

LAND DEVELOPMENT





EXISTING CITY CENTER

Based on a robust master plan, which draws on the site's inherent assets, land development has greatly enhanced the value of the city center. Downtown Beirut, functional in its infrastructure and facilities, neat and attractive in its urban design, finishing and landscaping, is a choice location for residents, businesses and institutions, as well as a vibrant cultural, tourist, leisure and shopping destination.

As a land developer, Solidere prepares the land in central Beirut for sale to investors wishing to develop their own real estate properties. Its activities in this domain involve site preparation, including archeology, infrastructure works, hardscaping, urban furniture and landscaping, town planning, parceling and urban management.

New infrastructure was laid in the traditional city center and the treated part of the landfill, and will later extend to the New Waterfront District.

As per the 1994 agreement with the Council of Development and Reconstruction (CDR), Solidere implements these works on behalf of the State in return for an allocation of 291,800 sq m of development land in the New Waterfront District.

Infrastructure

Beirut city center is equipped with a 3.6-km ring road, 8.4 km of primary roads and 16.6 km of secondary, tertiary and pedestrian roads. Expansions to the pre-war grid accommodate traffic and facilitate land parceling for real estate development. Three major axes form the ring: the new George Haddad to the east; the widened Fakhreddine to the west; and to the south, Fouad Chehab bridge, doubled in capacity, with an interchange and underpasses providing quick access to the airport, the port, East and West Beirut, and main central areas. Functional in its western section, the BCD Corniche is to skirt the waterfront district. Large avenues cut across the city center north-south: the Martyrs' Square axis extending Damascus road to the port; the new Park avenue linking the traditional city center to the hotel and waterfront districts. Weygand, Zeitouneh and Port streets, the latter widened and extended towards Trieste street, form major east-west boulevards. New roads were created in Wadi Abou Jamil.

The water supply system comprises 30 km for drinking water and 38 km for landscaping and irrigation. The water disposal system consists of 26-km storm water drainage, a sewage pumping station and 28-km sewage piping. Solidere implemented all civil works, including culverts, relating to power supply and installed 66 KV and 220 KV power cables, a 220 KV link between the Beirut pine forest station and the BCD, and a 240 MW substation transforming high-tension power transmitted by Electricité

du Liban (EDL) into medium voltage; local transformers in turn convert it to low voltage electricity for domestic use. Public lighting was installed, with low-voltage cabling, lighting fixtures and feeder pillars. Tunnels were equipped with lighting, stand-by generators, control and safety systems.

Solidere continues to install cabling and equipment falling under EDL responsibility, including 20 KV cables and secondary lines connecting delivered buildings to the public network, despite Council of Ministers' instructions to EDL to undertake such installation, directly recouping costs from end users.

Civil works were also implemented for power and secondary telecommunications networks, including duct banks for medium and low voltage networks, cable TV and telephone services. Solidere was granted in 1998 a build-and-operate license for teleport/broadband distribution and cable TV networks allowing direct connection of any BCD building to high speed broadband services, as well as a wide range of television services without the need for antenna installations. The Company intends to build and operate the system together with a technical partner, using advanced telecom technology, with the first phase to be installed during the coming year.

Hardscaping and street furniture, upgraded at Solidere's expense beyond the agreement with the State, provide high-quality public space. While street and sidewalk paving and streetlights were designed to complement the characteristics of each sector, a unified modern design characterizes other street furniture and public signage. Plaques with newly assigned postal codes were installed in 2002. The Company continues to generate designs and development controls for the public domain.

A signage manual has recently been completed and will shortly be submitted to the Beirut Municipality.

Pending completion of sufficient space underground, 16 vacant lots assigned for surface parking provide 2,500 car spaces servicing 6,000 customers per day. Prior to putting into operation the Souks of Beirut 2,550-space car park, 600 car spaces have been provided in the fourth basement.

A four-level, 108-space public car park in Weygand street is topped by a garden. A private 280-space underground car park is under implementation by Solidere in the northern part of the Foch-Allenby area.

Tendered out by CDR as BOT projects, two car parks under public property in Martyrs' Square and near the Grand Serail, remain unexecuted.

Decree 5714 of 2001 stipulated the creation of two additional underground car parks in Wadi Abou Jamil and Mina El Hosn.





Landscaping

More than 60 gardens, squares and promenade areas are part of the BCD 'green master plan'. Close to 3,500 trees already adorn the city center, in addition to a large variety of shrubs and flowering plants including traditional, revived local and imported species. The tree nursery produces 25,000 flowering plants per month and is used to tend trees spared by the war, until they are transplanted into a new setting. The streets are lined with more than fifteen species of trees, all fast growing, or fitted with planters or wide medians landscaped with trees, shrubs and colorful plants.

