



## PUBLISHED BY

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[www.grda.mt](http://www.grda.mt)

Publication date: July 2023.

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# Potential Benefits, Projected Cost & Economic Impact

## 1. Background

The importance of establishing a green park in Victoria is underscored by various existing challenges, such as the scarcity of open spaces and a lack of parking facilities, as well as untapped opportunities that have yet to be realized. These concerns and difficulties have been raised by stakeholders who regularly engage in consultations with the GRDA, as well as through studies and surveys conducted by the Authority and other researchers.<sup>1</sup>

This note offers insights into the possible positive outcomes that can be derived from the Victoria Green Park (V. Park) as presented by the GRDA in its vision for the urban regeneration of Victoria.<sup>2</sup> The note delves into the potential social and environmental benefits and explores the possible financial gains that can be expected from the project. This analysis also provides a preliminary cost estimate of the V. Park. Additionally, it explores the economic advantages that can be expected, including job creation and increased economic activity within the local area.

## 2. Proposed V. Park Concept

This section of the note provides a description of the V. Park concept that is being proposed by the GRDA. The proposed concept involves the development of an ecological green park in Victoria, with an underlying multi-level car park. The proposed development is set to cover a total site area of 28,500 square meters which is currently occupied by Victoria's main car park, the adjacent football ground, which is also being used as a car park, the central hub of Victoria Bus Terminus as well as the Victoria playing field. The land area earmarked for investment is entirely owned by Government and is located just off Republic Street, behind the Villa Rundle Gardens.

The GRDA's V. Park concept entails the green regeneration of Victoria's main car park area and its adjacent areas. An open green space will be developed over a multilevel underground car park that will be excavated to accommodate around 880 parking spaces over a total area of 22,000 sqm,

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<sup>1</sup> A study titled "Spaces and Places for Young People in Gozo" published in *Perspetivi* emphasized the importance of increased availability of open areas. <https://grda.mt/wp-content/uploads/2023/03/Perspetivi-Issue-2-30.03.23.pdf>.

In a survey conducted by the GRDA among residents of Gozo, it was found that 12% of participants identified transportation-related problems, such as traffic congestion in central Victoria and insufficient parking availability, as one of the main negative aspects of the Island. <https://grda.mt/wp-content/uploads/2022/01/Survey-Extract-1-of-3-.pdf>.

<sup>2</sup> For more information on the GRDA's vision and concept for the Victoria Urban Upgrading see: <https://grda.mt/wp-content/uploads/2023/06/GRDA-Vision-for-Victoria-Urban-Upgrade-An-Introduction-to-the-Concept.pdf> & <https://grda.mt/wp-content/uploads/2023/06/GRDA-Vision-for-Victoria-Urban-Upgrade.pdf>.

spread over three floors. The multi-level car park is envisaged to include the following technical specifications which would contribute towards green and smart mobility:

- i. It will be covered by green infrastructure as well as a rainwater harvesting systems to sustainably harvest and clean stormwater that would runoff into reservoirs.
- ii. The carpark is also expected to have a high concentration of Electrical Vehicle (EV) recharging stations to promote carpark users to shift towards EVs.
- iii. Modern Internet of Things (IoT) technologies shall also be adopted so that users are updated in real time on parking availability.

### 3. Benefits of the Proposed V. Park

#### *Health and Wellbeing Benefits*

The primary objective of the V. Park is to enhance the health and wellbeing of residents, and visitors, and Gozitans by increasing the amount of green open space in the heart of Victoria and restricting cars from the streets. The V. Park aims to integrate with the Villa Rundle Gardens to create an open space that offers an improved quality of life.

The creation of a green open space at the centre of Victoria will have several positive effects on the population in Gozo. Accessible green spaces and natural environments have been proven to enhance wellbeing by promoting stress reduction, relaxation, physical activity, and social interaction. Green open spaces also foster community cohesion. Studies have indicated that individuals residing in urban areas with ample green space experience less mental distress, anxiety, and depression. Moreover, such individuals enjoy greater overall wellbeing compared to those living in areas with limited green space.

