

SIGNIFICANCE AND DIVERSITY OF LANDSCAPE DESIGN IN REHABILITATION



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Abstract. The World Health Organisation defines human health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Nature is one of the mechanisms that can help to achieve the aspects highlighted in this definition. Recovery environments, such as therapeutic gardens in the outdoor areas of treatment centers, play a crucial role in challenging life circumstances and can supplement traditional forms of treatment. They are not a substitute for medical care and different therapies, but rather function as a support system and enhancement for achieving quicker and higher quality outcomes. The aim of this paper is to look at the possibilities of creating different revitalisation landscapes, including abandoned ones, and to adapt them to different target groups, which are increasing in number and diversity in today's changing political and economic situation, as well as to the growing number of people who need a specific approach to the recovery process, which can also be provided by a well-designed outdoor space. The revitalisation of the landscape of abandoned rehabilitation facilities is also essential for sustainability processes, when the functional zoning of such areas is improved and outdoor spaces that can fulfil their function in the long term are brought back to life, transformed into spaces adapted to modern needs. Based on the analysis and theoretical studies of different outdoor spaces of abandoned rehabilitation institutions, proposals and thematic models for the revitalisation of rehabilitation landscapes near abandoned water, near settlements and surrounded by forests have been prepared, highlighting the potential of such areas within individual landscapes and emphasising the importance of rehabilitation landscapes in each of them. **Keywords:** therapeutic landscapes, rehabilitation landscapes, stress minimizing landscapes, landscape design

Introduction

A significant proportion of the world's population now lives in cities, and urban life inevitably affects people's health, and health is critical to our ability to function in society. Increasing urbanisation, as well as financial, political and environmental challenges, are driving the search for innovative solutions to develop healthy environments and adapt to this era of chronic lifestyle diseases [16]. This process has long been relevant in many respects, making cities and urban environments more sustainable from a number of perspectives in which landscape plays an important role [18]. Landscape and urban design that promotes health and well-being is of paramount importance, not only because health systems around the world are under pressure, but also because of a wide range of social, economic, political and environmental factors [16]. Considering its impact on the psyche and health, rehabilitative landscape design is mainly intended for various medical institutions, sanatoriums and nursing homes, but its application is not limited to these spaces; therapeutic design principles can also be applied in schools, libraries and any public outdoor space [1].

While a well-designed living environment is beneficial to the health and well-being of all citizens, it is particularly important for certain target groups for whom it can have a therapeutic effect. Firstly, healthy environments need to address demographics - we live in an ageing society. In the next few years, the majority of the population will be of working age, which means that the proportion of age-related diseases will increase, so it is necessary to plan now how to develop and create a quality living environment for seniors [4; 11]. Similarly, according to the European Agency for Safety and Health at Work, stress is one of the biggest health and safety problems in Europe and the second most commonly reported work-related health problem, affecting more than 20% of workers in the EU-27. It is estimated that 25% of Europeans experience mental health problems at some point in their lives, and around 10% of long-term health problems and disability can be attributed to mental and emotional health disorders. Analysis of Latvian statistics on neurotic, stress-related disorders shows that the situation in this area has deteriorated significantly, with the number of new cases

of neurotic disorders rising sharply by 2021 [5; 6; 15]. Of course, the current unstable political situation and wars will inevitably have an impact on the psychological, mental and physical health of society. The coming years will be a long and difficult process of recovery, which will require peaceful and safe spaces.

Referring to the European Landscape Convention, which states that any landscape, anywhere - urban, rural, degraded, areas of outstanding beauty, areas of high quality and everyday areas - is an important part of the quality of human life, and that landscape plays an important role in human recreation and well-being, is a key element of individual and societal well-being, and in understanding the global challenges mentioned above, it is reasonable to consider that the creation of high quality living spaces is an important aspect of the common good of society [10]. Environmental design specifically designed to improve health and well-being can be used to stimulate positive social change in cities and their neighbourhoods [16].

Various terms are used in the literature to refer to the therapeutic segment of landscape architecture. Terms such as sanctuary, therapeutic or restorative gardens, rehabilitative, therapeutic or healing landscapes, etc. are used, usually

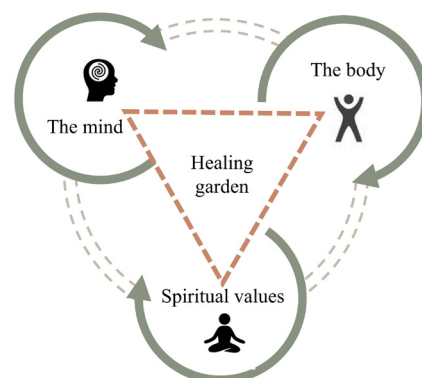


Fig. 1. The essence of healing gardens [Authors' scheme, 2023]

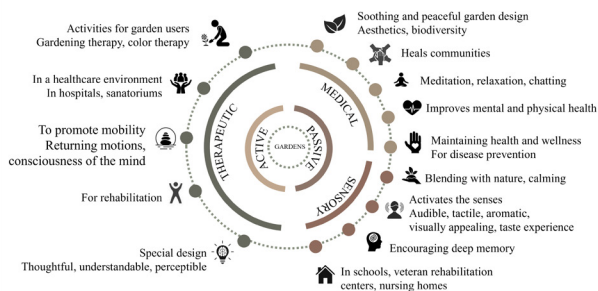


Fig. 2. Gardens with healing properties, their types [authors' scheme, 2023, using 1; 3; 16]

