

The bowels of Naples

The historic city of **Naples** is known for its beautiful bayside location, its churches and monasteries, castles, city gates and villas, and the liveliness of its streets. Far fewer people, however, are familiar with the city below – the underground of Naples. This 2500-year-old network will receive an unusual addition with the extension of the metro system.

■ NAPLES (IT) — TEXT: MARIJKE BEEK, ILLUSTRATION: HARMEN VAN DER HORST

The old Neapolitan underground city consists of water channels and reservoirs, narrow and tapering tuff stone excavations sometimes tens of metres high, tunnels, catacombs and quarries converted into bomb shelters. It is estimated that this network—fragmented and here and there disrupted by the metro—is at least three million square metres in size. Only a third of it has been made accessible. From the street, the city below is completely invisible. Its pattern, of which only parts have been mapped, has no relation to that of the streets above. The construction of underground Naples was possible because the city is built on a thick layer of yellow tuff, which resulted from an eruption of Vesuvius approximately 15,000 years ago. This type of stone is readily workable, yet strong.

During the last twenty years, intensive work has been undertaken to build a modern metro network. The most recently built metro stations feature underground squares that give special attention to modern art.

Historic underground

Neapolis ('new city') was founded 2500 years ago by the Greeks. They constructed an aqueduct both above and below ground to carry water from Vesuvius directly

into the cisterns beneath homes and squares. The waterways are located approximately 40 metres below sea level; via wells the water was brought above ground. The stone made available by this underground construction was used to build city walls and houses. The Romans later expanded the city in conjunction with the Greek water system. To avoid inconvenient detours bypassing the hills surrounding the city they dug tunnels through them, often hundreds of metres long.

Underground Naples grew explosively in the 16th and 17th centuries, the result of a ban on bringing building materials into the city. At that time, Naples was the most populous city in the world. But as an unintended consequence of the restrictions, tuff was clandestinely mined under construction sites, sometimes by hacking out an existing reservoir even further. In this way, a negative of the city above arose underground.

The water supply continued to grow until a serious cholera epidemic broke out in 1884. The much higher lying sewer ruptured and spilled over into the aqueduct, which was then replaced by a modern water supply system in pipes.

When the threat of war loomed in the late 1930s, the municipality transformed a portion of the underground

spaces into bomb shelters. Wide spiral staircases suitable for a fleeing crowd were constructed around the wells. Narrow paths were broadened and spaces better interconnected. The shelters of the most bombed city in Italy were used heavily. Following the war, the memory of those painful times was quickly erased. Debris was thrown into the wells and the entrances bricked up. The memory of the city below faded...

Until, in the summer of 1979, smoke started coming from the old wells. Underground Naples burned because wood refuse had caught on fire. Days after the fire was extinguished, the residents rediscovered the subterranean city. It also captured the imagination of others: in 1987, the architecture magazine *Domus* devoted extensive attention to it (no. 681). Two years later, international architects attending the 'Laboratorio Internazionale Napoli Sotterranea' made proposals for its reuse.

Modern underground

For years, the huge numbers of cars in Naples have caused such problematic gridlock that it makes the city almost unliveable. In order to reduce car use, an ambitious plan was designed to, over time, connect the city, harbour, airport and train station with metro lines. The number of existing lines and stations will multiply as a result.

Line 1, which began construction in 2001 and features the 'Art Stations', springs to mind. Internationally renowned architects and artists were approached to participate in the project. From the beginning, the stations were viewed as important public spaces that should be pleasant to experience. For each station, an architect was commissioned to design both the underground section and the square above, with the goal of giving the surrounding area a boost or upgrade. Normally little would change in the World Heritage Site that is Naples' old centre. But since the squares above the stations would be put to the shovel anyway, this was an opportunity for major refurbishment. Additionally, several artists were invited to create works that respond to the location of each station. Close cooperation is expected between architects and artists. Thus far, nine stations on Line 1 have been realized, each having indeed received a unique image. Soon the stations at Piazza Municipio by Álvaro Siza Vieira and Piazza Garibaldi by Dominique Perrault will be finished. These connect the Neapolitan underground and above-ground cities with each other in a remarkable way. The modern underground city slowly creeps into its counterpart. →

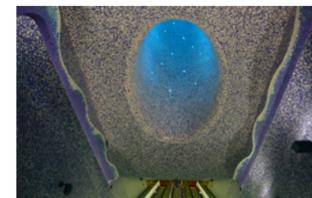
A negative of the city above arose underground.