#### *Environmental and Sustainability Benefits*

As the main administrative hub, hosting schools, law courts, and being a popular tourist destination<sup>3</sup>, the city of Victoria faces numerous challenges such as traffic congestion, pollution, and other issues arising from the substantial influx of people for various purposes. Currently, Victoria's primary car park area can only accommodate 150 vehicles, all of which are free of charge. Additionally, an adjacent area designated as a football ground is being used as a paid parking lot which accommodates 75 vehicles.

Due to the scarcity of parking spaces, cars are often parked in narrow roads, congested areas, squares, and locations near heritage sites, significantly impacting Victoria's urban fabric and the

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<sup>3</sup> According to the results from a Tourists' perception of Gozo survey carried out by the GRDA during the month of October 2022, 72.6% of visitors visited Cittadella & Victoria during their stay in Gozo. For more info see: [https://grda.mt/wp-content/uploads/2023/04/GRDA\\_Tourism\\_Survey\\_Part\\_1.pdf](https://grda.mt/wp-content/uploads/2023/04/GRDA_Tourism_Survey_Part_1.pdf).

quality of life for both residents and visitors. Over the years, these challenges have worsened due to the persistent increase in the number of vehicles, while the available parking spaces in Victoria have remained unchanged. The proposed multi-level underground car park beneath the proposed green park aims to increase the parking capacity from a total of 225 spaces to 880 spaces, thereby alleviating the parking shortage in Victoria and addressing the aforementioned challenges.

Furthermore, the construction of a green multi-level underground car park intends to alleviate congestion in a highly congested area by removing bottlenecks, while also promoting sustainable mobility through a shift to pedestrianization and also through the provision of electric vehicle charging stations among other initiatives. The bus terminus is also planned to be integrated into the underground car park, with the possibility of implementing a park-and-ride system for transporting passengers from Victoria to other areas in Gozo, as well as facilitating transportation within the city centre. This will enhance traffic flow, tackle congestion and parking issues, and contribute to a cleaner environment by reducing car pollution and emissions in Gozo. The park-and-ride service would utilize 100% electric buses, and the bus frequency would be determined based on an analysis of residents' and tourists' mobility patterns to ensure reliability and efficiency.

### *Financial Benefits*

The V. Park is anticipated to have a positive impact on the area's appeal to investors, visitors, and prospective residents. Specifically, urban green open spaces are valuable environmental assets that are often associated with beneficial effects on the overall quality of life and property values.

As previously mentioned, parks and green spaces have the potential to enhance healthy lifestyles and wellness for individuals of all ages, making them particularly attractive to families with children and retirees seeking a city that prioritizes a high quality of life. Well-maintained open spaces also offer an opportunity to create a positive impression and convey a sense of place and confidence, which can be appealing to investors and businesses. Additionally, access to nature and open spaces tends to provide a sense of rejuvenation and enables workers to be more productive.

Public green spaces are frequently considered as tools to reshape a city's image and revitalize neglected properties for market re-entry. Numerous studies indicate a significant correlation between property value and proximity to parks and open green spaces. However, the specific impacts may vary depending on the case and location.

## **4. Projected Cost**

This section of the analysis presents the preliminary cost estimates of the proposed new green park development and the underlying multi-level car park. This assessment relies on the estimates and assumptions derived from the GRDA's concept for the park (*see Table 1*).