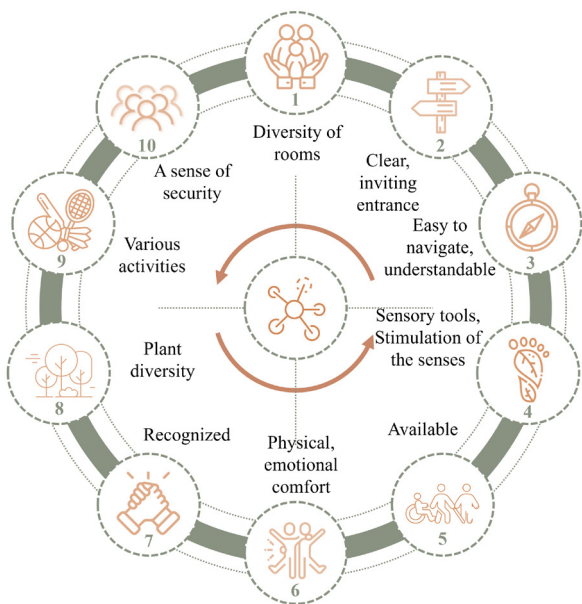


Fig. 3. Basic principles of rehabilitation landscape design [authors' scheme, 2023]

referring to the creation of gardens with healing and therapeutic effects, with a positive impact on human health, they should help and accelerate recovery (see Figure 1). Often these words and terms are used interchangeably [1; 12].

There are thought to be two main types of gardens with medicinal properties (see Figure 2). Gardens that provide passive health benefits - Healing gardens [12; 21] and Sensory gardens [8; 13], and gardens that provide and promote active healing - Therapeutic gardens [1; 16; 19; 20].

Healing gardens are a long-term investment in improving public health and healing communities. By spending time in a healing garden, visitors are healed in a passive way, by feeling the presence of nature. These gardens are not just for when there is an acute need, but are important for preventing illness, promoting active lifestyles, and maintaining and improving feelings of health and well-being [16].

A sensory garden cannot be designed without considering the human factor. Unlike other display gardens, which are designed to be observed from a distance, sensory gardens attract visitors to touch, smell and actively experience with all their senses [8].

The activities that take place in therapeutic gardens contribute significantly to treatment and stress reduction for patients and staff. Therapeutic gardens mainly cater to patients suffering from mental illness and those undergoing rehabilitation after various traumas or illnesses [20].

Focusing on understanding the inner world, adapting to situations and creating the right environment is a sequence of actions that requires attention to nuance and detail. As

discussed above, the philosophy of therapeutic landscape design is to create gardens that promote health. This design combines horticulture and landscape architecture with psychology and medicine. It is based on the theory of the positive effects of nature, vegetation and gardens on the psyche, senses and health [1]. For the design of a healing garden to be functional and achieve the goal of healing, specific design and planning principles need to be considered (see Figure 3).

For the purpose of this study, rehabilitation landscapes are landscapes in rehabilitation centre areas, the development concept of which is based on research-based design principles for therapeutic gardens.

Methods

Three different landscapes of abandoned rehabilitation centres have been selected for the study, where the selected areas have different spatial structures, but what they have in common is the rich natural substrate and the diversity of existing elements. The areas were divided into different categories and selected on the basis of the following principles: seaside, forest, suburban - the most typical locations of the treatment centres, which were mainly determined by the natural environment - by the sea, near the forest, in a suburban area. The location of these specific sites has also historically been a key location for the development of sanatoriums and rehabilitation centres. The different structures, sizes and locations of the sites allow each of them to be selected and developed according to the most appropriate development scenario and adapted to the specific group of people. Once the sites have been selected, their functional boundaries are defined. They are not based on cadastral divisions, but the spatial structure of the sites was assessed during the site survey and the functional boundaries were defined in terms of spatial and visual divisions.

The selection of sites was based not only on their location, but also on their natural base, size and the preservation of existing buildings (whether and to what extent structures have been preserved). The sites vary in size, location and configuration, but all of the selected sites have retained their historic buildings; the state of deterioration of the buildings varies, but is one of the prerequisites for the development of the site.

Two former sanatoriums - Liepaja Sanatorium and Baldone Sanatorium - were chosen for the study. Sanatoriums were usually built outside populated areas for hygienic reasons. They were most often built by the sea, in mountains and coniferous (dry) forests, and less often in suburban green areas [7]. The Liepaja sanatorium falls under the category of 'seaside'. The proximity to the sea is a compelling advantage for the development of the rehabilitation centre, it would provide both an influx of visitors and positive health benefits. The Baldone sanatorium falls under the 'forest' category. This site is the largest of the selected sites in terms of area. This gives it the advantage of being able to develop a variety of treatment facilities and offer a variety of activities. The third site selected is the former Straupe Narcological Hospital. This site has not historically been a sanatorium, but the therapeutic framework has been a key element of the site throughout its existence. The site was chosen because of its location - it falls under the category of 'suburban' - and because of its specific natural substrate and the overall configuration of the site.

