PORT LAYOUT

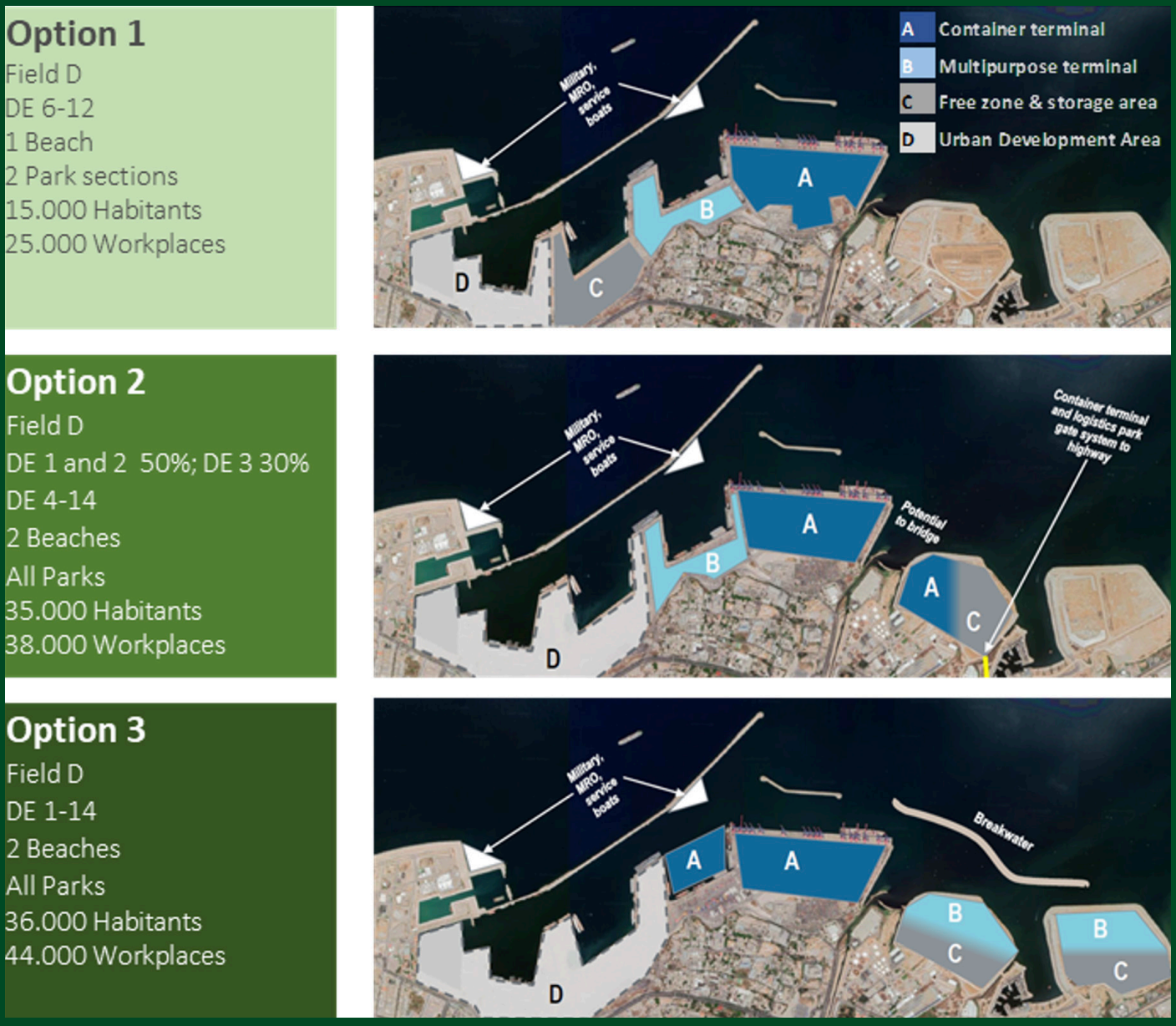
HPC

Port Layout options

The joint study understood 3 options that could speak to this and would be suitable for providing to the requirements of the city and industry. These can also be seen as stages within the development, and as such potential phases of the same very long-term plan. These should be developmental, yet flexible, as the city, port and needs evolve into the modern era.