**Table 1: Site characterises & assumptions**

Total site area	28,500	Square meters
Number of parking spaces	880	Parking spaces
Projected cost	€35.0 million	Projected construction and finishing costs based on the proposed floor plans outlined in the GRDA's vision for the park. These costs include a contingency of 20%.
Projected annual operational cost	€0.7 million	Per annum

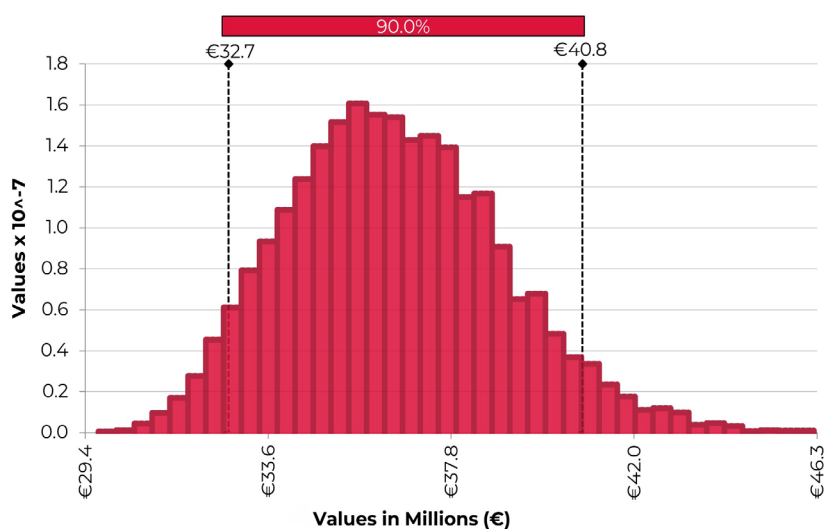
Source: GRDA

The development of the proposed V. Park concept is estimated to necessitate a capital investment of approximately €35.0 million. This amount covers the costs of the project, including Value Added Tax (VAT), and incorporates a contingency expense of 20% to accommodate for the potential increase in prices resulting from global price inflation. The capital expenditure encompasses all the expenses attributed to the V. Park, including demolition, excavation, construction, and finishing costs. Furthermore, the annual operational costs required to maintain and manage the green park and underground parking are projected to reach €0.7 million. These operational costs include wages, maintenance expenses, cleaning services, security measures, as well as costs associated with water and electricity usage.

It is important to highlight that the projected capital cost is based on specific assumptions outlined in the GRDA's concept for the V. Park, which may undergo changes after the consultation process and once the final project plans are finalised. Furthermore, the estimated costs encompass inherent risks associated with the demolition, construction, and finishing phases of the project. There are also other risks associated with the project including additional expenses in the event of unexpected archaeological discoveries, a greater inflation rate than originally envisioned in the baseline costs, and the likelihood of encountering shortages in available human resources.

To account for the aforementioned risks, this assessment also incorporates a Monte Carlo simulation.<sup>4</sup>

**Chart 1: Projected Cost**



Source: GRDA estimates

<sup>4</sup> Monte Carlo simulation is a computational technique used to model and analyse the uncertainty and variability of a system or process. It involves running multiple simulations using random inputs or parameters within specified ranges to generate a range of possible outcomes. By repeating these simulations numerous times, statistical analysis can be applied to estimate probabilities and assess the likelihood of different results. This method is particularly useful for complex systems with numerous variables and uncertainties, providing valuable insights for decision-making and risk assessment.

This approach allows for a more comprehensive consideration of the risks associated with the project. By employing Monte Carlo simulation, a range of possible outcomes can be generated, taking into account the uncertainties and variability of these risks, providing a more robust assessment of the project's financial costs. According to the results of the Monte Carlo simulation, which were based on the previous outlined risks, there is a 90% probability that the project will cost between €32.7 million and €40.8 million (see *Chart 1*).

In terms of identifying a prospective funding avenue for the V. Park, the GRDA is of the view that it should be supported by the Sustainable Urban Development (SUD) Fund.<sup>5</sup> This fund, which receives partial financing from the European Regional Development Fund (2021-2027), was announced during the 2023 Budget Speech. Its primary objective is to promote urban green initiatives in Gozo and support ongoing structural reforms in the region. These reforms aim to enhance Gozo's competitiveness, vitality, and ability to provide a satisfactory quality of life for its residents.

