

CANAL
DU
midi



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Canal du Midi



Canal du Midi world heritage

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A unique civil engineering structure listed as a UNESCO World Heritage Site

The Canal du Midi represents the achievement of a long-held dream: to be able to sail from the Atlantic to the Mediterranean through the interior of France, thus avoiding the route around Spain via the Strait of Gibraltar.

Built by Pierre-Paul Riquet between 1667 and 1684, during Louis XIV's reign, the Canal du Midi is one of the oldest canals in Europe still in operation. At 240 km long, it links Toulouse to the Étang de Thau at Marseillan, crossing a variety of landscapes: the Toulouse conurbation, the Montagne Noire, cereal and wine-growing plains, and the Mediterranean coast.



The Canal du Midi was placed on the prestigious UNESCO World Heritage List in 1996 because its value is considered to be universal and exceptional!

Regarded as one of the most extraordinary civil engineering achievements of the modern era, it is a significant demonstration of the technological breakthrough that paved the way for the industrial revolution. It represents a period in history when river transport developed through the mastery of hydraulic civil engineering. Created to meet a strategic objective in land use planning, from the moment it was built it became the most striking feature of the land it crossed, combining innovation and aesthetics. All this forms the basis of the outstanding universal value of the Canal du Midi! **From the man-made structures to the landscapes around them, the French State has a duty to preserve this heritage and pass it on to future generations.**

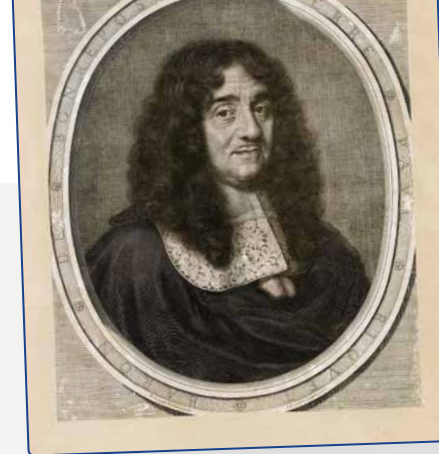
The heritage status includes the Canal du Midi itself, its water supply system in the Montagne Noire and its 18th-century extensions (Canal de Brienne, Canal de Jonction and Canal de la Robine), i.e. 360 km of canals and waterways!

1. The story of a monumental structure

Riquet, the canal designer

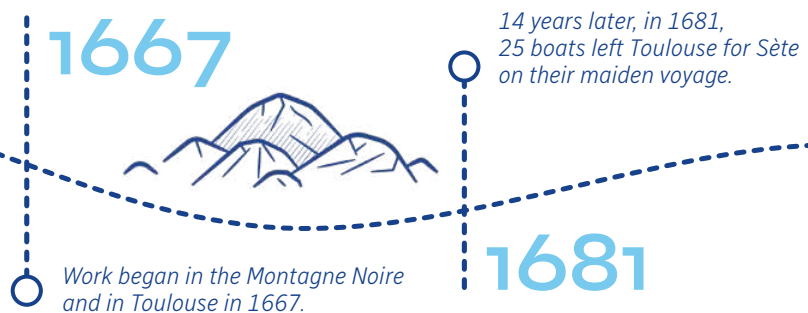
There were many projects to build a canal between the Atlantic Ocean and the Mediterranean Sea, the first of which dates back to Antiquity. But they all come up against a water supply problem because the canal has to cross a high point...

Pierre-Paul Riquet found the solution by proposing to collect water from the Montagne Noire to supply his canal. He convinced Jean-Baptiste Colbert, finance minister to King Louis XIV, that his canal project would enrich Languedoc and France by developing trade. **Louis XIV saw an opportunity to mark his reign with an ambitious project** and in 1666 signed the Edict for the construction of the Royal Canal of Languedoc (the former name of the Canal du Midi).