1 STAZIONE PIAZZA DANTE (2002)
Architect: Gae Aulenti Architeti Associati
Artists: Joseph Kosuth, Jannis Kounellis, Michelangelo Pistoletto, Nicola de Maria
Address: Piazza Dante Allighieri



2 NAPOLI SOTTERRANEA
Address: Piazza San Gaetano 68 / Via Tribunali
Info: www.napolisotterranea.org



3 STAZIONE TOLEDO (2012)
Architect: Oscar Tusquets Blanca
Artists: Robert Wilson, William Kentridge, Achille Cavalli
Address: Via Toledo / Via Armando Diaz



4 CINEMA MARTOS METROPOLITAN (1950, 2003)
Architect: Stefania Filospesiale (original building), Chiaia SRL
Address: Via Chiaia 149 (under Palazzo Cellamare)



5 ANTRO DE MITHRA (GRAN GARAGE)
Address: Vico Santa Maria a Capella Vecchia / Rampa Caprioli



6 TUNNEL BORBONICO
Address: Vico del Grottone 4 / Via Domenico Morelli 40 (two entrances)
Info: www.tunnelborbonico.info



7 PARCHEGGIO MORELLI / GROTTA CARAFA (2011)
Architect: Filipe Rosano
Address: Via Domenico Morelli 40



8 STAZIONE MARITTIMA (1933-1936)
Architect: Cesare Bazzani
Address: Piazzale Stazione Marittima



9 STAZIONE UNIVERSITÀ (2011)
Architect: Karim Rashid
Address: Piazza Bovio
Contributed by: dirkverwoerd



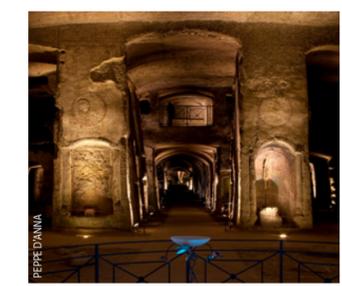
10 PALAZZO DELLA POSTE (1928-1936)
Architect: Giuseppe Vaccaro and Gino Franzini
Address: Piazza Matteotti 3



11 LANAPOLI SOTTERRANEA (LAES)
Address: Gambirino, Piazza Trieste e Trento / Via Chiaia 1-2
Info: www.lanapolisotterranea.it



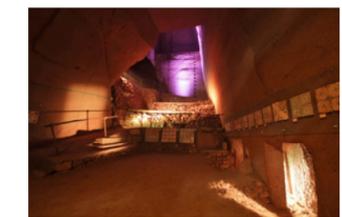
12 STAZIONE MUSEO (2001)
Architect: Gae Aulenti Architeti Associati
Artists: Fabio Donato, Mimmo Jodice and others
Address: Piazza Cavour



13 CATACOMBE DI SAN GENNARO
Address: Via Capodimonte 13
Info: www.catacombedinapoli.it



14 CIMITERO DELLE FONTANELLE
Address: Via Fontanelle alla Sanità 80
Info: www.catacombedinapoli.it



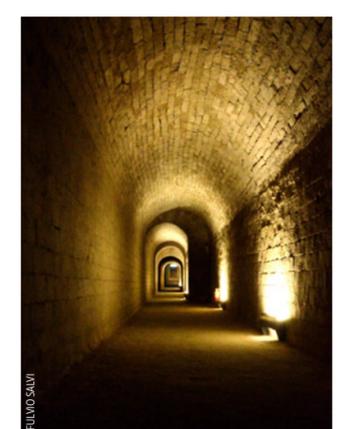
15 MUSEO DEL SOTTOSUOLO
Address: Piazza Cavour 140
Info: www.ilmuseodelsottosuolo.com



