
UNIVERSITY OF MALTA
FACULTY for the BUILT ENVIRONMENT
B.Sc. (Hons) Year 3
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Unit Code: BEN 3101 (Occurrence D)

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Unit Title: Design Workshop

Sub-Heading: Transforming Public Open Spaces Through Nature-Based Solutions

Introduction

The introduction of nature into public open spaces brings about a number of positive benefits of a socio-ecological nature. Vegetation strengthens ecosystem services and enables these spaces to have better water management, cleaner air and temperature moderation. This in turn translates itself into enhanced wellbeing for the community surrounding these areas not least in terms of respiratory health, mental wellbeing as well as additional areas for recreation. Green Infrastructure is one example of nature-based solutions.

Table 1 – Benefits of Green Infrastructure

| Benefits group | Specific Green Infrastructure benefits |
|---|---|
| Enhanced efficiency of natural resources | Maintenance of soil fertility |
| | Biological control |
| | Pollination |
| | Storage of freshwater resources |
| Climate change mitigation and adaptation | Carbon storage and sequestration |
| | Temperature control |
| | Storm damage control |
| Disaster prevention | Erosion control |
| | Reduction of the risk of forest fires |
| | Flood hazard reduction |
| Water management | Regulation of water flows |
| | Water purification |
| | Water provisioning |

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| Land and soil management | Reduction of soil erosion |
| | Maintaining/enhancing soil's organic matter |
| | Increasing soil fertility and productivity |
| | Mitigating land take, fragmentation and soil sealing |
| | Improving land quality and making land more attractive |
| | Higher property values |
| Conservation benefits | Existence value of habitat, species and genetic diversity |
| Benefits group | Specific Green Infrastructure benefits |
| | Bequest and altruist value of habitat, species and genetic diversity for future generations |
| Agriculture and forestry | Multifunctional resilient agriculture and forestry |
| | Enhancing pollination |
| | Enhancing pest control |
| Low-carbon transport and energy | Better integrated, less fragmented transport solutions |
| | Innovative energy solutions |
| Investment and employment | Better image |
| | More investment |
| | More employment |
| | Labour productivity |
| Health and well-being | Air quality and noise regulation |
| | Accessibility for exercise and amenity |
| | Better health and social conditions |
| Tourism and recreation | Destinations made more attractive |
| | Range and capacity of recreational opportunities |
| Education | Teaching resource and 'natural laboratory' |
| Resilience | Resilience of ecosystem services |

Source: <http://ec.europa.eu/environment/nature/ecosystems/studies.htm#implementation>, adapted.

The European Union defines green infrastructure as a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services such as water purification, air quality, space for recreation and climate mitigation and adaptation. This network of green (land) and blue (water) spaces can improve environmental conditions and therefore citizens' health and quality of life. It also supports a green economy, creates job opportunities and enhances biodiversity. Green infrastructure planning is a successfully tested tool to provide environmental, economic and social benefits through natural solutions. In many cases, it can reduce dependence on 'grey' infrastructure that can be damaging to the environment and

biodiversity, and often more expensive to build and maintain. An overview of green infrastructure benefits is presented in Table 1.

Local Context

Public areas within our localities are not given much, or any, design attention. Even where individual buildings are carefully designed, the space in between, the public realm, often “just happens”. And yet, the public realm, our streets, piazzas, public gardens, are the areas that all of us inhabit, probably even more intensely than specific buildings. The theme of this Workshop is to focus on an existing public open space in Wied iz- Zurrieq, Qrendi which is to be re-designed into a greener space. The site is currently a garden/belvedere and includes the adjacent historic Xutu tower(see Figures 1 and 2).



Figure 1: Site in Wied iz- Zurrieq, Qrendi



Figure 2: Site comprises garden/belvedere and the historic Xutu tower

This workshop is being carried out in collaboration with the Public Works Department. You will be required to carry out consultation with the Department as one of the main stakeholders.

The main aim is to re-think the design of this space at a conceptual level and to demonstrate how it can contribute towards economic prosperity, social wellbeing whilst integrating environmental elements. This exercise should demonstrate skills in urban design, as well as in civil engineering with a view to put forward new concepts for feasible spaces that can make a difference in the lives of the users of such spaces.

Project Scope

The aim of this design workshop is to re-design the existing public space with the aim of retrofitting it with green and blue infrastructure making it a more attractive space for different users and achieving a balance between such users.

You are required to observe how the quality of this space is impacted by its use, for example, be it commercial, passing trade etc and how these spaces may be designed in a manner which heightens economic, social and environmental benefits. You will be required to properly design the selected area to consider the green infrastructure principles mentioned above as well as other socioecological measures that can improve the socio-economic fabric of the area. This means that, apart from proposing a design for this open space, you will need to consider aspects such as storm water drainage, street furniture, lighting, vegetation, mobility, recreation etc. Street furniture includes all those installations that “embellish” our public open spaces, that is, public rubbish bins, directional signs, advertising boards, lighting poles (possibly with PV integrated fittings), railings that blend with the environment using sensitive materials which prove to be low in maintenance and resistant to the marine environment, spaces for bicycle parking, charging points integrated in street furniture, and whatever occupies the public realm. You will also be required to design a new public convenience that blends with the environment and not constructed in the traditional building fabric, as well as allow for a space to install works of art or sculptures in the public open space. You also need to think of how pedestrian spaces can be made into attractive and walkable areas – this includes thinking about accessibility issues for a wide range of pedestrians.