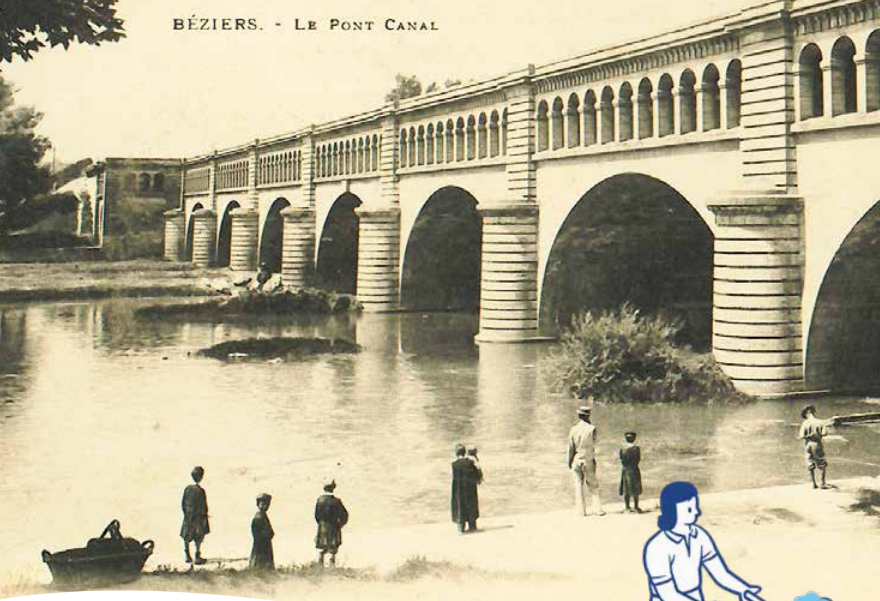
Pierre-Paul Riquet was appointed contractor for the construction of the Canal du Midi and thus created the longest entirely artificial waterway of his time.

A gigantic construction site



Up to 12,000 labourers worked on the construction of the Canal du Midi at the same time: diggers, masons, stonemasons, blacksmiths, carpenters, and more. The excavation and earthworks for the Canal du Midi, as well as the creation of its water supply system in the Montagne Noire and the construction of all the structures (locks, aqueducts, dams, navigation tunnel, etc.), some of which were unprecedented at the time, constituted a real technical feat.

Together with Versailles, it was the largest construction site during the reign of Louis XIV!



Canal bridge over the River Orb in Béziers



Did you know?

When travelling by river during the 17th and 18th centuries, you had to take the River Garonne from Toulouse to reach the Atlantic Ocean (formerly known as the "Ocean Sea" in French).

In 1856, the Canal Latéral à la Garonne was opened, enabling safe navigation all year round between Toulouse and Bordeaux. Together with the Canal du Midi, it formed the "Canal des Deux Mers" and marked the completion of the **perfect link between the Atlantic Ocean and the Mediterranean Sea** that was initiated by Pierre-Paul Riquet.



Continuous improvement

In 1686, following major malfunctions in the canal, Louis XIV commissioned Vauban to carry out an expert assessment. **Numerous structures aimed at improving the functioning of the canal, including many navigable aqueducts, were then built** from 1687 to 1694.

Other improvements were made in the centuries that followed. Extensions were built in the 18th and 19th centuries and new structures were created.

More recently, the locks were mechanised and then automated and water management has been modernised.

2. How does the canal work?

The water supply

Unlike rivers, canals are artificial and their water supply is controlled by human intervention.

The water in the Canal du Midi is collected from several streams in the **Montagne Noire**. It travels 65 km from the Alzeau water intake, along the Rigole de la Montagne and then the Rigole de la Plaine, to reach the Seuil de Naurouze, the highest point of the canal (189 m above sea level). From there, the waters are divided between Toulouse to the west and the Mediterranean to the east. **Some of this water is stored in the Montagne Noire reservoir lakes such as Saint-Ferréol and Lampy** to contribute to a year-round water supply. Other water intakes from rivers (in Cesse, Aude and Hérault) complete this system.

The role of the locks

The Canal du Midi's 78 locks allow the canal's gradient to be overcome in successive stages! **With single, double, triple, quadruple and even octuple locks, there are** sometimes several basins when the gradients are steep.

Did you know?

The oval shape of the locks on the Canal du Midi has become its emblem. **Riquet chose this shape to make them more resistant to lateral thrusts from the land.** As techniques evolved, the locks built from the 19th century onwards were rectangular in shape. In the 1980s, some were lengthened by 10 metres to allow the passage of Freycinet gauge barges.