Three high-level spatial plans have been developed and are shared on this pathway. They are distinct, yet also provide a potential sequential order of how a potential expansion of the port could be mapped out to enable future growth. The spatial plans provided in this section include an illustration of the Port of Beirut layout and the allocation of the different terminals and relevant port areas. These areas are outlined in specific sections including further detailed information. A color code links the sections to the illustrated layout and respectively refer to the discussed option.

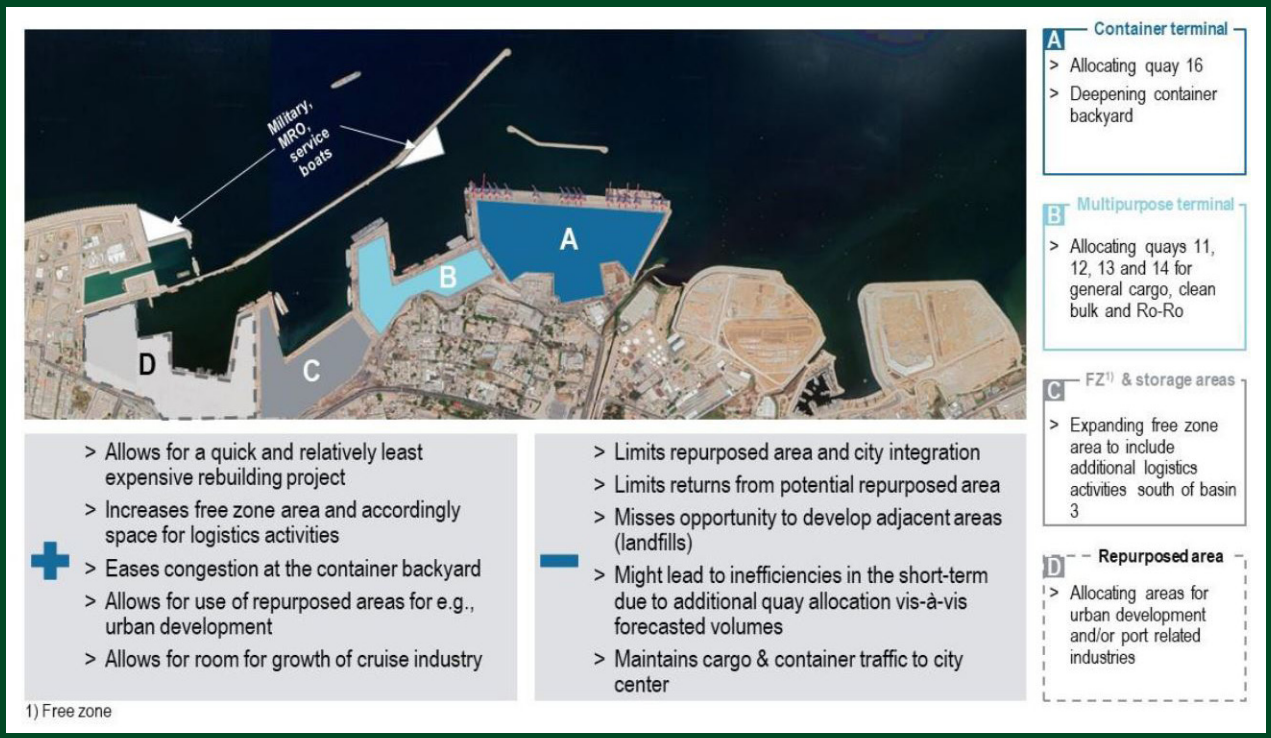
Figure 20: Options for an Urban Development



Source: Colliers International / Plan Roland Berger

These 3 options result in different land use (available and new formed ground), assumed population and workplaces, as indicated above and in the following figures.

