Design Problems of Tourism Infrastructure for People with Disabilities in Protected Landscape Areas in Poland

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Abstract. The article presents problems of designing the tourist infrastructure for disabled people in protected landscape areas. At the introduction, there is an analysis of current regulations and implementation practice from the designer's point of view. Design problems were discussed on the example of a project realised in the Stołowe Mountains National Park in Poland and a vision of its implementation in the future, in terms of changing regulations and under the influence of increasing the social sensitivity to the problem of accessibility for the people with disabilities and also, which is the essence of the design in an area of unique natural values, responsibility for the quality of natural open spaces, protected landscapes. There are many studies discussing the problems of disabled people in the apartments, public spaces and buildings. Now, this issue is expanding into open landscape areas, tourist routes and areas of legal nature protection. However, the implementation of full accessibility, as well as making the protected landscape available for tourism, is conditioned by many limitations. Since 2012, the Stołowe Mountains National Park has been implementing a project of making its natural resources available to the tourists as well as in terms of accessibility for the disabled. It is being realised, on the basis of a design concept for the small architecture elements and the buildings of the ticket offices created by architects Alicja Maciejko and Mirosław Strzelecki, stylistically coherent for the whole area of the National Park. This project was awarded in the architectural competition for the best friendly public space in the Lower Silesian Voivodship in 2014. The article also presents an analysis of what actions can be taken and what areas can be designated for full and partial accessibility.

1. Introduction

The article presents problems of designing tourist infrastructure for people with disabilities in protected landscape and nature areas. These are currently very important problems concerning the elimination of recreational and tourist discrimination in protected areas. This is directly related to the adaptation of tourist infrastructure to all kinds of physical and mental possibilities of human contact with the environment, including those related to disability limiting the spatial accessibility of protected areas. On the selected example, carried out in Stołowe Mountains National Park of the design solutions and implementation of small architecture objects were presented. According to age, gender and psycho-physical features (including disabilities) of the body, the groups of users include: people in wheelchairs, people walking with crutches, walking sticks of prostheses and other equipment, people with manual disabilities, people with blindness and visually impaired people as well as people with hearing or hearing
impairment. Due to the existing environmental conditions, not all projects of this kind of tourism infrastructure are implemented in protected areas. This applies first of all to the protected areas distinguished in the plans to make them available, which are higher due to the characteristics of the environment, the level of difficulty in visiting them and carrying out construction investments there. In line with the idea, which has been developing since the 1980s, that "no groups of people can be discriminated against on grounds of different physical capabilities", European universal design standards for all are being established in the world. Therefore, special consideration should be given to the problems of a more complete application of these standards in the design called "integral design" or "universal design" in recreational and tourist areas that are additionally protected by landscape and nature.

