higuera en él y por baxo un pedaço de macaber de medio marjal y la higuera no es de la Yglessia, linda lo uno con lo otro y su solar y con tierras y por otra las dos açequias y en este macaber estaba un moral que no ay memoria del. (AHDGr, Acequias-572F, Escritura 134, fol. 7v).

located in the plaza of the High District, presumably near the medieval cistern<sup>38</sup> and again just near the aforementioned division of channels (namely *Real Street* and *La Seculilla*) (Fig. 7).

At this point, due to three issues that I will enumerate below, I believe that the connection between the shrines of Acequias and its medieval irrigation elements was not a coincidence. The first one was the historical troubled partition of the flow between this village and the nearby Mondújar. In some way, it seems how if those temples had had some “sacred” control over that distribution in order to avoid any unfair practice. Likewise, the mosque itself owned and sold part of the local supply to other places. It seems reasonable to think that mosques tried to elude any inconvenience. Furthermore, water in Acequias was traditionally managed through “temporal irrigation turns”: the litigation cited above specifies that each *marjal*<sup>39</sup> of land had fifteen minutes of water assigned (Espinar Moreno 2007: 76). The document also explains how the division of the flow was mostly measured by the prayer times announced from the minarets.<sup>40</sup> From the documentation we know that in the tower of the church (which was possibly the former minaret adapted as a bell tower since the building of the new church commenced in 1546<sup>41</sup>) a sundial existed, which would have been the local reference for measuring time and the call to prayer.<sup>42</sup> Thus, the call of the *muezzin* and the sun position could be understood as the logical ways to divide the day and hence the allocation of water.

Thus, the management and distribution of the water in Acequias was somehow linked to the local sacred sphere, and the relationship between the mosques, water infrastructure (in this case some flow distribution nodes causing conflict) and the different quarters looked to define a social and territorial unit. Similarly, the important and varied roles developed by the Islamic religious centres seem to have included temporal regulation of the flow, which guarantee pacific relationships among the communities.

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<sup>38</sup> Approximate geographic coordinates of this third sanctuary: longitude 03° 32' 20.40" W and latitude 36° 58' 06.39" N.

<sup>39</sup> *Marjal* (from the Arab *al-mrah* or *al-marrah*) is an ancient agrarian measurement used mainly in the territory of the old Kingdom of Granada. A *marjal* was exactly 528.42 m<sup>2</sup>.

<sup>40</sup> The witness Fernando de Mendoça el Calah, native of Talará, gave the following testimony in relation to the flow division between Acequias and Mondújar: “[...] que el dicho lugar de Açeca no tiene ny le pertenesçe nyguna agua de noche, sino és desde antes que amanesçer un poco hasta la oración y desde la oración hasta la mañana [...]”. (AHDGr, Acequias-572F, fol. 27v).

<sup>41</sup> More information about the church of Acequias can be found in Gómez-Moreno Martínez 1996: 29.

<sup>42</sup> AHDGr, Acequias-572F, fol. 4v.



Fig. 7. Former High district, plaza and its tank preserved under the modern construction. Acequias, Granada.

Perhaps, in the same way, these ideas could have some kind of correspondence or parallelism with other irrigation clusters or local casuistic in the old Kingdom of Granada.

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