Teams mobilised every day

The Canal du Midi is a public asset, owned by the French State. **Voies Navigables de France**, a public state organisation, acts as the Canal's manager. Lock keepers, specialist maintenance agents, boilermakers, administrative agents, technicians, engineers, and many more, work on a daily basis to operate and maintain the canal network.

Water management is optimised thanks to the control of flow rates and levels to guarantee its various uses: navigation, agricultural irrigation, drinking water, natural environments, etc. **Voies Navigables de France** alongside the local authorities, also works to develop and enhance this exceptional structure.



3. The canal: connecting the heart of the regions

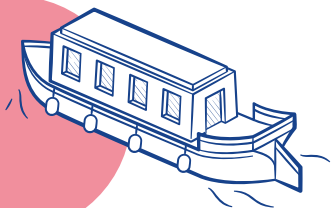
An area shaped by navigation

As soon as the canal opened, the transport of passengers and goods (grain, rice, wine, salt, silk, cloth, dyes, wood, coal, marble, etc.) came into full operation. The boats were then hauled, i.e. pulled, by horses from the tow-path along the canal. **The “barque de poste” service enabled travellers to travel from Toulouse to Sète in four days.** Several stops punctuated this 240-km journey: the *dînées* (midday meal) and the *couchées* (evening meal and overnight stay).

The flourishing activity of the canal led to the organisation of life around it, with the construction of numerous buildings (warehouses, inns, chapels, stables, offices, lock houses, etc.), the creation of hamlets, the establishment of ports, the development of shipyards, etc. The new outlets led to an increase in agricultural activity and craft and industrial facilities.

Did you know?

Numerous boats are moored on the Canal du Midi all year round. These are often freight barges converted into accommodation or business premises.



Uses that evolved over time

The second half of the 19th century saw the decline of transport by boat due to the opening of railway lines between Bordeaux and Sète. In the 20th century, road transport further exacerbated the crisis in inland waterway transport in the south of France. Despite the modernisation of the Canal du Midi, freight transport finally disappeared in the 1980s. Today, action is being taken to revive freight transport, particularly in urban areas.

Today, the Canal du Midi is the **1st** destination of choice for river tourism in France with almost:

30% of national traffic	70,000 passengers per year.
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Cycle tourism has not been overlooked. Several cycle routes run along this UNESCO site: the “Canal des 2 Mers à Vélo”, the “Méditerranée à Vélo” and the “Vélodyssée”. The canal has also become a place for other activities such as hiking, rowing and fishing.

An ecological corridor for fauna and flora

Between Toulouse and the Etang de Thau, the canal forms a long ribbon that connects natural areas and is home to rich biodiversity. The waterway and its banks, embankments and rows of trees, constitute diverse environments where certain **protected plant species grow**.

Numerous animal species also find favourable conditions for feeding, nesting, breeding and migrating: birds, including birds of prey, bats, dragonflies, salamanders, lizards, small mammals and more. Almost 300 species have been recorded!



Numerous protected species find refuge along the Canal du Midi, such as this owl called the Eurasian scops owl.



The trees along the Canal du Midi are being replaced

The rows of trees along the Canal du Midi are a landscape feature that has been constantly evolving over the centuries. Entirely created by human hands, this plant landscape is made up of a variety of species from the 17th and 18th centuries. They were largely replaced by plane trees in the 19th century.

These plane trees are now victims of a disease known in French as “chancre coloré”, which is incurable and leads to their death. **A vast replanting programme** led by Voies Navigables de France with the support of its partners and patrons is underway. The time has come for diversification. *Quercus cerris* (or Turkey oak) has been chosen as the new tree species that will characterise the canal, along with seven other species selected for their height, longevity and ability to adapt to the environments they inhabit: the celtis (or hackberry), the Norway maple, *Tilia cordata* (small-leaved linden) and *Tilia platyphyllos* (large-leaved linden), the European hop hornbeam, the white poplar and the stone pine.