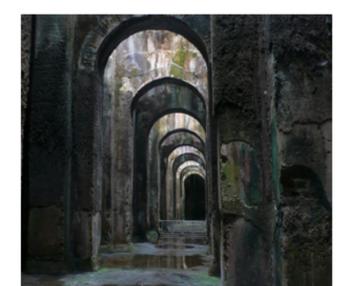
16 STAZIONE MONTESANTO (2008)
Architect: Silvio d'Ascia
Address: Piazza Montesanto



17 PARCHEGGIO VIA VENTAGLIERI
Address: End of Via Ventaglieri



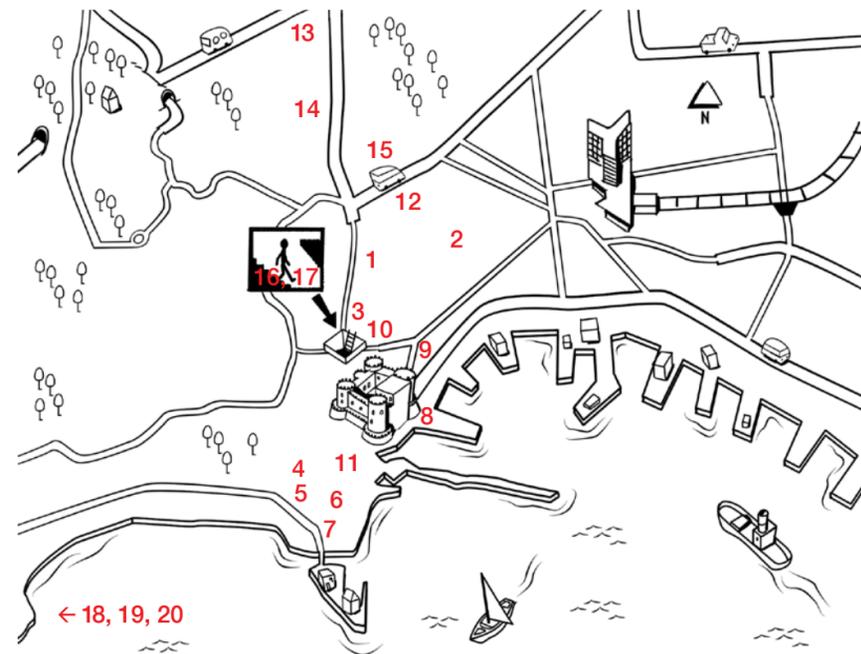
18 GROTTA DI SEIANO
Address: Discesa Coroglio 36
Info: www.napoliunderground.org
Note: Closed Sundays



19 PISCINA MIRABILIS, BACOLI
Address: Via Piscina Mirabile 27, Bacoli
Note: Closed Mondays



20 ANTRO DELLA SIBILLA, POZZUOLI-CUMA
Address: Via Monte di Cuma 1, Cuma
Info: www.napoliunderground.org



(The bowels of Naples)

On the first two days of the tour, the Neapolitan metro system simultaneously provides points of interest and transportation. On the third day, we go by car outside the city.

The starting point is **Stazione Piazza Dante (1)**, designed by Gae Aulenti under the square of the same name, which she also refurbished. The objective was to allow the 18th-century square to come back into its own. Inside the station, American conceptual artist Joseph Kosuth placed a quote by Dante in neon letters on the wall. Bar Mexico at no. 86 makes the best espresso in Naples. Nearby is the old city centre, where reservoirs, tuff quarries and bomb shelters can be visited at **Napoli Sotterranea (2)**. From there, take the subway to **Stazione Toledo (3)**, where a light crater connects the square with the blue station hall 40 metres below. A ride on the escalator to see this light funnel (with a light artwork by Robert Wilson) is a must!