The Abandoned Rehabilitation Landscape Character Assessment (ARLCA) approach was developed to best assess the existing situation of the sites and their suitability for the development of a rehabilitation function. The matrix is based on the principles of rehabilitation landscape planning and the

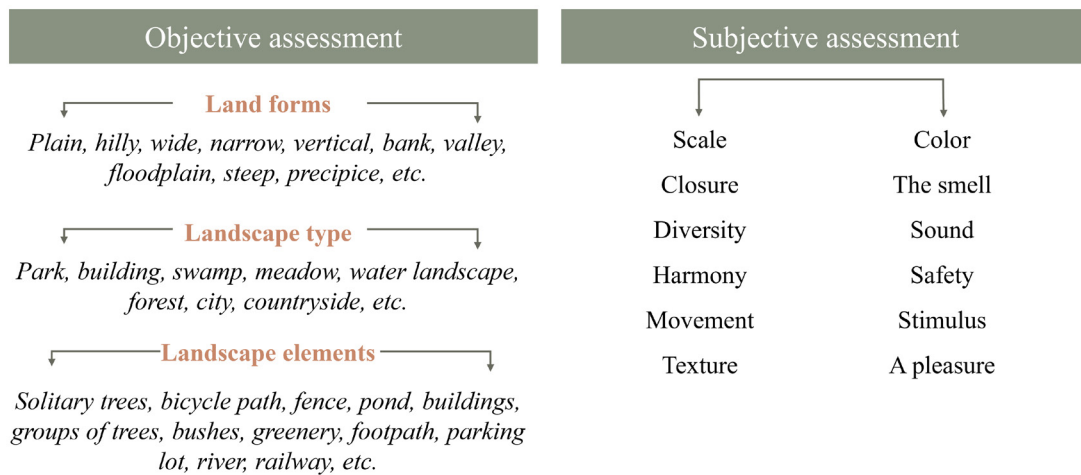


Fig. 4. Landscape assessment method [authors' scheme, 2023, using 9]

Landscape Character Assessment method (see Figure 4).

The ARLCA matrix is divided into three assessment blocks: Landscape - Perception, Accessibility and Approachability, and the Physical Condition of the Site, where each of these blocks has their own evaluation aspects and more detailed evaluation criteria.

The Landscape - Perception block is designed to assess the structure, emotional perception and aesthetic quality of the landscape. The landscape structure assesses the composition of the site, the natural substrate, the existing vegetation, the presence of water, which is an important factor in rehabilitation, and the topography. The emotional perception of the landscape is the subjective assessment of the author, taking into account the basic principles of rehabilitation landscapes, such as the safety of the area. Criteria such as smell, colourfulness and sound are assessed too. In terms of aesthetic quality, attention is paid to the scale of the site, views and existing elements, as well as the architecture of the buildings.

Healing gardens are most often in combination with different buildings. Where there are existing buildings on the site, the relationship between the architecture and the landscape should be examined as part of the site analysis. Architecture and gardens should complement each other and speak the same language. The garden and architecture should be in harmony. The treatment process must be supported by the site, e.g. the shape of the garden, the façade of the buildings, etc. Depending on the diagnosis of the garden users, even the building materials or the size of the building can affect the feeling of safety and comfort [14].

The second evaluation block, Accessibility and Approachability, assesses physical and visual accessibility. This includes criteria such as orientation and landmarks, functional accessibility (public and private transport), distances to public centres, the external appearance of the site and views to it, and environmental accessibility or universal design.

As the sites are derelict and not subject to public activity, the matrix includes an assessment block on the Physical Condition of the Site. This block assesses the extent to which the site is degraded, polluted and vandalised. It also assesses the existing infrastructure in the area - lighting, landscaping features, footpath network, their existence and functionality.

Results

The highest score in the territory of Liepaja sanatorium was obtained in the aspect of emotional perception (see fig. 5). This is explained by the location of the territory, the presence of the sea gives the territory a higher scenic value and makes it more pleasant to be in. The structure and aesthetic quality

of the landscape are rated similarly. The site is classified as green, with up to 30% of the total area covered by green vegetation, dominated by individual large trees and groups of shrubs. The value of the site lies in its proximity to water. The architecture of the existing buildings blends harmoniously into the overall landscape, forming a unified structure.

The highest score in the Baldone Sanatorium area was given to the aspect of landscape structure. All the evaluation criteria were above average. The site is interesting, it is not monotonous, the site also benefits from the proximity of water (the river), which also determines the changes in the relief. The site is very green, dominated by groups of trees and shrubs, due to its proximity to the forest. The proximity of the forest also influences the evaluation of the criterion of emotional perception. The assessment of the harmony of the architecture with the surroundings shows that there is discomfort. The high-rise building on the site is very large, creates a feeling of insecurity and is out of scale with the surrounding area.

The lowest score in this block was obtained by the area of the Straupe Narcological Hospital. The score is largely due to the location of the site and the adjacent infrastructure elements. Positive features include the presence of water and the existing green structure, the space is filled with various groups of trees and shrubs, and there are also groups of greenery. Despite the large scale of the existing building (the Palace) in relation to the adjacent part of the park, it fits harmoniously into the overall landscape and reads as a coherent structure. The location of the Liepaja sanatorium site - the city centre - is positively reflected in the assessment of physical accessibility (see Figure 6), but the functional accessibility of this site received the lowest score because, in comparison with other sites, this site is not as close to public transport as other ones. The site is visible, with views on all sides, partially screened from the sea by trees.

The lowest score in this block is given to the area of the Baldone sanatorium. As part of the site is surrounded by woodland, it is not easily visible from a distance and has no clear landmarks.

The criterion of orientation reflects the situation in the evaluation of the size of the sites. The Liepaja and Straupe sites are relatively small and therefore easy to navigate, while the Baldone site is large and lacks clear landmarks, making it difficult to navigate. All sites score low on the criterion of environmental accessibility - the current situation is not conducive to environmental accessibility. Liepaja Sanatorium scores slightly higher than the other sites due to the fact that there are virtually no changes in the terrain.