Along the water's edge

Set off to explore the canal

The Canal du Midi, a UNESCO World Heritage site, comprises more than 300 structures: 78 locks, more than 50 navigable aqueducts, weirs, tunnels, bridges, and more. Its course passes through 89 municipalities, including many picturesque, bucolic and unusual villages. Each has a unique atmosphere that will entice you to stop off to visit the surrounding area! The Canal du Midi can be explored by following the water at your own pace: by boat, by bike or on foot; all at once or in sections; in a relaxed or energetic way... The choice is yours!

Here is a presentation of just a few of the sites to explore, among many others...



1

Domaine de Bonrepos-Riquet

The Domaine de Bonrepos-Riquet, located to the north-east of Toulouse, is part of the history of the canal. It was acquired by Pierre-Paul Riquet in 1652. Various basins that are still visible today suggest that **it was here that he experimented with his hydraulic projects for the Canal du Midi**. Located in the heart of a large park, this estate is open to visitors and consists of a castle, Riquet's former residence, a fully restored orangery and various outbuildings.

2

Port de l'Embouchure & Ponts-Jumeaux

The Canal du Midi starts at the Port de l'Embouchure in Toulouse! Originally, there was a lock there that provided access to the Garonne. Today, it is the point where three canals converge: the Canal du Midi, the Canal de Brienne and the Canal Latéral à la Garonne. The Ponts-Jumeaux (Twin Bridges), inaugurated in 1776, were actually two bridges: one for the Canal du Midi and one for the Canal de Brienne. The third bridge was built identically in 1838 when the Canal Latéral à la Garonne was created.



3

Canal de Brienne

The 1.5 km-long Canal de Brienne has linked the Canal du Midi to the Garonne since 1776. It has facilitated connections towards the Pyrénées, avoiding the Saut du Bazacle, a real obstacle to navigation on the Garonne. Saint-Pierre lock provides the junction between this canal, whose shady banks are perfect for a stroll, and the Garonne, which has become one of the favourite haunts of the inhabitants of Toulouse.



4

Négra lock

The hamlet of Négra, with its chapel, former stables and inn, is a reminder of the bustling activity that once took place along the canal. From 1681, travellers heading to Agde on the "barque de poste" were welcomed here for their first stopover since leaving Toulouse. This very picturesque site, located in Montesquieu-Lauragais, also features a small navigable aqueduct upstream from the lock.



5

Aqueduc des Voûtes

Dating from 1689, this aqueduct is located between the villages of Gardouch and Renneville. It is a unique structure designed by Vauban, when he was commissioned by Louis XIV to carry out work to improve the canal. This two-arched aqueduct allows the canal to span the river Hers, and the two large weirs that flank the structure to drain away flood water. Recently restored, this structure, which has been improved over time, bears witness to the ingenuity deployed to maintain waterway navigation on the Canal du Midi.



6

Seuil de Naurouze

The Seuil de Naurouze is a strategic point on the Canal du Midi. It is located on the watershed, in Montferrand. From this high point, the waters flow towards the Atlantic Ocean on one side and the Mediterranean on the other. When the canal was designed in 1665, Pierre-Paul Riquet invented an ingenious hydraulic system that collected water in the Montagne Noire to feed this highest point of the canal, at an altitude of 189 metres. The remains of a vast octagonal basin built on Riquet's initiative, surrounded by a channel, as well as the imposing 20-metre obelisk erected in his honour by his descendants, can be seen on this extensive site, which is ideal for a stroll.



7

Alzeau water intake

Located at an altitude of over 680 metres, the water intake on the Alzeau torrent is the starting point of the water supply system for the Canal du Midi. It is here, in the commune of Arfons, that the Rive de la Montagne begins, which runs for 24 km to the village of Les Cammazes. It can be explored on foot or by bike. A commemorative marker dated 1837 tells the story of the adventure that was the construction of the Canal du Midi. The house nearby was used as accommodation for the Alzeau water intake guard.