Starting with Nejme Square, Solidere landscaped areas adjoining public and religious buildings. An open space over the Weygand street underground car park is providing a visual link with the Municipality building and the Al Omari and Emir Assaf mosques.

The fountain in the cascading open space under the Grand Serail was upgraded in 2002. Another sloping, 2,000-sq m public open space was created near the Serail entrance. Across the street is the garden near the Evangelical church and the National Music Conservatoire.

Other well-maintained and vibrant open spaces include: Gibran Khalil Gibran garden facing UN House; Zokak El Blatt garden overlooking the city; Roman Baths garden and pedestrian area; Riad El Solh Square; Emir Amine Square in Bachoura; Omar Daouk Square and Planet Discovery garden in Mina El Hosn.

Debbas Square is the main garden in the Saifi area. Internal squares and landscaped spaces are helping create a pleasant environment in Saifi Village. Other ongoing works include a square in the Foch area and the upgrading of the CDR stairs, both designed by Vladimir Jurovic; and the upgrading of the Gibran Khalil Gibran garden fountains. Envisaged projects are: planting a median along Trieste street; and developing the designs of the one-kilometer old seashore walk open spaces.



Archeology

Archeological excavations and research yielded evidence on civilizations which span over 5,000 years and contribute to defining Beirut's identity. Solidere supported the rescuing and preservation of this heritage and financed the teams working under the supervision of the Directorate General of Antiquities (DGA); while the Master Plan flexed to preserve important archeological sites identified under UNESCO protocol to be reintegrated in unique ways into the townscape.

In coordination with relevant administrative authorities, the Company is supporting site excavation, research and conservation, and integrating findings into development projects. Archeological research proceeded during the year on seven sites falling on public space, in buildings under restoration or on development lots. Core drilling in a Foch-Allenby site having revealed the location of the ancient harbor, archeologists are participating in the construction project.

The documentation, digitizing and evaluation of the results of these sites are nearing completion. These include the fortifications of the Hellenistic city and the Roman main north-south axis (Cardo Maximus). The Persian-Phoenician site was consolidated and protected to warrant construction around and over the site without endangering the ancient vestiges.

An agreement was signed in January 2002 with the American-British landscape architecture firm Gustafson Porter, winner of the international landscaping competition, for the detailed design of Hadiqat as-Samah (Garden of Forgiveness). A conservation plan for the archeological remains includes long-term burial of some, with the on-site conservation and integration of representative features from different periods: Roman Cardo Maximus, earlier Hellenistic remains, Decumanus with houses and workshops, evidence of the conjunction of Hellenistic and Roman urban grids; Byzantine baths; walls associated with the 17th century Fakhreddine palace; and later Ottoman foundation arches and walls. Implementation will start in 2003 with the construction of the west terrace wall and pedestrian street overlooking the Cardo, and the commencement of the archeological conservation program.

Decree 5714 of 2001 amended the Cadmos street alignment, and specified the site for the study of two road bridge links north of Martyrs' Square across the ancient Tell, both provisions aimed at preserving archeological remains. Dar Al-Handasah undertook the study for CDR, with Solidere coordinating the urban design through its consultant, the French architect Michel Macary, responsible for the conceptual design of the Tell Site Museum and Heritage Trail.

The Company claimed US\$17 million in compensation for increased infrastructure costs due to delays attributed to DGA. The costs are bound to increase as long as issues remain unresolved.

Infrastructure operation and maintenance

Besides constantly upgrading site logistics services (cleaning, pest control, safety, security and traffic management), the Company continues to operate and maintain the completed infrastructure and reconstituted public domain. These services cover tunnels and underpasses, roads and sidewalks, traffic lights and street lighting, streetscape and furnishings, utility ducts and manholes, sewage and storm water networks and the sewage pumping station; the irrigation station and network, trees and landscaped open spaces. Solidere has raised with State authorities the issue of the costs incurred for these services for which it intends to seek compensation. The costs are compounded by handover delays that persist to this day.

Handover to the State

As per Law 117 of 1991 and the agreement with the State ratified in decree 5665 of 1994, implemented infrastructure and the reconstituted public domain are to be delivered to the State represented by CDR.

Despite the latter taking delivery of the ring road with its bridges, tunnels and underpasses, main and secondary roads and utilities (in December 2001), and the sewage pumping station (in July 2002), the Company continues to operate and maintain them.

Repeated requests having been sent to the Municipality to take over this function, tender documents were prepared by Dar Al Handasah, as consultant to CDR, in order to enable the Municipality to subcontract the operation and maintenance of the received infrastructure. The tender documents are still with CDR.