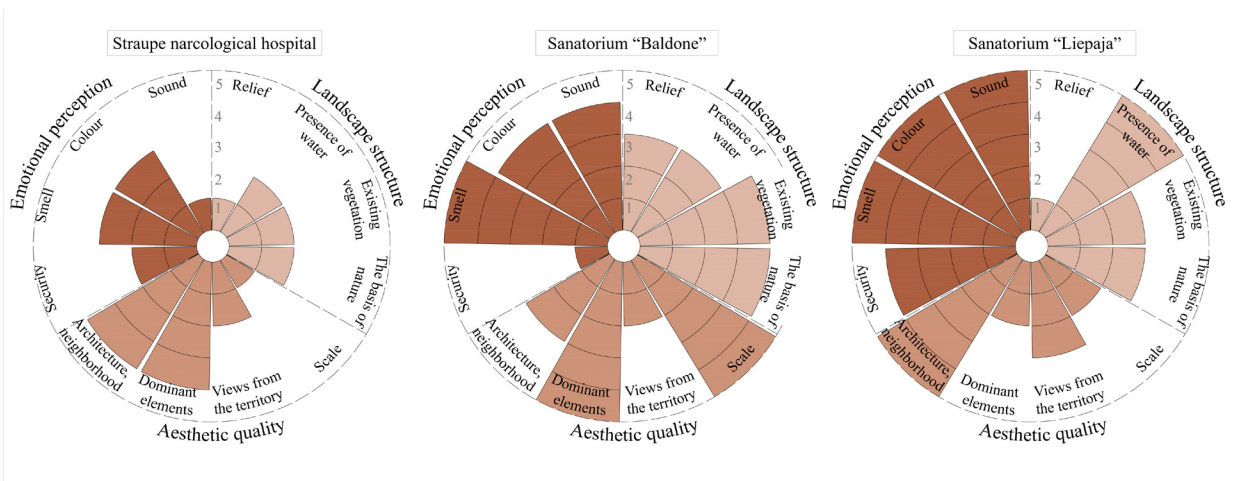


Fig. 5. ARLCA landscape assessment approach, Landscape Perception assessment [authors' scheme, 2023]

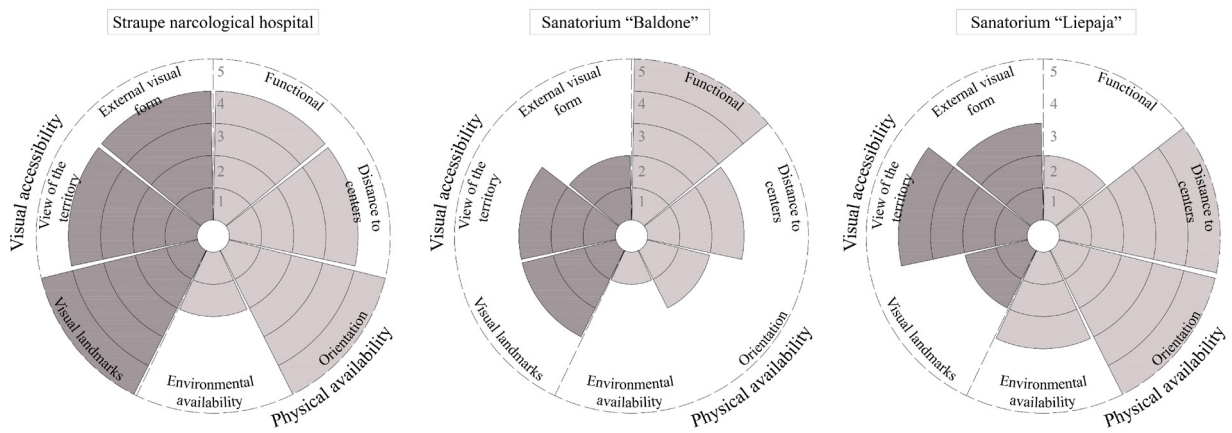


Fig. 6. ARLCA landscape assessment approach, Accessibility and Approachability assessment [authors' scheme, 2023]

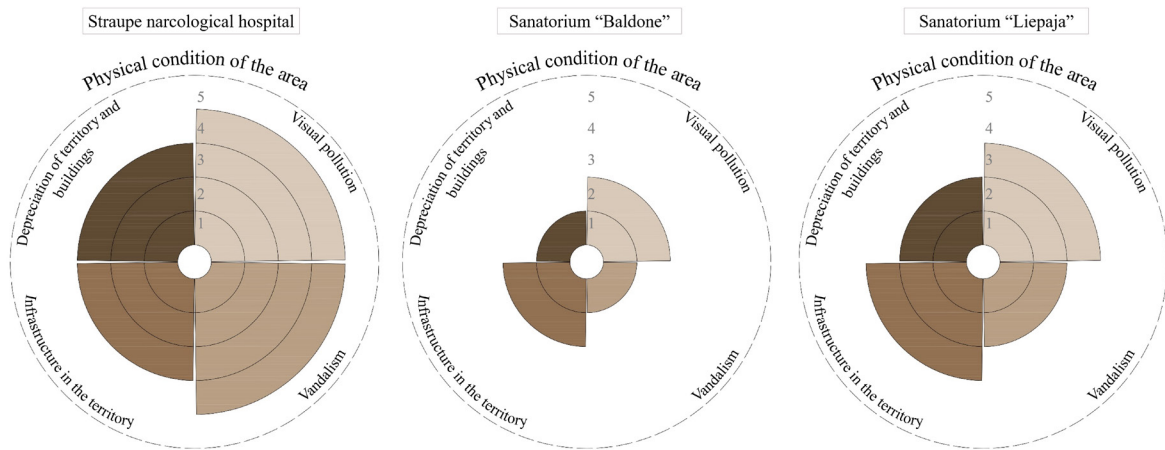


Fig. 7. ARLCA landscape assessment approach, Physical Condition of the Site assessment [authors' scheme, 2023]