## 5. Economic Impact Assessment

This section focuses on evaluating the economic effects resulting from the construction of the newly planned V. Park. The evaluation is conducted based on the GRDA's proposal as presented in the GRDA V. Park vision document. The assessment considers various factors such as the characteristics of the site, the anticipated costs for construction and finishing, and the projected timeline for the project.

To analyse the economic impact, the assessment utilizes the Gozo Economic Modelling tool, which was specifically developed by Oxford Economics for the GRDA. This tool enables the consideration of alternative scenarios that could potentially impact the baseline economic projections. By utilizing this model, the assessment determines the direct economic impact of the project on Gozo's economy, as well as the associated indirect and induced effects. The economic impact is evaluated by comparing the changes in economic activity with the baseline economic forecast provided by Oxford Economics.

The baseline forecasts for Gozo are updated once a year and are publicly available on the GRDA's website. The most recent set of forecasts has been updated using the latest regional GDP figures, which were published in late December 2022. These forecasts provide an economic outlook for Gozo up until 2040.

### *Real GDP*

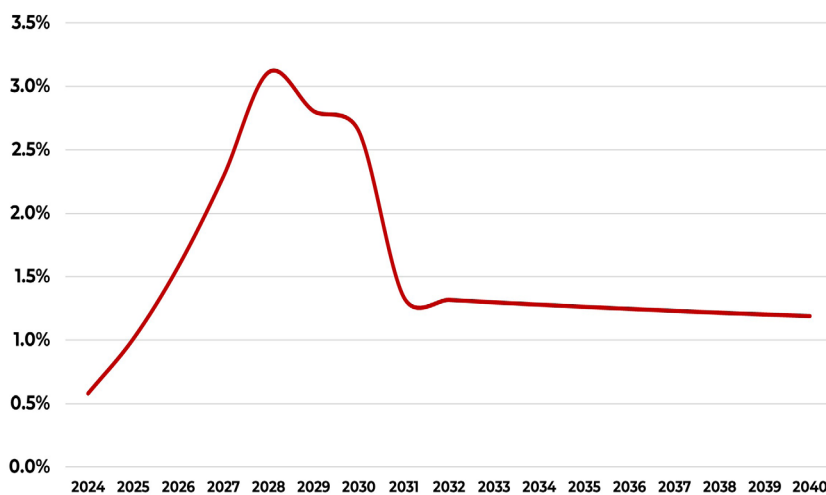
Based on this assessment, it is determined that the green park in Victoria, along with its associated parking facilities, will have a beneficial effect on the economy of Gozo. The project is expected to generate a significant increase in economic activity in both the short and long term.

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<sup>5</sup> "Apart from the 10% commitment of the European Union cohesion and agricultural investment funds, Gozo will also benefit from around €60 million in investment under the Sustainable Urban Development initiative. The areas in which these funds will be invested will be determined next year so that the work related to this initiative can kick off immediately." Budget Speech 2023

During the construction and finishing period, which is projected to span from 2024 to 2030, the annual real GDP of Gozo's economy is projected to on average increase by €13.0 million. This represents an average annual increase of 2.0%, compared to the baseline projections provided by Oxford Economics (see *Chart 2*).