In order to facilitate the handover of public lighting works, Solidere has agreed to install the necessary meters, deemed by CDR as part of the Company's deliverables to the State.

The determination of the reconstituted public domain, an essential precondition for its delivery, was finalized in decree 5714 of 2001. The additional lots relinquished by Solidere to the public domain as per the decree necessitated some works, mostly public squares and gardens. A mechanism was devised to allow implementing property conveyance to the State with the provision of CDR taking delivery of future works in the released lots.

Master Plan Issues

Technical, architectural and legal issues relating to the proper interpretation of the Master Plan and the clarification of general and special BCD regulations, were the subject of numerous exchanges between Solidere and the Higher Council for Urban Planning. Several meetings were also held to that effect during the year.

A number of amendments to Decree 5714 of 2001 were thus proposed by Solidere in order to deal with the above issues, thus paving the way for the release of building permits relating to several real estate development projects in the city center, including the Souks of Beirut.

Having approved a number of the Solidere proposals, the Higher Council for Urban Planning forwarded its resolutions to the Beirut city Municipal Council, which in turn approved them in May 2003, thus paving the way for the issuing of a Council of Ministers' decree amending Decree 5714 of 2001.

Future Prospects: Martyrs' Square

Solidere will be launching later this year an open international urban design competition for the grand axis of Martyrs' Square. The design comprises the open space corridor and most of Sector H development land, down to the quayside of the first basin of the Beirut port.

The competition will incorporate the integration of important archeological sites to the north, including the ancient Tell area, as well as the museum for which a concept was received from the French architect Michel Macary.

A preferred scheme for the road links connecting Martyrs' Square to Port street across the Tell area was selected, based on a detailed study of the various options by Dar Al Handasah, Macary and transport planners. The selection was based on three criteria: traffic flow, impact on archeology and high quality urban integration. The selected scheme, approved by CDR in April 2003, will be incorporated in the urban design competition for the Martyrs' Square axis.

The competition outcome should greatly contribute to determine the new identity of this important symbolic civic space, the land use activities around it and its new extended axis down to the waterfront, as part of the process of reconnecting and repositioning the city. The design will also involve proposals for a high-rise landmark site at the northeast gateway to the city center. Completion of the urban design competition will mark the start of parceling and development in the Martyrs' Square axis, with proposed land uses as visitors' destination (hotels, active street life, cafés); cultural uses (archeology museum, other); and a high-tech (media and ICT) center at the heart of the city.



NEW WATERFRONT DISTRICT





The New Waterfront District is evolving. The site commands fine views of the Mediterranean, with a picturesque landscape of hills and mountains across the bay. The sector plan and the Beirut Marina design, both involving international architects and planners, are proceeding towards finalization. Environmental works have moved east, clearing the view for new residential developments facing the marina and the future park. Promotional, leisure and cultural activities are held on the eastern edge of the waterfront.

Heavy engineering investment in sea defense, marina construction, environmental cleanup and reclamation have been preparing for the development of the New Waterfront District. Once completed, it will constitute more than one-third of the city center. Forming an uninterrupted 3.5-km extension of the Beirut shoreline, the new corniche promenades, marina and harbor quaysides will provide more than four times the amount of seafront public space currently available in the entire city corniche system. This high-density district, endowed with extensive green areas, will emphasize mixed use. Waterfront leisure, retail and residential developments, allied with prime financial, business, hotel and tourist facilities, will enhance its attractiveness as an international destination.

Land Treatment and Reclamation

An example of changing disaster into opportunity, the New Waterfront District is an expansion of an original landfill enclosing a dumpsite that had scarred the city center foreshore since the Lebanon war. Phase Two of environmental reclamation, resulting in land cleaned to seabed and down to 23 meters below the water surface, had reached two-third completion by end 2002. The works have now moved east, clearing the view to new residential developments south of the New Waterfront District. Landfilling stands at 55 hectares, with the shortfall from the final 60-hectare target representing marine service access and work areas for the contractor, Radian International (US).

The contract, covering 18 hectares not counting extensions below sea level, involves the excavation, sorting and treatment of 5 million cubic meters of debris and waste materials. The works, started in April 1999 and scheduled for conclusion by mid-2004, are supervised by Fairhurst International (UK), controlled by Bureau Veritas (France).

The US\$56-million project is partly financed for its local content by a six-year, locally syndicated US\$22 million loan concluded in March 2000. Drawdowns until end 2002 amounted to US\$20.2 million. Repayments started in June 2002, with US\$16.2 million still outstanding at year end. The US content of the project in engineering and construction services and equipment benefits from US\$14.7 million in export credit financing and US\$10 million in additional local financing, concluded in 2001. Drawdowns of US\$18.2 million on both parts of financing had been effected by 2002.