Summarising the results of the third evaluation block, there are strong differences between the areas surveyed (see Figure 7). The highest score was obtained by the Straupe Narcological Hospital, where the physical condition of the site was judged to be of the highest quality. This is due to the fact that the institution has been closed for the shortest period of time and both the park and the buildings are still in active use, mainly for tourism.

The Baldone and Liepaja sanatoriums were closed during the same period, but the physical condition of the site is different. This is due to the location of the site and the surrounding infrastructure. The Liepaja sanatorium has suffered from vandalism, and there is a marked deterioration of the buildings. Visual pollution is visible in some places, but the

site is arbitrarily overgrown with various shrubs. The Baldone sanatorium, on the other hand, suffers from severe vandalism, pollution and dilapidation. The former infrastructure is no longer functional.

Discussion

A review of the literature and existing research on the needs of different patient groups, the adaptation of outdoor spaces and the aspects relevant to planning, reveals an overall concept of rehabilitation landscaping (see Figure 8). The concept reflects three key elements: nature, people and architecture. These elements interact to influence and complement each other, with the common goal of creating a high quality and adapted rehabilitation outdoor space for

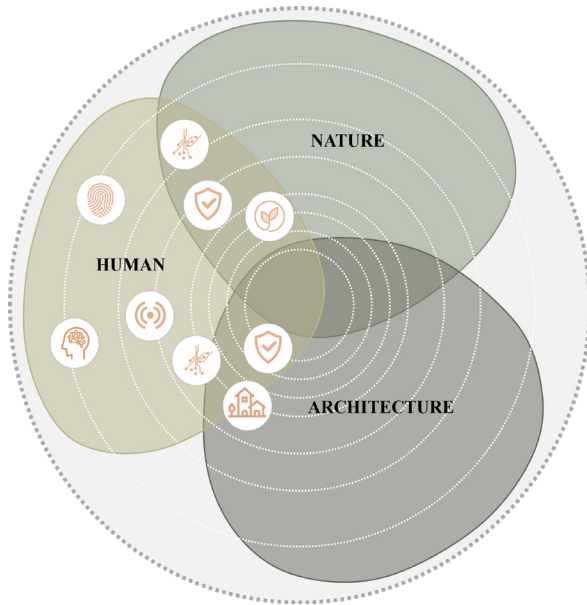


Fig. 8. Basic concept of rehabilitation landscaping [authors' scheme, 2023]

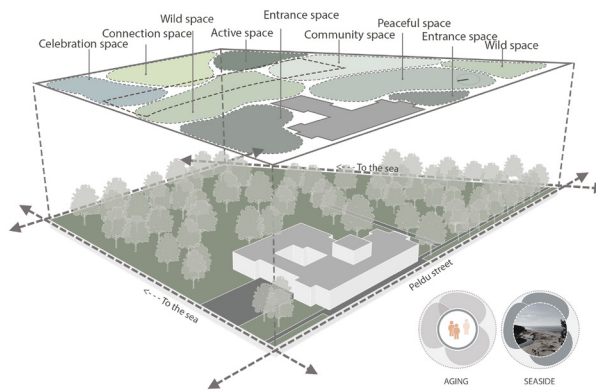


Fig. 9. Planned zoning for the territory of the Liepaja sanatorium [authors' scheme, 2023]

each visitor.

The concept of outdoor development in such abandoned rehabilitation centres comprises seven categories of comfort, which include different psychological and emotional facets, different functions and outdoor structures. By combining some or all of these categories, an overall outdoor message is created that provides the functions needed by visitors and the full functioning of the rehabilitation landscape. Each concept can be tailored to the specific problem of the study, where the direction of development would be tailored to the needs of the user group.

For each of the former off-site rehabilitation facilities to be developed, the paper proposes not only an overall concept for the development of the site, but also three spatial design models that highlight the key features and opportunities of both the site and the specific functional space.

There are several advantages to creating rehabilitation landscapes close to water, in this case the seaside. Rehabilitation by the sea can offer a versatile and effective approach to promoting recovery, providing physical, emotional and social benefits.

Having assessed the current situation, positive features and shortcomings of the Liepaja Sanatorium territory, as well as possible development scenarios, the development direction of this territory is focused on care and rehabilitation of the elderly. Having identified the needs and abilities of the elderly, the territory of the sanatorium is the most suitable for the successful implementation of this type of rehabilitation.

The zoning of the area is divided into seven rooms (spaces) (see Figure 9 and Table 1), which include both more active activities and quiet areas to be with oneself. The zoning is based on the existing situation, but also takes into account the planned new buildings, which will occupy a large part of the total area. The natural base will shrink considerably with the planned development, but the zones have been arranged in such a way that they can be adapted to the future situation with a slight transformation.