2. The development of legal regulations regarding the use of the environment by people with disabilities

Many areas of disabled people's life related to discrimination can be regulated by legal acts, and compliance with them will help to overcome difficult life situations. The architect's point of view as a designer influencing the development of integration of disabled people with the public is significantly different from the point of view of a lawyer and specialists from other fields involved in the construction investment process. It should be noted that for the development and implementation of a project meeting essentially all the needs of fully functional and disabled users, it is not enough to know the rules of design art (design skills) and awareness of the importance of these needs and the good will of all participants in this project. The good will, which is strongly declared earlier, usually disappears when problems arise related to co-financing of such an enterprise. Therefore, effective consideration in designing the needs of disabled The analysis of the development of legal regulations carried out in this aspect clearly shows the previous and current course of the fight for establishing equal rights for all users of the environment. The first provisions of the construction law, taking into account the needs of disabled persons, were mostly limited to legal acts describing construction solutions for special purposes. Examples of such standards are German DIN 18 024 and 18 025 and similarly the first French standards NF P 91 201 are included [1]. Such an imposed way of architectural design was a barrier to finding the best solutions to meet the needs of people with disabilities. An example of such regulations in Poland was the so-called "Seventeenth" from 1980, which despite its importance in the Construction Law was not taken into account by designers [2]. Designing according to such legal regulations was then argued for the need to pursue the democratic will of most people fully functional, not taking into account that the limitations of physical or mental fitness are usually not a matter of choice. Back in 1987, at the Seminary CIB W84 in Prague, particular attention was paid to the political problem of people with disabilities who were in many countries a less educated social group with little work and earning opportunities, which were equated to minority and ethnic minority groups. Users of the environment cannot be realized without administrative regulations and law enforcement [3]. The first signals on the international forum regarding the proposed need to expand the legal fight against discrimination of persons with reduced physical and mental fitness were reflected in the resolution 1921 (LVIII) of the UN Economic and Social Council of 6 May 1975 concerning the prevention of disability and rehabilitation of people disabled. The next important step in this direction was the adoption by the General Assembly of the United Nations (UN), resolution 2856 (XXVI) on December 9, 1975, the Declaration on the Rights of Disabled Persons, which refers to adopted previously the principles of the Universal Declaration of Human Rights and to the other obligations of the Member States and to the International Convention relating to disability. Further international legal acts expanding the rights of people with disabilities to use the environment include the Geneva Convention No. 159 of the International Labor Organization regarding occupational rehabilitation and employment of disabled people of June 20, 1983, in force in Poland from December 12, 2005. (Journal of Laws - Dz. U. of 2005, No. 43, item 412.). The next was the resolution of the General Assembly of the United Nations (UN) of December 20, 1993 (annex / resolution 48/96) regarding the Standard Rules on the Equalization of Opportunities for Persons with Disabilities, which obliged countries Member States to improve their
domestic law in this area. In a fully developed international document on the prohibition of discrimination and guaranteeing equality for persons with disabilities, it was unanimously adopted on 13 December 2006, resolution 61/106 of the General Assembly, Convention on the Rights of Persons with Disabilities, ratified by Poland on September 6, 2012 (Dz. U. of 2012 item 1169). The main merit in adopting this Convention was the disabled community, affiliated to the International Disability Caucus, forming a coalition of 70 international, regional and national organizations fighting in the international arena for a legal act regarding their right to freedom and security, the right to freedom of movement and to independent living, right to health, work and education, and the right to participate in political and cultural life.