Solutions must be addressed to maximise economic, social and environmental goals within the area of intervention. You will be required to make an assessment of the selected area, to identify its characteristics, and to assess the extent to which detailing impacts the perceived quality, attractiveness and its potential to act as green hub. In doing so, you will be required to develop a design concept for the space. The design will need to illustrate how the following aspects have been considered / provided for:

- Contextual Relationships
- Connectivity
- Character and Form
- Activities and Functionality
- Accessibility and Mobility
- Use of Vegetation
- Use and Management of Water
- Waste Management
- Community Involvement / Needs (socio-economic).

Deliverables

The following deliverables are contemplated:

1. Presentation of your analysis and research outputs, both in terms of the physical and functional aspects of the space as well as the economic, social and environmental aspects characterising the area, which you will identify by observing how space is used and also by documenting interviews with users and stakeholders.
2. Produce a design concept and master plan for the space and its adjacent street illustrating how these can be improved by addressing the criteria referred to above. Each intervention should be supported by a strong rationale that maximises economic, social and environmental benefits. The interventions should be limited to public areas or areas where central or local government may intervene i.e. private property is not to be included. In some cases, depending on the context and outcomes of your analysis, potential ideas for semi-private areas such as front terraces or front gardens may be considered.
3. Develop drawings and visuals to illustrate how some of the following aspects would be addressed and how they form an integral part of the design concept and masterplan layout:
 - a. Overall design
 - b. Sustainable drainage systems
 - c. Waste management provision
 - d. Vegetation planters
 - e. Street furniture
 - f. Lighting provision
 - g. Mobility
 - h. Recreation.

These outputs should be presented in the form of the following submissions: 2 A1 posters and a 5 minute video presentation recording¹. Depending on the format of the final presentation you will be either required to present your posters in person or use the digital presentation for an online presentation via zoom. Deliverables shall be in electronic and not printed format.

Timelines

The project should be completed by not later than the 12th November 2024.

Throughout Week 1, you are requested to, as a minimum requirement:

- Visit the public open space
- Observe the space and understand what works and what doesn't. What uses surround the site? How does movement work? Observe how people use the space, how does it support their activities and how does it fail to do so?
- Document interviews with users and stakeholders (including the local council and Public Works Department). What are their views? What works for them, what doesn't? What improvements would they like to see?

The following link also provides a useful resource. Not all the questions may be relevant; however, it can help you in starting to think about some of the questions you may ask.
<https://placecheck.info/en/21-questions-for-the-placecheck-walkabout/>

After week 3 you will have an interim presentation where you will be required to present the analysis and critique of the space together with the design concept. You will then continue work on the design development of the space. You will be required to prepare a design layout for the space together with visualizations to understand in particular the character of the proposal and drawings explaining its functionality.

The anticipated calendar will be as follows:

| | | |
|------------|----------|---|
| Week 0 | 25/9/24 | Briefing, familiarisation with, and explanation of, brief. |
| Week 0 - 1 | | Visit the site and undertake observations, carry out research component, place check etc. |
| Week 1 | 2/10/24 | Tutorials – Outcomes of Analysis & Observations – Physical & Social Aspects |
| Week 2 | 9/10/24 | Tutorials – Design Objectives, Strategy & Concept |
| Week 3 | 16/10/24 | Interim Presentation – Analysis, Space Critique, Objectives & Concept |
| Week 4 | 23/10/24 | Tutorials – Design Development |
| Week 5 | 30/10/24 | Tutorials – Design Development |
| Week 6 | 6/11/24 | Tutorials – Design Development and Presentation Preparation |
| Week 7 | 13/11/24 | Final Presentation |

¹ The 5 minute presentation should explain the design highlighting the problems encountered and the solutions thereto. These presentations are intended to be hosted on the Department's Facebook page. Your consent to the use of your presentation for this purpose is required.

Learning Outcomes Envisaged

The design workshop applies basic public space design principles in practice by first performing an analysis and critique of current practices. Subsequently, to design a proposal aimed at improving the overall quality and liveability of the space and its surroundings and exploring its potential to act as a green socio-economic hub. The envisaged outcomes for the project are:

- Developing a critical perspective to the design of the public realm and defining problems clearly
- Developing a deeper understanding of the various functional requirements of public spaces and addressing these in the design approach
- Applying the principles of green infrastructure to make the space positively contribute towards the micro-climate of the area
- Integrating economic, social and environmental considerations within the design of the space to ensue its attractiveness, functionality and contribution towards the upgrading of the surrounding area
- Heightening communication skills [graphic, writing, presentation] to communicate results, thoughts and design ideas in an effective and interesting manner

Marking Scheme

The following marking scheme will be adopted:

| Criterion | Mark |
|--|------|
| Developing a critical perspective to the design of the public realm and defining problems clearly | 10 |
| Developing a deeper understanding of the various functional requirements of public spaces and addressing these in the design approach | 20 |
| Applying the principles of green infrastructure to make the space positively contribute towards the micro-climate of the area | 30 |
| Integrating economic, social and environmental considerations within the design of the space to ensue its attractiveness, functionality and contribution towards the upgrading of the surrounding area | 30 |
| Heightening communication skills [graphic, writing, presentation] to communicate results, thoughts and design ideas in an effective and interesting manner | 10 |

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