The area of the sanatorium is small, easily covered and transparent, and this aspect will ensure that the seniors can easily move around the area, feel safe as they are easily visible

Table 1. Spatial design models for the development of the territory of Liepaja sanatorium [construction by the author]

Spatial design models	Description
	<p>The main purpose of a Peacefull space is to provide a quiet, undisturbed place to be alone or with a small group of friends. The space can accommodate different types and models of seating. The seating areas can be more enclosed or more open, and the backdrops can be varied and made up of different types of greenery. Use flowering, aromatic plants to make the space more inviting.</p>
	<p>Community space - a space to develop communication, interpersonal skills and practical activities. The plan is to create horticultural therapy areas with various raised planter boxes and seating areas. It is important to design the space so that everyone has the opportunity to work - the planters are sized to be easy to reach, the boxes are adapted for wheelchair users and distances are respected. The space is in a sunny location, so it is important to provide shelter from the sun. This solution uses pergolas to shade the space from the sun whilst allowing sufficient light to pass through.</p>
	<p>Connection space - an open, slightly transparent space that merges with the adjacent beach. The space provides a link to the activities on the beach, acting as an introduction to the sea area. Walkways should be created here, linking to footbridges or paths in the dune zone, on the beach. Benches (or seating areas) should be systematically placed along the paths. Views of the sea are important too.</p>

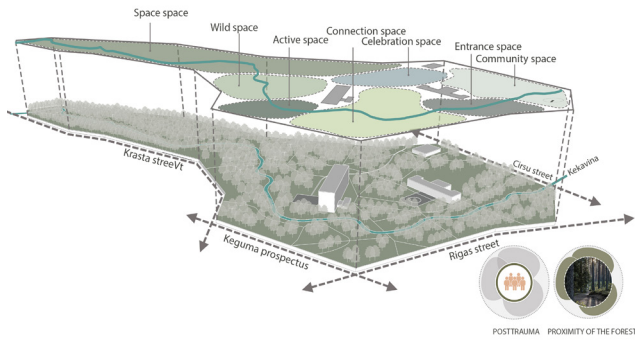


Fig. 10. Planned zoning of the territory of the Baldone sanatorium [authors' scheme, 2023]

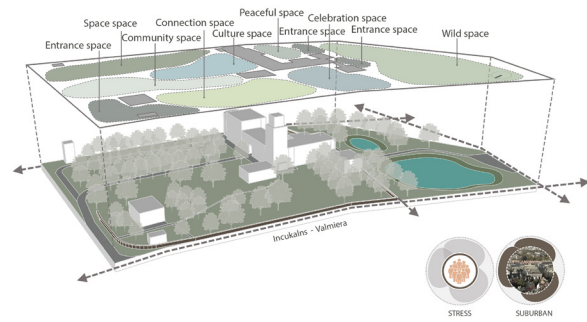


Fig. 11. Planned zoning for the territory of Straupe Narcological Hospital [authors' scheme, 2023]

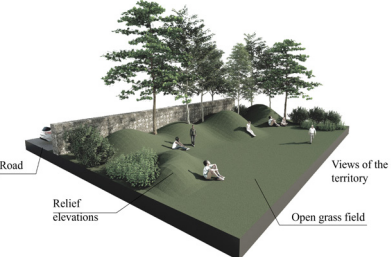
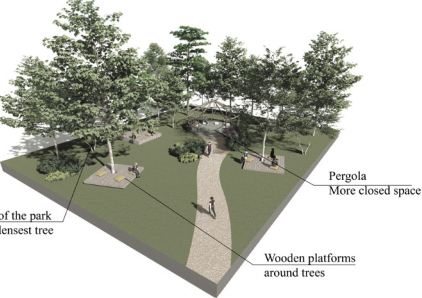
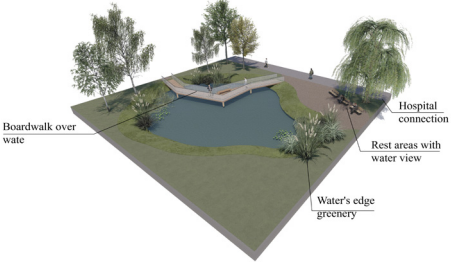
in any situation, and can quickly return to the building. There is no change in the terrain of the area, which also ensures ease of movement. The proximity of the sea will encourage exercise - quiet walks, swimming and sea air will have health benefits. The infrastructure surrounding the sanatorium, the concert hall, the park, the beach, will give the patients the feeling that they are still part of the community, so that they are not isolated from the activities around them. Rehabilitation landscapes near forests can offer several benefits for both physical and mental health. The therapeutic effects of forests on stress have been proven by several studies, and various forest therapies are now gaining recognition. By evaluating the territory of the "Baldone" sanatorium and identifying the positive effects of the forest on stress-related problems, the development of the sanatorium territory is focused on the rehabilitation of post-traumatic stress patients - war veterans. The location and surroundings of the site will

create a peaceful rehabilitation space that will provide the necessary peace and quiet for this group of patients. The seven rooms (spaces) in the sanatorium area are arranged in such a way that they do not conflict with each other and successfully integrate with the existing Lilac Park (see Figure 10 and Table 2). The creation of outdoor rehabilitation areas in the suburbs enables local people to use them and makes them easily accessible due to their location. The location of the Straupe Narcological Hospital in relation to the nearest towns and settlements makes it economically advantageous to develop the rehabilitation function. The existing situation of the area suggests that the development of the area could be directed towards the rehabilitation of patients with various stress-related illnesses. The constant movement around the site will remind patients that everything is changeable and transient, so they will not

Table 2. Spatial design models for the development of the territory of Baldone sanatorium [construction by the author]