In Europe, joint efforts to improve the quality of life and the situation of people with disabilities, as well as in the world, go back to the '70s. In 1983, the European Commission implemented the first joint action program. A clear change in the interpretation of the right to use the environment by people with disabilities is a resolution of the Council of Europe in 1984, which states the need to broaden the concept of accessibility and demands a change in approach to the whole problem. In 1985, work began in this area (commissioned by the Office for Action on Disabled People of the European Commission), whose purpose was to lay the foundations for pan-European standardization of methods for removing construction barriers in the environment in favour of creating a wide integrated accessibility. In 1988, the Council of Ministers of the European Community established the second program of action "HELPOS"("Handicapped People in the European Community Living Independently in an Open Society"), aimed at creating conditions for a dignified and independent life for people with disabilities [4]. The newly formulated philosophy of European integration, adopted by the Council of Europe in order to establish a pan-European standard of design for all (called universal design or integral design), has become the basis for the entries included in the first edition published of 1990, of previously started work: "European Manual for an Accessible Built Environment" [5]. The first general strategy of the European Community regarding activities for disabled people was included in the European Commission communication on equal opportunities for people with disabilities - "New European Community Strategy for people with disabilities" of 30 July 1996, which the Council of the European Union adopted by Resolution December 20, 1996. Integrated accessibility is understood in it as the implementation of programs promoting the adjustment of the physical environment (architecture and infrastructure), educational (education at all levels of learning), living (professional and public participation) and access to information and means of communication, to the needs of all people. The year 1997 is considered a breakthrough in the Union's approach to the problems of people with disabilities, because on October 2 this year, the Treaty of Amsterdam was signed, which he introduced into the Treaty of the European Union, among others Article 13 (in force from May 1, 1999) prohibiting discrimination against people with disabilities. At the European Council in Nice, on December 7, 2000, “The Charter of Fundamental Rights of the European Union” was passed and signed, Article 21 of which prohibits discrimination on grounds of disability, which is only declarative. In the following years, the Action Plan of the Council of Europe focused on further promotion of the rights and full participation of people with disabilities in society, and above all on improving the quality of life of people with disabilities in Europe 2006 - 2015 (Recommendation of the Committee of Ministers to Member States No. REC/2006/5). Following these declarations, the Parliament and the Council of the European Union, the Directives on equal treatment of disabled people in employment and occupation, and on land-based transport (2007) and air transport (2008) for passenger traffic are being implemented in turn by the Parliament and the Council of the European Union. During this period, the Communication of the European Commission of 15 November 2010 is also published. (IP/10/1505) - "European Disability Strategy 2010 - 2020. In February 2016, the EU-funded pilot project "EU Charter for Persons with Disabilities" was launched (Access City Award 2016/2017/2018). The EU Charter aims to ensure equal access to certain facilities, especially in the fields of culture, leisure, sport and transport. This EU course of action has recently been significantly reinforced by a legal document approved by the European Parliament on 13 March 2019 called the "European Accessibility Act". It is a directive that aims to create
common standards for goods and services throughout the European Union so that they are adapted to
the needs of people with different disabilities. The European Accessibility Act also responds to the call
from the disability community to adopt the forms of contact with emergency services, which are also
intended to be accessible to the deaf and speech impaired. Criticism from the European Disability Forum
(EDF) was increasingly frequent during the successive stages of work on this document. The criticism
concerned the most important provisions missing in the act: 1/ Transport and services provided by micro
enterprises, household appliances, 2/ Legal obligation to ensure the accessibility of infrastructure and
buildings in which the people with disabilities live most of their lives. EDF is now calling for better and
more effective legislation.