Nearby is **Cinema Martos Metropolitan (4)**. In 1950, this tuff quarry was made into a giant auditorium, which was then divided into cinemas in 2003. The original cavern has decisively shaped its floor plan.

Above the Via Chiaia lies the Gran Garage, known as **Antro di Mithra (5)**. There, Roman soldiers would have worshipped their god Mithras. The entrance, with the Military Academy high above, offers a fascinating sight, especially in the evening.

Neaby, back down Via Chiaia, is the Tunnel Borbonico **(6)**, built around 1850 by the Bourbon Kings as an escape route to the sea. During construction, workers came across an aqueduct, over which the tunnel is built on two bridges. The tunnel was rediscovered and opened in 2010. Particularly noteworthy are the stolen old cars and Vespas that were found here. Work on the reopening of the tunnel was done from the adjacent and easily accessible 16th-century Grotta Carafa. This was then converted into the ultramodern **Parcheggio Morelli (7)**, wherein old and new are clearly distinguishable from one another. Much of the huge space was left open by the architect. The parking garage received the European Parking Award 2011.

From the nearby Piazza Municipio, where the metro station by Álvaro Siza Vieira is under construction, **Stazione Marittima (8)** is immediately noticeable at the harbour. Huge cruise ships dock at this location, which is designed as a gateway from the sea to the city.

Not far away, beneath Piazza Bovio, is the **Università (9)** metro station, a total design by Karim Rashid with soft shapes, vibrant colours and reflective materials. Between this station and Stazione Toledo are a number of public buildings that form part of the new city centre realized in the late 1930s. Situated on irregular lots, these structures are carefully blended into the surroundings with the sleek design of the fascist era and tall, strikingly conceived main entrances. The **Palazzo della Posta (10)** is the most interesting and easily accessible.

In front of the famous Gambirinus café nearby is the meeting point for **LaNapoli Sotterranea (11)**. The tours primarily visit the shelters under the working-class neighbourhood of Quartieri Spagnoli.

Day two is mostly dedicated to the city's esteemed dead, as well as the rituals surrounding them, and begins at the **Museo (12)** metro station. The station building is nestled within the sloping ground; its colour and materials echo the famous Museo Nazionale, which stands next door.

From here, the **Catacombs of San Gennaro (13)** are reachable by walking or bus (Line 178) to the north of the former town in the 'Valley of Death'. These catacombs were used as a cemetery and church from the 2nd century onwards. The complex consists of two basilicas, each having three aisles, and shows how not only building, but also excavating can yield unusual architectural spaces. Sunday mornings the La Paranza cooperative organizes a tour called 'The Holy Mile' in which the catacombs and the astonishing **Cimitero delle Fontanelle (14)** are visited. Here rest the dusty remains of hundreds of thousands of victims of epidemics, earthquakes and other disasters. Some of the skulls have been subsequently cared for and honoured. Recently, the cave was cleaned and refurbished, but the bizarre display remains.

Returning to the city, the **Museo del Sottosuolo (15)** can be found at Piazza Cavour. This museum about the Neapolitan underground is situated inside a large tuff quarry.

From there we move to **Stazione Montesanto (16)**. The existing building has been restored and transformed into a hub for various types of public transport, including the funicular railway. The station has become a landmark for the surrounding neighbourhood, and its eye-catching terrace on the first floor is also a great lookout point.

Around the corner, at the end of **Via Ventiglieri (17)**, there sits a car park in a tuff quarry where little has changed over the years. The family, who has run the garage for decades by now, has given it a homely feel.

Day three takes us by car to three ancient underground sites situated in the coastal landscape west of the city. The first is also reachable by public transport.

The **Grotta di Seiano (18)**, a 770-metre-long Roman tunnel, was intended as a route to the Villa Pausilypon, located directly on the coast. Occasional openings provide light and air to the tunnel. From the remains of the villa there is a wonderful view of the sea and rocky shore. The tunnel was rediscovered and restored in 1840.