Spatial design models	Description
	<p>The great value of the area is the river Ķekaviņa that flows through it, and its presence can be integrated into any space, but in the Wild space the value of water is emphasised the most. The space will include activities related to observing and exploring nature, focusing on the positive effects of water on visitors. Different approaches to the water will be developed, creating terraces and platforms to be placed near the river. Several bridges will be built throughout the sanatorium area, connecting the two banks of the river and creating a walking path. There will be areas where it will be possible to touch the water and areas where it will be possible to observe the water from a distance.</p>
	<p>The largest part of the territory is covered by a Space space that shows and emphasises the main asset of the territory - the forest. The space includes the entire adjacent forest area and part of the sanatorium park. The space is to be designed as naturally as possible, taking into account the existing forest values. Emphasis should be placed on the development of walking routes of various lengths and types, with sports equipment in certain areas. It is important to provide regular recreational areas. In order to emphasise the positive effects of the forest on health, forest therapy and forest bathing (Shinrin-yoku) should be developed in the area. Forest bathing is a deliberate act of being in nature, a long, slow walk that allows you to feel your surroundings [22].</p>
	<p>Next to the forest area, next to the sanatorium buildings, there is a Celebration space. The space is intended for various community events for visitors. The development model includes a terraced amphitheatre that blends into the overall forest landscape and provides an opportunity for gathering and developing communication skills. When creating this type of gathering space, environmental accessibility should be ensured. As part of the space is terraced, ramps should be provided to allow wheelchair access to the space.</p>

Table 3. Spatial design models for the development of the territory of Straupe Narcological Hospital[construction by the author]

Spatial design models	Description
 <p>Road Relief elevations Views of the territory Open grass field</p>	<p>A Connection space is provided along the road to partially separate the inner part of the park from the road. This area provides the most open and secluded areas, allowing for the development of open space for a variety of activities, while allowing unobstructed views of other visitors.</p> <p>The development solution proposes a variety of elevations which will create an interesting structure and opportunities for different uses of the space. The raised areas would also act as a noise barrier, integrated into the overall function of the redeveloped outdoor space.</p>
 <p>The area of the park with the densest tree cover Pergola More closed space Wooden platforms around trees</p>	<p>In the part of the park where the trees are denser, there is a Space space. The aim of the space is to create an area, separated from the surrounding traffic, where it is possible to be alone or in small groups and feel the presence of nature. By taking into account the position of the trees in the space, it is possible to place integrated wooden platforms around the trees. They can be built at different heights to make them easy to use for all visitors. The space should be complemented by a laconic canopy that allows people to stay outdoors even in adverse conditions.</p>
 <p>Boardwalk over water Rest areas with water view Water's edge greenery Hospital connection</p>	<p>The ponds on the site are located outside the walled enclosure of the hospital, so the pond area and adjacent green spaces form a shared Wild space. The emphasis of the space is on the presence of water and its health benefits. The development proposes walking platforms over the water, with the possibility of separate areas with direct access to the water. Safety measures should be taken when creating platforms over the water, with fencing along the edges of the platforms. Recreational areas should also be provided adjacent to the ponds with views over the water. Benches, tables, planting near the water's edge to emphasise the purpose of the space - to connect with the water.</p>

feel isolated from the world around them.

When designing the outdoor rehabilitation area near the motorway, the layout of the spaces should be considered in such a way as to create a reminder of the constant movement mentioned above, but without creating a conflict between disturbing noise and quiet rest areas. The site consists of eight rooms (spaces) (see Figure 11 and Table 3), located in relation to the designated areas, the road and the existing building complex.

Conclusions and Recommendations

Based on the research and development proposals for different types of rehabilitation landscapes, guidelines have been combined to help in the design of such outdoor landscapes:

- Firstly, a therapeutic outdoor space should provide a variety of spaces - spaces with different characters for groups of visitors and for being alone. Providing a variety of spaces gives patients a choice and a sense of control, which in turn reduces stress. A space designed for solitude allows patients to 'break away' from the sterile environment of the hospital; spaces where small groups, visitors or medical staff can gather provide social support for the patient [12].
- Closer to windows, rooms and building entrances, the garden will be used more as these spaces are easily accessible, but another approach should also be offered, the provision of more remote, spacious, freer spaces. Designs should be made to allow easy access to garden spaces, providing an environment that encourages social interaction between small groups, as well as places where larger numbers of people can gather, while still allowing a sense of privacy [21].

- Provide a variety of activities - both active and passive activities should be provided. In developing different activities, a balance should be struck between passive and active spaces. The balance between these two aspects needs to be found depending on the type of users and how much they are able and willing to be active or vice versa. This aspect points to the importance of understanding user groups and their needs at the outset [14].
- People should be able to work and stay in the garden during different seasons and weather conditions. Shelters in the garden will provide protection from the sun and allow activities to take place in less favourable weather conditions. There may also be covered areas closer to the entrances to the buildings to allow access to the garden when it is raining. Lighting should be provided to allow the garden to be open during the dark seasons [1; 12].
- All garden elements should not only be safe, but also comfortable. The overall aim is to create an environment where visitors feel cared for. If visitors feel physically and emotionally comfortable, they will spend more time in the garden. This in turn requires that sufficient seating is provided and that it is accessible to all. Seating should be regular and systematically distributed throughout the area, with an optimum spacing of about 25 metres between benches. Benches should also be placed at entrances to allow visitors with limited time to sit down. It is also possible to use movable benches and tables to give visitors a choice, which in turn leads to a sense of control [3; 12; 17].
- The garden needs to be clear, understandable and easy

to navigate - an abstract, unclear environment can create a sense of anxiety, which is unacceptable. Spaces should be arranged in a way that is transparent, easy to find and inviting. The ability to navigate the garden independently can be encouraged in a number of ways: clearly visible paths, signs, landmarks, visible access to the building. The path system should also act as a guide, always leading to the desired destination and helping to find the way back, ideally all paths should lead back to the building entrances. It is equally important to create features that will help visitors remember the garden. The garden should be recognisable and encourage associations. It is advisable to include a striking element that is not competing or off-putting, a distinctive group of plants, a water feature or anything else that will create new memories and associations with the place. The visitor should feel a sense of belonging to the garden and associate it with a familiar space, event or feeling [2; 12].