Independently the development of international and European legal regulations regarding the
provision of disabled people with the same rights and obligations as other members of society, they are
created in advance in some European countries (such as Sweden, the United Kingdom, Finland, the
Netherlands) and the world (primarily in Canada, the United States of America and Australia), legal
provisions that have more and more flexible and extended legal solutions in the area of how to build a
friendly environment for people using it, including people with disabilities. Improvements of these
solutions, not always fully accepted by the disabled, mainly concern design and implementation
problems in the scope of: 1/ Providing existing facilities, especially those covered by conservation
protection, 2/ Determining the parameters and quantities of architectural elements due to the
individualized nature of physical and spatial needs of disabled people, 3/ Granting state funds for public
investments regarding existing and newly designed construction resources also available to people with
disabilities.

In Poland, after the period of political and economic transformation (in the 1990s), many norms and
legal acts were introduced to improve the lives of people with disabilities in society. During Poland's
accession to the European Union (at the turn of the 20th and 21st century), a number of detailed rules
and legal regulations were introduced, taking into account the requirements of disabled people and the
conditions to be met by construction and engineering structures and their equipment adapted to these
requirements. They are currently contained in many Polish laws and regulations, such as, among others,
the following:

- Constitution of the Republic of Poland of 2 April 1997. (Journal of Laws No. 78, item 483),
- The Charter of Rights of Persons with Disabilities. Resolution of the Sejm of the Republic of
  Poland of 1 August 1997. (Polish Monitor, dated 13.VIII.1997 No. 50, item 475),
- Act of 27 August 1997 on social and vocational rehabilitation and employment of disabled
  persons (Journal of Laws No. 123, item 776, as amended),
- Act of 3 December 2010 on the implementation of certain provisions of the European Union in
  the field of equal treatment (Journal of Laws No. 254, item 1700, as amended),
- Construction Law Act of 7 July 1994. (Journal of Laws of 2019, item 51),
- Act on spatial planning and development of 27 March 2003. (Journal of Laws of 2019, items
  60, 235), Previous title: Act on spatial development of 7 July 1994. (Journal of Laws No. 89,
  item 415),
- Road Traffic Law Act of 20 June 1997. (Journal of Laws of 2019, items 60, 235),
- Law of 29 August 1997 on hotel services and the services of tour operators and tour guides.
  (Journal of Laws of 2019, item 238.) - Previous title: Act on tourist services (Journal of Laws
  No. 133, item 884),
- Regulation of the Minister of Infrastructure and Construction of 12 April 2002 on technical
  conditions to be met by buildings and their location (Journal of Laws of 2017, item 2285),
- Ordinance of the Minister of Transport and Maritime Economy on the technical conditions to
  be met by public roads and their location of 2 March 1999. (Journal of Laws of 2016, item 124),
• Ordinance of the Minister of Transport and Maritime Economy on the technical conditions to be met by road engineering structures and their location of 30 May 2000. (Journal of Laws No. 63 item 735),
• Regulation of the Minister of Infrastructure of 3 July 2003 on the detailed scope and form of a construction project (Journal of Laws No. 120, item 1133, as amended),
• Regulation of the Minister of Transport, Construction and Maritime Economy of 25 April 2012 on the detailed scope and form of a construction project (Journal of Laws of 2012 item 462, of 2015, item 1554),
• Regulation of the Minister of Economy and Labour of 19 August 2004 on hotel facilities and other facilities in which hotel services are provided (Journal of Laws No. 188, item 1945, 2006, item 169 with later amendments).

Political and economic changes and then adjusting Poland to EU law also forced in the scope of expanding the accessibility of disabled people, the progress of changes in social awareness and then in legal provisions. The highest legal act, the Constitution of the Republic of Poland and the Polish Charter of Disabled Persons adopted by the Sejm of the Republic of Poland in 1997 created a strong basis for the implementation of a specific right of disabled citizens and the obligations of public authorities towards them. Although the Charter of the Rights of Persons with Disabilities is a declarative act, it effectively establishes the directions of changing the rights of the disabled to full participation in society, access to goods and services, access to medical care, education, employment, living in an environment free of functional barriers, and in this: 1/ Access to offices, polling stations and public facilities, 2/ Free movement and general use of means of transport, 3/ Access to information, 4/ Possibilities of interpersonal communication. In accordance with the Charter of Rights of Disabled Persons and EU directives, further legal regulations are created in Poland concerning persons with disabilities, in which problems related to the adjustment of construction and engineering objects are being addressed in order to eliminate architectural and spatial barriers. These regulations, such as: Construction Law, Road Traffic Law, as well as the Act on Spatial Planning and Development and the Law on Hotel Services and the services of tour guides and tourist guides, as well as executive ordinances for these acts, do not provide according to the EU the idea of integral accessibility: 1/ Full social participation (especially disabled people) in the design and investment process [6], 2/ Solutions adapting the right to the type of accessibility requirements, including in particular requirements for the design and implementation of tourist infrastructure for people with disabilities in areas of protected landscape and nature not only in Poland. At this stage of development of legal regulations concerning the use of the environment by disabled people, Poland does not yet have strong legal support in the European Union. At present, EDF (European Forum of People with Disabilities) organizations are effectively demanding these regulations at the EU forum. However, it should be noted that even the most effective legal regulations will not be provided without the good will of society, designing and building without barriers and the obligation to quickly adapt the environment to people with disabilities.