At the end of reclamation, backfilling the clean material delivers sites for infrastructure, parks and high-density structures. Studies for the development of infrastructure, parks and high-density structures are starting with a feasibility study by Paul Rizzo Associates (US), financed by a US\$450,000 grant from the US Department of Trade.

The eastern part of the new land, not requiring treatment, was leveled and equipped with 7,500 sq m of temporary roads and a 25,000-sq m surface parking area. Leased to Beirut International Exhibition and Leisure Center (BIEL), it is hosting activities in temporary structures totalling 17,500 sq m of floor space, which include a 10,000-sq m exhibition hall, 2,000 sq m of conference areas, and a 3,000-sq m Royal Pavilion with supporting facilities, serviced by a 1,200-car park.





Beirut Marina

The Beirut Marina construction was part of completed marine works, also comprising a breakwater and a two-line defense structure protecting the marina and waterfront. The project cost totaled US\$298 million. Solidere continued in 2002 the repayment of the 10-year, US\$107.3 million loan from BNP Paribas and Banque Indo-Suez with COFACE guarantee, with US\$15.3 million paid during the year and US\$76.6 million outstanding at year end.

These major deliverables of the 1994 agreement with the State were handed over to CDR in February 2002 for the sea defense structure; and in April 2002 for the Beirut Marina civil works, including quays and breakwater. In the same month, CDR put the marina at the disposal of Solidere as per the agreement signed with the State in 1997 for the operation of the two BCD marinas.

A committee comprising the directors general of the Finance, Transport and Tourism ministries and a representative of CDR, was appointed by the Council of Ministers to put into effect the agreement as far as the Beirut Marina and to follow up on its implementation by the Company.

The agreement grants Solidere the right to exploit for a 50-year period the marina water surface, together with the Corniche underground car park provided for in the BCD Master Plan. The Company is to construct at its own expense and with official approval the installations needed for the marina operation. Works include access and circulation roads, breakwater surface parking, underground car park, pontoons, harbor master building and utilities for boats. The marina by-laws address such issues as administration and operation of the marina general services, boat traffic, public safety, environmental protection, vehicular and pedestrian circulation.

Groupe Camille Rayon (France), nominated in March 2002 as consultant to Solidere, completed in February 2003 the design of the Beirut Marina equipment: pontoons, utilities (water, power, telecom), ducting of networks, mooring bollards and service bollards. To avoid any odors in the marina, a flushing system was devised for the enhancement of current through the injection of fresh water and air. Finally, an intelligent system will cover the functional aspects of the harbor master building, linking to it all activities to allow for automatic billing.

The Beirut Marina started receiving boats as of July 1, 2002. Though not yet equipped with all planned facilities to meet a full tourist season, it is accommodating permanent berths and numerous visiting boats from neighboring marinas, especially in the summer and during week-ends throughout the year. Construction works achieved in 2002 include the timber deck, with a life expectancy of 25 years, completed end October.

A limited design competition for the Beirut Marina was launched among selected architects in April 2002. The concepts presented contained many interesting ideas, however none was accepted as a whole by the jury.

In November 2002, Solidere signed an agreement with Steven Holl architects, a leading US design firm. The architect's concept involves the design of a town quay of waterside restaurants on the southeastern curved edge of the Beirut Marina; a yacht club, summer apartments, leisure and marina-related shopping facilities on the eastern edge of the marina; and a harbor master, customs and immigration building. A belvedere overlooking the marina from the Corniche, a footbridge, underpasses, stairs and ramps are to provide pedestrian links between the marina and its surroundings. Following approval of the concept design, Holl, teaming up with architect Nabil Gholam and landscape architects Iliya-Stevenson, is to be entrusted with detailed design and supervision. The project will be implemented in phases with the first stage, comprising harbor master's building and part of the town quay development targeted for the summer of 2004.

An agreement was signed by Solidere with Dar Al Handasah for the design of the Corniche underground parking. Submitted in December 2002, the preliminary design is being reviewed to achieve the necessary coordination with the design of the Beirut Marina. This will be followed by detailed design, construction permit procedure, and execution.

Master Plan Issues

The Higher Council for Urban Planning and the Beirut city Municipal Council approved in 2002 the proposed sector plan for the New Waterfront District, its park and waterside (Sectors A and D of the BCD), together with the general and special regulations relating to these sectors. It is expected that the necessary measures will be taken towards its official ratification by Council of Ministers' decree.