Figure 17: High-level spatial plan – Option A



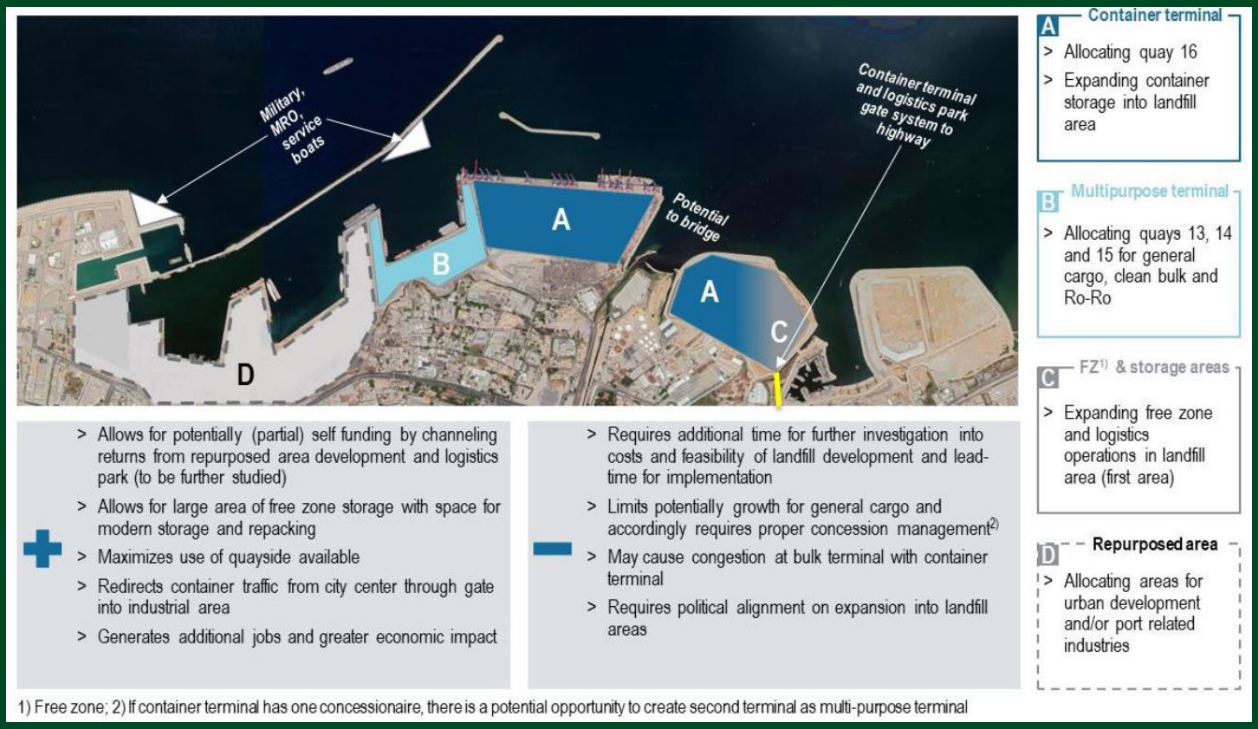
Source: HPC, Roland Berger | Image: Google Earth

The first option builds on the status quo ante of the Port of Beirut before the explosion. In this option, the former tradition of business at the Port of Beirut is leveraged and right-sizing measures are carried out. It foresees the best use of the previous port area, maximizing capacity and streamlining cargo handling. Thus, some port land can be freed to be used either by port-related industries or for urban development.

Option A allows for a quick and cost-effective rebuilding project of the port. The damage caused by the explosion is repaired, yet no further major infrastructural changes are required. The free zone area is expanded, and related logistics activities can be supported. In addition, an adapted layout to the container backyard eases congestion in container storage. The repartitioning of the berthing capacity offers potential for the growth of the cruise industry. The envisioned set-up of the cargo terminal allows some port land to be freed up which can potentially also be repurposed. Possible use of the area could be the integration of port-related industries or even urban development with some housing or other types of buildings. However, this option also faces some limitations. The quay allocation for multi-purpose terminals might lead to inefficiencies in the very short-term due to a slightly more dedicated berthing space. It only foresees a relatively small area to be repurposed which limits the potential for other, non-port-related uses, and thus misses out on the development of a true waterfront, preventing the development from being self-funding and requiring donors to fund the development. It would also limit future growth with no further space available for future expansion by missing the opportunity to develop adjacent areas, such as the current landfills to the East, which are then likely to be used in other ways and not available.