3. Protected landscape areas as a public space

As described, removing barriers and accessibility for people with disabilities are legally guaranteed in Poland and in many other countries for public space in urban areas and in buildings. In some nations, social sensitivity is greater and communities without legal obligation voluntarily remove barriers to access for the disabled. The same happens in many places visited by tourists, despite the fact that, according to the definition of building law, they are not buildings or public spaces on construction sites or are historical objects. On the Acropolis Hill in Athens, for example, there is a specially designed entrance for disabled people (Figure 1). This architectural solution allows them to a visit on almost equal terms, taking into account that, because of the terrain conditions, help from an assistant is necessary (e.g. stairs and large gradients of paths). An observation platform in Wola Krogulecka in Poland or a platform on the beach in Kolobrzeg is also adapted for the disabled ( ). There are no legal regulations that allow equal access to the space in the open landscape. That is why there is so much freedom in
designing, especially small architecture, terrain stairs, which are usually too steep, and even engineering structures, such as observation towers, which not only are not adapted to the needs of people with disabilities but also do not conform to other requirements, as shown in the photo. This applies mainly to the settlement of stairs, resting places and the height of handrails. According to the authors, the definition of public space does not only refer to the space of highly urbanized places, but to all places, in which people meet with each other. The places in the open landscape may be also called public space. To a certain extent (limitations may be caused by different terrain conditions), this space should be organized in a different way than in the urban areas to provide access for all users, while at the same time protecting the natural resources that are made available for tourist traffic. The degrees of difficulty and possibilities of access should be described in detail so as not to exclude any user. However, any investment in protected areas is connected to many formal, legal, technical and aesthetic problems. Theoretically, these areas should be free from any forms of human development and interference in the natural environment and all activities should be subordinated to nature protection and take precedence over other activities related to making them available to the public. All nature and specific features of the landscape are subject to the protection. In the public space, the most important accessibility for all users is the safety of use and the public good. In the protected mountainous landscape, accessibility is limited, routes are adapted to tourist traffic in a narrow range, interference in natural landscape and nature systems is strictly controlled and monitored. In the situation of activities in the field of tourism and recreation, which even force to extraordinary physical effort, because the places are located in hard-to-reach, where it is impossible to maintain the standards required for public space, it is reasonable to subject the tourist and recreational infrastructure to the requirements availability and ergonomics? In Stołowe Mountains National Park there are looking for architectural and all other solutions that would change the stereotypical image of the mountain place naturally closed for disabled people and adapt park to the requirements of modernity in this field. There is no possibility to grant access to all the users everywhere, because of the landscape conditions (rocks and slopes) as well as difficult location conditions but because of nature protection, there is not access everywhere also for others.

Figure 1. Entrance to the Acropolis in Athens adapted for the disabled. Greece 2018

The subject of existing barriers in architecture and urban planning, concerning both architectural objects, technical limitations, public spaces, and their equipment are widely discussed. Worldwide, a series of analyses of places available for the disabled and projects that solve these problems are presented. Literature and implementation practice also present objects that, despite such assumptions and high investment expenditures, have not solved the problems of accessibility. Sometimes it turns out that the landscape without any infrastructure intervention was friendlier for the disabled than the completed project. Difficulties are most often caused by imprecise workmanship, bad quality of materials, inadequate preservation of wooden elements, ageing and mechanical damage of equipment and less durable infrastructure elements (connectors) or loss of surface and collapse, as well as lack of consultation with disabled people before starting design. An example is the park in Zielona Góra, presented in the picture below (Figure 2). Incorrectly made pedestrian platform poses a danger to all users, including for example children riding bicycles. Barriers are undoubtedly the reason for the low
participation of disabled people in tourism. People with disabilities do not travel because a significant part of places and facilities are not accessible to them or they cannot obtain information about accessibility, means of transport are not suitable for them. This is included in the Access Chain. However, there is also the aspect of loneliness (people with disabilities, who have free time do not have relatives, who would have time to leave together). In Poland, the price barrier for the disabled is very limiting. Many luxury hotels fully adapted for people with disabilities are not used by the disabled. Other factors that decide not to use open spaces by the disabled are unfavourable weather conditions (rain, strong wind, can be a significant obstacle to tourism) and mistakes in designing the public spaces, which make them unattractive and not visited by fully able-bodied people. Interpersonal contacts are also a factor that cannot be ignored. Public space should facilitate them. Disabled people in open spaces are often afraid that they will be exposed to the danger of being alone, e.g. in forest areas where there is no possibility to call for help. On the contrary, people with disabilities are also afraid of being in a crowd or stream of people who do not respect restricted mobility (examples of pushing or bumping into people with disabilities moving slower or with crutches). The most attractive for the disabled are not only the spaces without barriers, but also the spaces that are the public life spaces in the full meaning of the word, friendly for all users. This applies to places in cities, parks, gardens as well as public spaces in protected areas. It should be noted that in the case of legal nature protection areas, recommendations concerning the location of car parks, minimum dimensions of parking spaces, minimum widths of passages, equipping public spaces with toilets for the disabled will be corrected after the analysis of specific terrain conditions, however, the maximum balance between making the landscape accessible and effective protection of natural resources should be sought.