Further along in the village of Bacoli is the **Piscina Mirabilis (19)**, a huge Roman water tank formed by barrel vaults of 70 metres long and fifteen metres high. The drinking water from this completely intact reservoir was probably intended for use by the Roman war fleet stationed in the bay. The impressive space is reminiscent of prints by Piranesi.

The function of the third location is uncertain. Built by the Greeks, the enigmatic **Antro della Sibilla (20)** is found in the beautiful seaside landscape of the Archaeological Park of Cuma, which was once a mighty port city. The structure's entrance is a long corridor carved into the tuff with a trapezoidal cross-section, which is illuminated by six side spaces. The corridor ends in a vaulted room. According to myth, it was here that the Cumaean Sibyl, a prophetess of Apollo, predicted the future, seated at the entrance to the underworld. On the return trip, the view of the (still active) Vesuvius just behind the city suddenly makes the Neapolitan desire to exorcise the destructive forces of nature quite understandable. ←

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In the next issue:



Debut

Town square by NFO (Kata Marunica and Nenad Ravnić), Crikvenica

CROATIA — TEXT & PHOTOGRAPHY: IVAN DOROTIC

NFO in Croatian stands for "unofficial organization". Although, bureaucratically speaking, our office functions as a formal organization, the unofficial name stuck with us since the beginning; we grew connected to it and didn't want to change it. Since we founded the office in 2008, NFO consists of several more permanent and occasional associates.

In 2011, we won first prize in a public competition organized by the municipality of Crikvenica, a small town on the Croatian coast. The competition called for a square, a park and a pavilion, which would together form a complete ambient zone of Crikvenica's waterfront.

This spring, two years after the competition, the town square, which is the most essential part of the project, was opened to the public. We have been pleasantly surprised by the promptness of all the phases of the competition, and its (partial) completion, which is quite rare in terms of Croatia. Furthermore, the completed project is almost identical to our original proposal, apart from some minor details.

Whilst designing the square, our primary inspiration in defining the space was the promenade, with an avenue of trees as the most important element. The function of the promenade (walking) and its form (continuity of trees) are elements that form backbone of typical promenades along the coastal belt of the Crikvenica Riviera region. In this case, we managed to achieve that the greenbelt of trees is drawn inwards on the edge of the square, creating a large parterre niche on the coastal stretch of the city; a large gap for the dominant, spacious square. An generously sized "empty" area is formed, which opens the square towards the sea and directs views towards the islands on the horizon. Such an airy and "oversized" area provides plenty of space for staging all sorts of public events and happenings. Any form of permanent construction was deliberately avoided, providing much more flexibility for the public space.

The rim of the square, adjacent to the existing buildings, is flanked by dense tree lines where wooden pergolas on metal columns are constructed in order to define the positions of café and restaurant terraces. This area of shady terraces under the trees intentionally occupies a different elevation than the square, serving as a way to give the terraces greater importance and the role of observation – an auditorium towards both sea and square. This difference in height is resolved with stepped cascades that can also function as surfaces for sitting and relaxing.

On the coastal side, parallel to the sea, a one-way road passes through the square, which was impossible to nullify or trace differently. Therefore, the volume and speed of cars driving there was to be slowed down and discontinued. Our solution for this is mild but constant speed humps, forming a wavy surface on the road, which force cars to drive slower, and at the same time provide visual contact with the square. The dangerous character of the road was circumvented, and an ideal coexistence of cars and pedestrians on the square has been accomplished.

The northern segment of the parcel is a smaller public space, shaped as a pre-square, a sort of an entrance to the main square. It is a point where pedestrians are passing through on their way from the dense structure of the town to the wide square. It is a more subtle and intimate zone, and an ideal location for a meeting point, as it is detached from the main square.

Following this successful completion of the main square, we are looking forward to beginning work on the realizations of the other parts of the competition programme. ▶

Are you a young architect who has recently completed a debut project? Submit your work at debut@a10.eu and you might see it published in A10.