Option B: Expanding container storage and logistics park into first landfill area

Figure 18: High-level spatial plan – Option B



Source: HPC, Roland Berger | Image: Google Earth

The second option considers expanding the container storage and logistics operations into the first landfill area to the east. Thus, this option suggests pivoting from the past and developing a new port spatial plan after the August explosion damaged large parts of the non-container terminals and storage facilities. Due to expanding the container terminal and moving the free zone, a significant part of the previous port land can be made available for other use. This would facilitate housing of various types, educational and cultural buildings could also potentially be developed in its place.

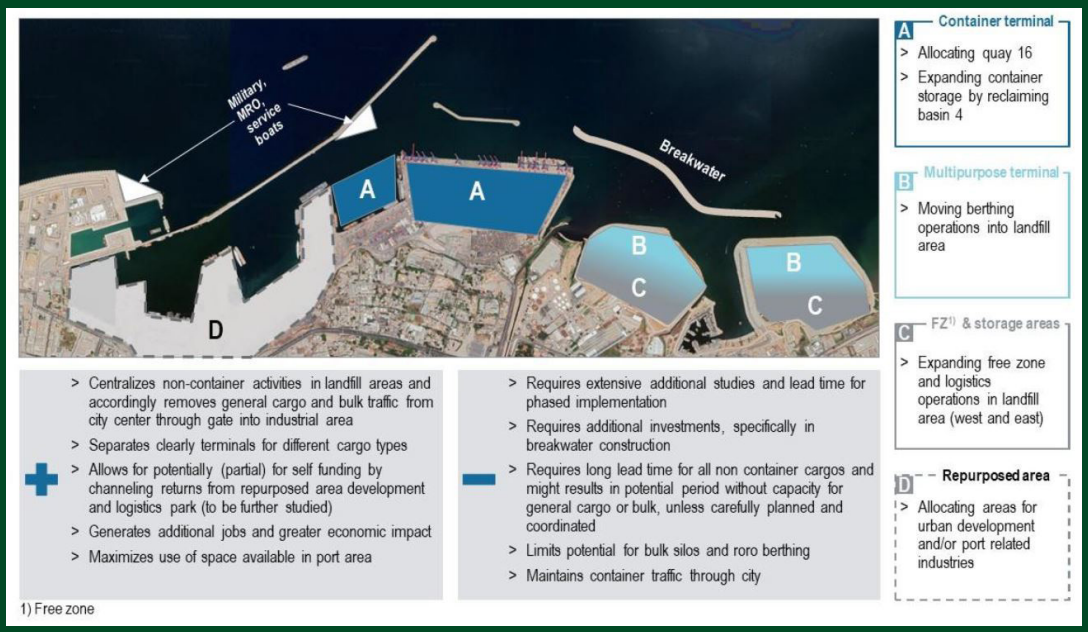
A main advantage of this option is that by freeing up space for other purposes, the required port redevelopment would potentially allow for self-funding by channeling returns from the repurposed area development and logistics park[1]. At the same time, the new location would allow for a large area of free zone storage with space for modern storage and repacking operations. The additional container terminal space has multi-fold benefits. The higher storage capacity allows for higher TEU turnover. A new road access system would redirect the container traffic from the port through gate into the industrial area and away from the city center, easing congestion and pollution in the said downtown area. In addition, the increased activity could generate additional jobs and provide a greater economic impact. The second landfill area could also be made available for other potential storage, warehousing, freezone trading stations and logistics parks functions or for the development of offshore facilities not requiring the stringent port facilities of a developed port.

In order to realize this, however, further investigation into of the landfill and the exact requirements of the port and logistics park would be necessary. One potential negative could be limited growth for general cargo, and the need for project cargoes to be routed via other ports. Overarchingly, such a redevelopment plan would require a comprehensive political alignment on the expansion to the landfill and the plans to repurpose prior port land. This does however provide the most financially viable and integrated sustainable solution for the future Beirut port.

1) This assessment is subject to further studies and thorough feasibility assessment.