![Figure 2. A newly constructed recreation footbridge in the protected area of the "Gęśnik's Valley " Forest and Park Complex in Zielona Góra, Poland 2019](image)

4. The Access Chain as an architectural design support

The Access Chain was developed by the Sensory Trust to ensure that access plans and reviews related to all parts of the visitor experience. The Access Chain recognises that the first step is when people make a decision to visit, followed by their journey to a site, then the experience itself, and ending with a safe return home. If any link in the chain is broken then what should be a great day out, can turn to disappointment, or may never happen. Creation of individual guidelines together with detailed information on the possibilities of using tourist infrastructure by disabled persons in Stolowe Mountains National Park and a vision of development may become a tool for designers and an example for local and national managing institutions (e.g. National Park, landscape park, a route in the State Forests or a commune). The creation of facilities for the disabled began with the acquisition of relevant information, both from organisations of disabled people and in response to the spa needs of the region. The statistics on visits are based on general statistical data, surveys, ticket sales and planned monitoring of entrances to the National Park. In order to determine the costs of investing in the area so that it is accessible to the disabled, an individual assessment of the possibilities should be carried out each time. Initial possibilities for change can be analysed using the Access Chain tool. Availability analysis should be taken into account: 1/ a preliminary assessment of the possibility of full adaptation for all disability groups, i.e.
(simplified division) for wheelchair users, for people with upper or lower limb dysfunction, for deaf and hard of hearing people and for visually impaired or blind people, 2/ a preliminary assessment of the possibility of partial adaptation for all disability groups. In practice, it may happen that the tourist facility itself may be adaptable for all groups of disabilities, while the environment, access or entrance prevent the full adaptation, which automatically limits the advisability of the full adaptation. Reverse cases may also occur. On site experience according to Access Chain should be taken into account: 1/ for access, 2/ for the environment, 3/ for the entrance zone, 4/ for the architectural object (in this case are not only buildings but all other elements of infrastructure including rest shelters, tourist routes or educational paths).