*Chart 2: Change in Real GDP (%)*



*Source: GRDA estimates based on Oxford Economics model*

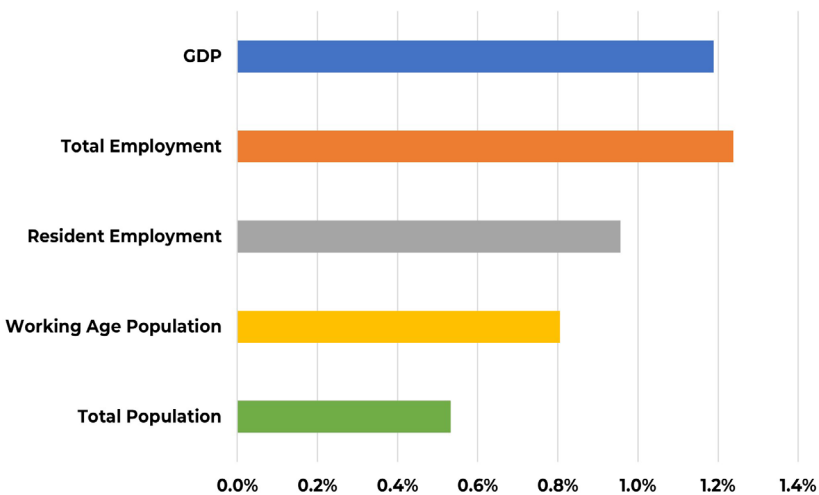
Following the completion of the construction and finishing phase, the positive impact of the V. Park on Gozo's economy is anticipated to continue. By the year 2040, the real GDP is predicted to be 1.2% higher than what was initially envisaged in the baseline projections. This increase in real GDP is primarily attributed to the heightened economic activity in the transportation and storage, arts and entertainment, and recreation sectors. Additionally, although to a lower extent, there will also be increased activity in public administration.

*Employment*

The increased economic activity resulting from the V. Park will also have a positive impact on employment rates. By the end of the projected period, the employment rate in Gozo is expected

to be 1.2% higher than initially anticipated in the baseline projections (see *Chart 3*).

*Chart 3: Difference from baseline, 2040 (%)*



In terms of specific numbers, the new V. Park is estimated to generate an additional 225 workplace jobs by the end of 2040. This means that there will be 225 more employment opportunities created compared to the baseline projections. The growth in employment will primarily stem from the transportation and storage, arts and entertainment, and recreation

*Source: GRDA estimates based on Oxford Economics model*



sectors, which will experience increased activity as a result of the project. These sectors will play a significant role in driving job creation and contributing to the overall economic growth in Gozo.

### *Other Impact*

In addition to the economic advantages mentioned earlier, there are several notable positive attributes that are challenging to quantify. These positive aspects encompass health, well-being, and hedonic benefits.

Estimating the health and well-being benefits can be approached by assessing the willingness to pay for urban green spaces. Halkos et al. (2022) conducted a study in Greece to determine the willingness to pay for urban parks.<sup>6</sup> According to their findings, visitors, on average, were willing to pay €3.56 for the opportunity to access urban parks. In terms of potential hedonic benefits, a study conducted in Warsaw, Poland, examined the effect of urban green areas located within a 100-meter radius of residential dwellings on property prices.<sup>7</sup> The study revealed that, on average, the presence of such green spaces increased property prices by 2.8% to 3.1%, with a more substantial impact observed in modern residential buildings.

While the quantification of health, well-being, and hedonic benefits is challenging, the above mentioned studies highlight the positive effects that urban green spaces have on residents' wellbeing and also on property prices. Although these studies are based on different cities and may not directly reflect the situation in Gozo, they provide a valuable indication of the potential effects that could be observed.

## **6. Concluding remarks**

In conclusion, the proposed V. Park concept, as proposed by the GRDA, offers numerous benefits and opportunities for the community and the environment. The projected cost of the V. Park is estimated to be approximately €35.0 million, with annual operational costs of €0.7 million. These costs are subject to certain risks and uncertainties, which were taken into account through a Monte Carlo simulation. The V. Park will increase economic activity during and beyond the construction phase and is also anticipated to create additional job opportunities.

Finally, the scope of this note was to provide stakeholders and decision-makers with a comprehensive understanding of the potential benefits, costs, and economic implications associated with the implementation of the V. Park. It lays the groundwork for informed decision-making and highlights the transformative potential of the GRDA's vision.

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<sup>6</sup> Halkos, G., Leonti, A., Petropoulos, C., & Sardianou, E. (2022). Determinants of willingness to pay for urban parks: An empirical analysis in Greece. *Land Use Policy*, 119, 106186. <https://www.sciencedirect.com/science/article/abs/pii/S0264837722002137>.

<sup>7</sup> For more information see: <https://jest.vgtu.lt/index.php/IJSPM/article/view/5220>.



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