Option C: Expanding non-container terminals and logistics activities into both landfill areas

Figure 19: High-level spatial plan – Option C

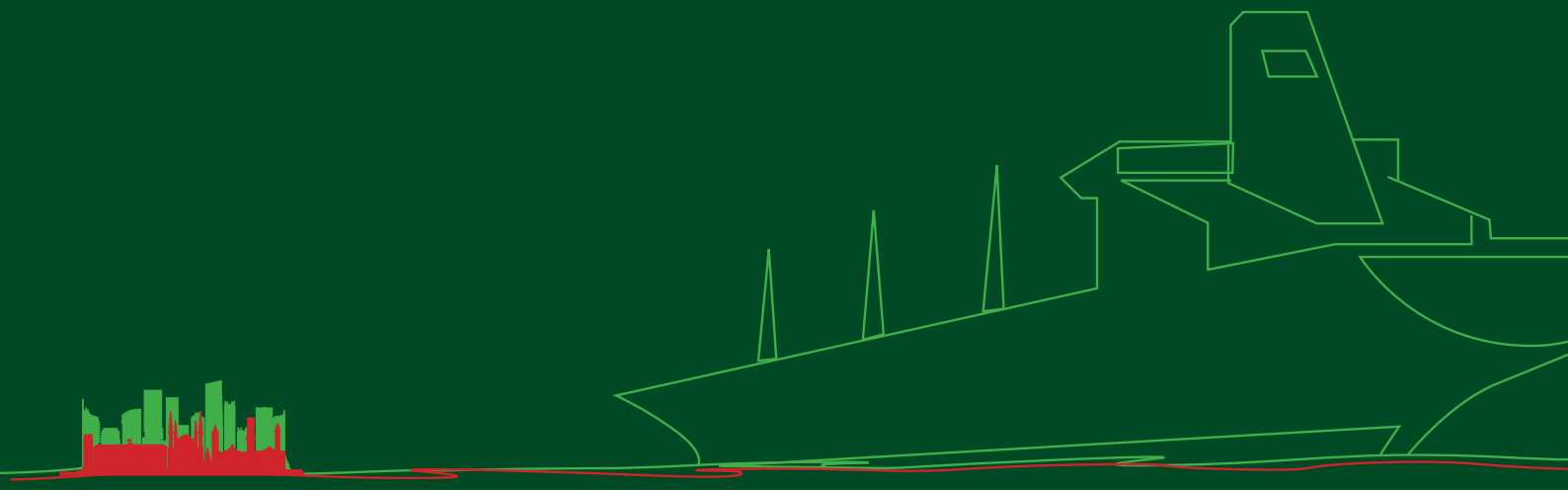


Source: HPC, Roland Berger | Image: Google Earth

Option C offers the most extensive and expensive change to the current layout of the Port of Beirut and the position of the current operations. In this approach, most of the port activity except for the container terminal is shifted east towards both landfill areas. In addition, the current basin four is filled to provide room for expansion of the container terminal. This plan can only be realized though the construction of an additional breakwater to be installed to protect the to-be-repurposed landfill areas from strong waves. Due to the comprehensive restructuring of the port towards the east, a large plot of port land can be freed up and be repurposed for other uses.

It is especially this last point of providing potential for a repurposed use of large parts of the previous port area that make a compelling argument. It allows for the self-funding of the necessary construction work by channeling returns from the repurposed urban development area. Furthermore, it removes general cargo and bulk traffic from the city center through a gate into the industrial area and clearly separates the terminals for the different cargo types. In addition, both the extended port operations and the establishment of further companies in the repurposed area will generate additional jobs which will expand the economic impact.

Due to the extensive nature of this suggestion, however, extensive additional studies and lead time for implementation are required. The plan entails significant investments, specifically regarding the envisioned breakwater construction. Furthermore, the extensive changes would have a severe impact on the functioning of the port if not carefully sequenced. The construction to also might result in periods with no capacity for general cargo or bulk, unless other plans and developments pre-empt this. From a city planning perspective, this option foresees changes in the road system, yet significant amounts of container-related traffic would continue to be channeled through the city. As in option B, this plan would require political alignment in order to realize this option, and it is recommended that this should then be a potential considered expansion beyond option B.



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