10

Grand Bassin and Saint-Roch locks

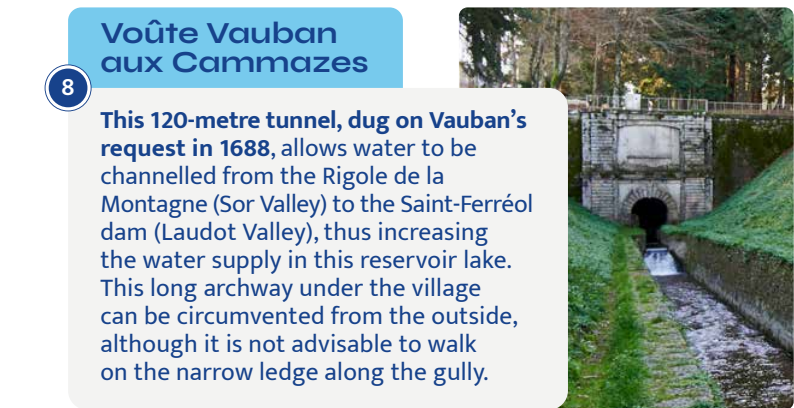
The Grand Bassin de Castelnaudary, a vast stretch of water that is now a favourite place for walks, dates from the construction of the Canal by Riquet. From 1674, the Canal du Midi was navigable from Toulouse to Castelnaudary, boosting the town's economic growth. Various trades set up shop and buildings were constructed to accommodate travellers, store goods and repair boats. The port was widely used by grain farmers from the Lauragais region. At the level of the four locks of Saint-Roch, the presence of water mills and a flour mill, used for the production of wheat flour, also bear witness to this agro-industrial past.



11

Port of Carcassonne and Fresquel navigable aqueduct

The Canal du Midi has passed through Carcassonne since 1810. Originally, the canal passed 5 km to the north of the city. Because of this distance, trade stagnated throughout the 18th century. The city then negotiated a new route for the canal, which runs alongside the lower town, known as the "bastide". The port of Carcassonne and the imposing Fresquel navigable aqueduct, 50 metres long and 30 metres wide, were then built. Today, the EuropOdysée barge in the port of Carcassonne offers an immersive experience to help visitors understand how the canal was built.



8

Voûte Vauban aux Cammazes

This 120-metre tunnel, dug on Vauban's request in 1688, allows water to be channelled from the Rigole de la Montagne (Sor Valley) to the Saint-Ferréol dam (Laudot Valley), thus increasing the water supply in this reservoir lake. This long archway under the village can be circumvented from the outside, although it is not advisable to walk on the narrow ledge along the gully.

9

Bassin de Saint-Ferréol

Built between 1667 and 1680 by Pierre-Paul Riquet, the Saint-Ferréol reservoir was the largest dam in the western world at the time. It was constructed by Vauban to increase capacity and was designed to help supply water to the Canal du Midi throughout the year. This lake, which extends over the departments of Haute-Garonne, Tarn and Aude, is now a perfect place for swimming and walking. It is also home to the Reservoir, a beautiful discovery centre that is well worth a visit to gain a better understanding of the Canal du Midi.



12

Pont de Rode and Orbiel navigable aqueduct

Shortly before arriving at Trèbes coming from Carcassonne, the Pont de Rode (bridge), built in the 17th century, is typical of those on the Canal with its perfect semicircular arch. Further on, the three-arched Orbiel navigable aqueduct, designed in 1688, allows the Orbiel River to be crossed without intersecting it, thus remedying the frequent problems caused by the silt brought by the river. Trèbes has benefited in its development from the canal. On leaving this lively village, a series of three locks dating from 1675 allows you to cross the steep gradient. A mill, now converted into a restaurant, used the hydraulic energy created there for many years.



13

The Argent Double structures

At La Redorte you'll find the **Argent Double spillway and aqueduct**, built at the end of the 17th century on the initiative of Vauban. The former was created to discharge excess water from the canal into the Argent Double river, and the latter to allow the canal to pass over the same river. Located in the heart of the Minervois vineyards, the port of La Redorte benefited from a high level of wine-making activity in the 18th and 19th centuries. Numerous coopers set up shop here to make the barrels essential for transporting wine and brandy. Today, this landscaped area is a perfect place for a walk.