5. Audit of the accessibility of tourist routes for Stolowe Mountain National Park

Stolowe Mountains National Park was established in 1993, the area is 6,340 ha. It is situated in the middle Sudeten, in the north-western Klodzko region. The border of the Park runs partly through the Polish border with the Czech mountains. The highest mountains in the Park are Szczeliniec Wielki. Stolowe Mountains are the Polish part of great sandstone layer situated between the Karkonosze, Bystrzyckie and Orlickie Mountains. The Czech part of it bears the name of Broumovska Vrchovina and it's also a protected area (CHKO Broumovsko). Stolowe Mountains National Park, like other National Parks in Poland, is an area of legal nature conservation. The rules of protection are set out in the Act of 16 April 2004 on nature conservation. Stolowe Mountains, unique on a global scale, are at the same time in a popular health resort region and thus play an important and complementary role also in terms of treatment, which contributes to making this valuable natural area accessible to people with temporary health problems, older people or people with occupational diseases who come here for therapeutic holidays, and more and more often for people with disabilities. The use of natural resources, as far as terrain and financial possibilities can be a continuation of the treatment program and improve in particular, the musculoskeletal system and organs. Tourist routes of the Stolowe Mountains National Park are characterized by varied difficulties; they can practice both professional tourism and walking. It is worth noting that there is no segregation. The disabled also practice competitive sports and professional tourism. The initial assumptions of the availability audit were developed on the basis of: Sensory Trust "An inclusive design tool - The Access Chain" and the guidelines contained in: Inclusive Landscape Design, Supplementary Planning Document. London Borough of Islington (January 2010). The accessibility study sheet was modified and extended for the assessment of tourist accessibility in the open landscape in mountain areas in preparation for the pilot audit of accessibility of tourist trails in Stolowe Mountains National Park. The accessibility tools provide answers to questions about the existing situation and possible solutions to improve accessibility for people with different needs and different types and degrees of disability. Properly conducted accessibility audit gives the opportunity to indicate specific solutions for facilities in the scope: 1/ Information on accessibility of routes (their sections, recreation sites, nature trails, etc.) in a manner adapted to people with different types of disabilities. Information on websites, direct in groups of recipients - e.g. foundations, associations of disabled people, among carers and therapists. In situ information: in places where to enter the trails, information points - in the form of signs, maps showing the possibilities of access and the level of difficulty, 2/ Application of design solutions in accordance with the principles of inclusive design /Design for All/ in adapting the existing tourist infrastructure and designing a new one, 3/ Application of assistive solutions (mobile wheelchairs adapted to off-road driving, rented at the entrance to the trail, assistance of trained personnel), 4/ Organisation of events adapted to the needs of people with specific disabilities - e.g. sign language guide tours for people with hearing disabilities, or placing information about plant and animal species in Braille along the nature trail, use of audio guides, 5/ Organisation of wheelchair-accessible transport to the places of entering the trail and returning from the places of the end of the trip. Availability audit will allow for planned and methodical implementation of solutions where they will be: 1/ Possible - due to the potential of the area, including not causing a conflict between accessibility and nature and landscape protection, 2/ Effective - the adopted solutions will give an opportunity to actually increase the share of people with disabilities in access to tourism in mountain
areas, 3/Economic - the possibility of directing financial resources for such facilities and such design and inclusion solutions, which will be commensurate with the outlays incurred - will actually equal the chance of using tourist infrastructure with optimal outlays for its adaptation. Information obtained during the preliminary audit will help the institutions managing the Stolowe Mountains National Park on: 1/ introduction of facilities on the existing functioning routes, 2/ anticipation of inclusion solutions when renovating routes and educational paths, 3/ planning the construction of new sections of routes with greater accessibility for people with special needs. Data obtained in preliminary audits should be consulted periodically - to obtain feedback it is necessary to invite beneficiaries of the programme, as one of the principles of inclusive design is to avoid stigmatization. After the implementation of solutions and the assumed period of their verification - conducting a monitoring audit to answer the questions whether they are effective, sufficient, meeting the assumptions and expectations. The construction of the tool for accessibility testing in open landscapes is based on the guidelines of the Accessibility Chain according to Sensory Trust/ It includes both intimate research - checking information on websites, in tourist guides, map analysis, project analysis and field research - checking the actual possibilities in the field in terms of the possibility of implementation, providing access to the facility. Each stage should be combined with public consultations. Many of the postulated solutions were included in the projects implemented in the years 2012-2018 [6-8].

6. Conclusions
Restrictions resulting from the unavailability of the terrain and legal regulations related to the priority of nature protection are obvious and natural obstacles in designing. But does this mean that people with disabilities cannot benefit from the public open landscape spaces? In fact, there are many possibilities. As has been shown, any space can be made available to a full or limited extent. However, it is necessary to carry out an accessibility audit to draw up a design that will realistically solve the problem of disabled people in a given place. Apart from the general guidelines, which are based on the technical, ergonomic and anthropometric possibilities, and are related to the type of disability, there are no standard solutions. Each project requires an individual approach, both for a given location and for a given category of disability, in order to make the necessary corrections. Since the condition of equal accessibility will be too difficult to meet in practice, in particularly justified cases, the tolerances should be allowed, the inclusion of which will constitute the basis for including a tourist facility as accessible to the disabled people in full or in part. It is better to make the facility accessible with minor inconveniences than not accessible at all. The handicaps should be described in such a way that the disabled person is aware of them. It is worth stressing that the needs of the disabled should be fulfilled not only through adequate space projects, physical assistance helps the disabled people in overcoming barriers, professional, off-road wheelchairs with increased mobility, which the parks can be equipped with, but also through the modern technological solutions (smartphones, applications, GPS, sounders) and also through the adequate assistive devices.

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