- Accessibility and universal design should be ensured; the garden should be accessible to everyone, regardless of age, ability or preference. When choosing surfacing materials, make sure they are wheelchair friendly and easy to navigate, and path widths should be appropriate [3; 12].
- Features should be provided to stimulate the senses and help with the practice of mindfulness. This can be achieved by using a variety of materials in the garden. From the use of different textures in landscaping elements to the wide variation in planting. Touching stones that warm in the sunlight, walking on different paths with soft or hard surfaces, touching plants, tree trunks - these activities make you aware of and connected to your surroundings. The full potential of the landscape in terms of views should be exploited, and seating should be arranged to provide as many different perspectives as possible [14].
- The presence of water is clearly a positive aspect. Moving water is soothing in both an auditory and visual context. It creates a psychological screen that helps in the process of rejuvenation. Moving water is also an effective way of reducing ambient noise. Still water promotes meditation and peace [12].
- Garden entrances play an important role, they should be presentable, inviting and appealing. The entrance area is the first impression of the garden, it plays a crucial role in attracting patients and making them feel safe [12; 14].
- The proportion of hard surfaces in the garden should be minimised, so the choice of planting is one of the most important aspects. It is recommended to use as wide a variety of plants as possible - colourful flowering plants, different textures, colours and shapes. Plants that make sounds in the wind, tree canopies, different grasses and others should be used, as well as plants that attract birds and butterflies are positive features in the garden [12].
- Plants can mark the change of seasons and help to create a sense of cyclical rhythm. A sense of cyclicity is extremely important in creating an awareness that nothing is permanent, just as the garden and landscape change, so does the process of recovery and growth [12].
- Healing gardens should provide a sense of security. The garden should be enclosed, the enclosure may not be visible, but the visitor should feel that they cannot accidentally leave or get lost. A garden with living components such as trees, flowers and shrubs creates

a sense of security and hope and offers psychological peace, a space to relax. The architecture of buildings should also create a sense of security and not be heavy and intrusive, as patients who are vulnerable and impressionable may perceive depressing and threatening messages from any environment that creates negative associations. To ensure the healing process, the environment needs to be unambiguously positive, which means that the space needs to support the healing process. The use of art (sculptures), garden and building forms should be considered; they should be harmonious and non-competitive, otherwise a negative experience may be created [14].

When planning such specific outdoor spaces, it is important to match their functionality with the resources already available in the area. The choice of the potential target group is also very important, as it determines the guiding principles for the development of the space.

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Kopsavilkums

Saskaņā ar Pasaules Veselības organizācijas definīciju, cilvēka veselība ir pilnīgas fiziskās, psiholoģiskās un sociālās labklājības stāvoklis, ne tikai stāvoklis bez slimībām vai fiziskiem traucējumiem. Daba ir viens no mehānismiem, kas var palīdzēt īstenot šajā definīcijā uzsvērtos aspektus. Rehabilitācijas ainavas, kas ārstniecības iestāžu ārtelpā var tikt skatītas caur ārstniecisku dārzu prizmu, ir nozīmīgs atbalsts sarežģītās dzīves situācijās un var kalpot kā papildinājums klasiskās ārstēšanās veidiem. Tās neaizstāj medicīnisko palīdzību un dažādas terapijas, bet ir kā atbalsta mehānisms un papildinājums ātrākai un kvalitatīvākai rezultātu sasniegšanai. Darba mērķis ir apskatīt iespējas dažādu rehabilitācijas ainavu, tai skaitā pamestu, veidošanai, pielāgojot tās dažādām mērķgrupām, kuru skaits un daudzveidība mūsdienu mainīgajā politiskajā un ekonomiskajā situācijā pieaug, kā arī pieaug to cilvēku skaits, kam nepieciešama īpaša pieeja atveseļošanās procesam, ko var sniegt arī pareizi veidota ārtelpa. Pamestu rehabilitācijas iestāžu ainavtelpu revitalizācija ir būtiska arī ilgtspējas procesu nodrošināšanai, kad tiek pilnveidots šādu teritoriju funkcionālais zonējums un atgriezta dzīvē ārtelpas, kas savu funkciju var pildīt ilgtermiņā, transformējoties mūsdienu vajadzībām pielāgotās telpās. Pamatojoties uz veikto dažādu pamestu rehabilitācijas iestāžu ārtelpu analīzi un teorētiskajām studijām, sagatavoti priekšlikumi un tematiski modeļi pamestu ūdens tuvumā esošu, apdzīvotu vietu tuvumā esošu un meža ieskaustu rehabilitācijas ainavu revitalizācijai, izceļot šādu teritoriju potenciālu atsevišķu ainavtelpu ietvaros, uzsverot katrā no tām rehabilitācijas ainavu nozīmi.