14

Répudre navigable aqueduct

Located between the charming villages of Paraza and Ventenac-en-Minervois, this massive aqueduct was built in 1677-1680 by Riquet. It allows the canal to cross the Répudre River, which is prone to flooding. It would serve as a model for Vauban during his improvement works, which would lead him to build 49 new aqueducts. **This aqueduct was the first to be built in France and is the second oldest in the world.**



15

Le Somail

Le Somail is a hamlet that grew up around the canal. The port of Le Somail was developed in 1682 to serve the city of Narbonne, 15 km away. **River activity was in full swing here thanks to the transport of passengers and goods until the middle of the 19th century:** canal administration offices, stables, inn, storage warehouses, chapel, icehouse, and more. Passengers travelling on the "barque de poste" would stop here overnight. Today, Le Somail welcomes many visitors, and the buildings house restaurants, bed and breakfasts, and other facilities. A wine warehouse has been converted into a picturesque bookshop selling old and new books. The Maison Bonnal offers visitors an original and fun way to discover the Canal du Midi.



16

Le Gailhousty site

Le Gailhousty, located in the commune of Sallèles d'Aude, is a collection of several structures of great architectural quality: a lock surmounted by a bridge, a vast spillway and a dry dock. The 30-metre-long spillway has 15 sluice gates to allow the waters of the River Aude to pass through in the event of flooding. The rear of the building has five arched openings from which a landing canal emerges. This site is located at the downstream end of the Canal de Jonction, which since 1787 has linked the Canal du Midi to the Canal de la Robine in Narbonne. To reach the entrance to the Canal de la Robine, boats travel along the Aude for a few hundred metres.

18

Grand Castélou and the Sainte-Lucie nature reserve

The Grand Castélou estate is located in the heart of the Marais du Narbonnais. **Formerly a saltworks and then an agricultural estate, water management is central to the history of the site.** After the saltworks were decommissioned, the fresh water from the Canal de la Robine made the land cultivable again. The hydraulic network consists of several dozen kilometres of ditches and nearly a hundred structures (water hammers and spillways). It is also an ideal place for bird watching. It is home to the "Maison de la Narbonnaise", a discovery centre dedicated to natural and cultural heritage. Downstream, the Sainte-Lucie Regional Nature Reserve is distinguished by its remarkable landscapes and is home to the Domaine de Sainte-Lucie, which has been converted into an intimate and welcoming coastal refuge.



17

Canal de la Robine in Narbonne

The Canal de la Robine, the former bed of the River Aude, crosses the historic centre of Narbonne. The Canal de Jonction, built in 1787, together with the Canal de la Robine, forms a 36.5 km long lateral branch of the Canal du Midi, which then opened up a new outlet to the Mediterranean at Port-la-Nouvelle. Narbonne benefited from the economic benefits of the canal at that time and it became a major port. Today, the banks of the canal provide a vantage point from which to admire the most beautiful monuments of Narbonne, including the famous Pont des Marchands, one of the last inhabited bridges in France, whose arches date back to Roman times.



19

The port of Capestang & le Grand Bief

The authentic village of Capestang is located in the middle of the main reach of the Canal du Midi. This **54-km section without locks** connects Argens-Minervois to Béziers without any change in altitude. Following the same contour line, the canal winds through the landscape before reaching the upper part of the village. The port of Capestang, very active in the 18th and 19th centuries thanks to the cultivation of vines in particular, is still a lively port on the canal today during the summer period. The Saïsse bridge, located at the entrance to the port, is typical of the 17th century and offers the narrowest passage on the canal!



20

Malpas Tunnel

The Malpas Tunnel was the first canal tunnel to be built in Europe. This 170-metre-long tunnel was excavated in 1679-1680 to allow the Canal du Midi to pass under the Ensérune hill. This picturesque structure, located in Nissan-lez-Enserune, enables the canal to continue along the contour line. A true technical feat for the time, this tunnel was the last major project undertaken by Pierre-Paul Riquet. Beneath this tunnel there is also an ancient aqueduct dating from the 13th century and a railway tunnel that is still in use today. The Maison du Malpas, nearby, houses an information centre about the Canal du Midi.



22

The Libron structures

In Vias, the Libron structures, built between 1855 and 1857, are a real technical feat! During times of flooding, they allow the Libron waters to pass over the canal, thanks to mobile aqueducts on rails that can be deployed without blocking navigation. Split into two branches, the river flows in one direction or the other, allowing boats to pass in either direction. This complex and ingenious structure is still operated during flooding by agents working for Voies Navigables de France (the French waterways authority), in conditions that have remained virtually unchanged since the 19th century.



23

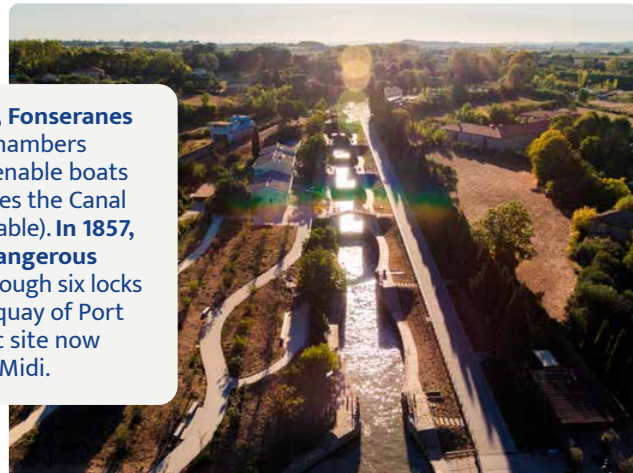
Écluse ronde (Round lock)

The Agde lock is the most original on the canal: it is round and has three entrances. The first opens onto the Étang de Thau via a short stretch on the Hérault river; the second on the canal from Béziers; the third towards the small canal that allows boats to reach the town of Agde and its seaport, then the Grau d'Agde. Extended by 10 metres in 1978 to allow larger barges to pass through, although its original appearance has been altered, it retains this unusual shape. In 1750, upstream of the round lock, Pierre-Paul Riquet's successors provided Agde with a port area. A large administrative building was constructed there in 1752: the Hôtel Riquet.

Fonseranes Locks & Orb navigable aqueduct

21

Located in Béziers and built between 1676 and 1680, Fonseranes is the largest set of locks in France. The eight lock chambers and nine connecting gates are 315 metres long. They enable boats to cross the 21-metre difference in height that separates the Canal du Midi from the River Orb (until 1857 this was unavoidable). **In 1857, the majestic Orb aqueduct was built to avoid this dangerous crossing of the River Orb.** It allowed sailors to pass through six locks at Fonseranes - instead of eight - before reaching the quay of Port Neuf in Béziers. The former mariners' inn at this iconic site now houses an immersive space dedicated to the Canal du Midi.



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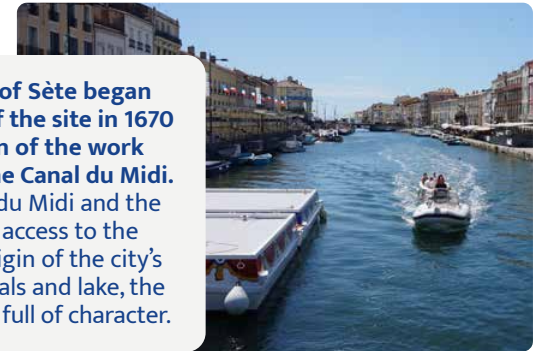
Pointe des Onglous

The Pointe des Onglous at Marseillan marks the end of the Canal du Midi. It is at this symbolic location that the canal flows into the Étang de Thau, 240 km from Toulouse. The Phare des Onglous lighthouse at the end of the pier offers a magnificent panorama of the lake. Access to Sète, a Mediterranean seaport, is just a stone's throw away, on the other side of the lake.

25

The Port of Sète

The construction of the port of Sète began in 1666. Riquet took charge of the site in 1670 and oversaw the continuation of the work at the same time as that of the Canal du Midi. The construction of the Canal du Midi and the port of Sète, which opened up access to the Mediterranean, were at the origin of the city's creation. Between the sea, canals and lake, the "Venice of Languedoc" is a city full of character.



Find more information at:
www.canal-du-midi.com

- All the sites to explore
- Organise your trip
(boat, cycling, walking, etc.)
- Practical information, and more.



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