



Standard for green areas

The Green Flag Award, Lepaa Campus

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ABSTRACT

Attractive, safe and accessible parks and green spaces contribute positively to society and the environment, improving public health, well-being and quality of life. Quality can be judged according to various attributes including general condition and maintenance, specific features and fitness for purpose. Different kinds of environmental awards and green space awards can help to raise expectations regarding what a good quality public park or green space should be. The awards can also be effective marketing tools if they are recognized by the public.

The Lepaa Campus of Häme University of Applied Sciences in Hattula is the first Finnish green area to apply for and win the Green Flag Award. The Green Flag Award scheme was first launched in England in 1996 to promote and encourage good quality public parks and green spaces that are managed in environmentally sustainable ways. Lepaa has offered high quality education in horticulture and landscape design since the early 1900s so bringing the Green Flag Award to Finland is one way of valuing this tradition. The Green Flag Award can be a way to start an open discussion about the value of good quality parks and green spaces in Finland.

The Green Flag Award can be utilized in education as well. The green areas in Lepaa provide an excellent learning environment and projects involving the management plan either directly or indirectly can benefit the Lepaa green areas.

Key words: Green Flag Award, quality, park, green space

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Houkutteleva, turvallinen ja helposti saavutettava viheralue vaikuttaa myönteisesti yhteiskuntaan ja ympäristöön. Viheralueilla on todettu olevan hyvinvointia ja elämänlaatua parantava vaikutus. Ympäristön laatua voidaan arvioida sen yleiskunnon ja ylläpidon kannalta, alueen erityispiirteiden perusteella tai sen sopivuudesta tiettyyn tarkoitukseen. Erilaiset ympäristön ja viheralueiden tunnustukset voivat auttaa nostamaan odotuksia siitä, mitä hyvä laatu tarkoittaa julkisessa puistossa tai viheralueessa. Palkinnot voivat olla myös tehokkaita markkinoinnin työkaluja, jos käyttäjät tuntevat ne.

Hämeen ammattikorkeakoulun Lepaan kampusalue Hattulassa on ensimmäinen suomalainen viheralue, joka haki ja sai Green Flag Award sertifikaatin. Green Flag Award -palkinto lanseerattiin Englannissa vuonna 1996 edistämään laadukkaiden julkisten puistojen ja viheralueiden arvostusta. Lepaa on tarjonnut laadukasta koulutusta puutarha-alalla ja maisemansuunnittelussa 1900-luvun alusta lähtien ja Green Flag Award – prosessin tuominen Suomeen on yksi tapa jatkaa tätä perinnettä. Green Flag Award voi olla keino lisätä avointa keskustelua hyvälaatuisten puistojen ja viheralueiden arvostuksesta Suomessa.

Green Flag Awardia voidaan hyödyntää myös Lepaan omassa koulutuksessa. Lepaan viheralueet tarjoavat erinomaisen oppimisympäristön ja erilaiset projektit, jotka liittyvät joko suoraan tai välillisesti Green Flag Awardin kohdekohtaiseen käyttösuunnitelmaan hyödyttävät Lepaan viheralueita.

Avainsanat: Green Flag Award, laatu, puisto, viherympäristö

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1 INTRODUCTION

Nature and built green areas contribute to the quality of life in many ways. A park experience reduces stress, relaxes and provides a sense of peacefulness and tranquility. Also, historical, aesthetic and recreational values of parks and green areas raise the attractiveness of the area and may promote it as a tourist destination. Nevertheless, green areas are usually the first places that suffer when there is an economic recession. This often results in cuts in the maintenance budget of green spaces in many towns and municipalities. Different kinds of environmental awards and green space awards can be effective marketing tools if they are recognized by the public. They help to raise expectations what a good quality public park or green space should be.

The Lepaa Campus of Häme University of Applied Sciences in Hattula is the first Finnish green area to apply for and win the Green Flag Award. The Green Flag Award scheme was first launched in England in 1996 to promote and encourage good quality public parks and green spaces that are managed in environmentally sustainable ways. In 2008 the award scheme was piloted internationally and nowadays green flag green areas can be found in The Netherlands, Germany, Australia, New Zealand, Republic of Ireland, United Arab Emirates and now also in Finland. The award helps to raise expectations of what public parks and green spaces can offer to park users and thus helps create a public recognition of a good quality green space.

This thesis discusses the quality of green spaces and how the quality can be assessed and compared. It also gives examples of different international award schemes for green spaces and parks. The practical part of the thesis discusses the application process for the Lepaa Campus Green Flag Award that took in place in spring 2016 and what it can bring to the management of the green areas in the campus and for education.

My own involvement during the application process was to provide different kind of map material of the Lepaa Campus area for the Management plan. I also took part in the Green Flag audit process in early May. After the Green Flag Award was granted to Lepaa Campus, I focused on the Quantum Gis (QGis) software and how it could be used to benefit both education and the new version of the management plan. Students in Lepaa have been using QGis as their primary GIS application since autumn 2016, so for example surveying different parts of Lepaa Campus area for mapping different kinds of vegetation patches can be used in the management plan to show biodiversity in the area.

2 QUALITY IN GREEN AREAS

Attractive, safe and accessible parks and green spaces contribute positively to society and the environment, improving public health, well-being and quality of life. Quality can be judged with various attributes including general condition and maintenance, specific features and fitness for purpose. Greenspace Scotland has commissioned a study to advance the Health Impact Assessment Guide that will commit to greater recognition of the role of urban green spaces in improving health. The study suggests that green spaces and parks are most valuable as an asset for physical activity when used by many people. Green spaces should be easily accessible, of adequate size, and in close proximity to residential areas. The attractiveness and quality of green space or park is an important factor in the use of the park. (Greenspace Research Report 2007.)

In Finland both private and public green space maintenance is based on Green Area Maintenance Classification that has been in use in Finland since 1993. The classification is a tool that helps compare the general look, quality and cost factors in green areas across the country. Maintenance class describes an area's general appearance, use and the quality of maintenance. In practice the maintenance work is carried out according to the Maintenance of Green Areas '05 publication no. 32 by The Finnish Association of Landscape Industries. Every class has its own quality requirements for the types of vegetation, construction and materials. (Nuotio 2007.)

2.1 What is quality

The quality concept is difficult to define because the meaning can vary in different contexts. For example, the ISO standardization provides guidance and tools for companies and organizations who want to make sure that their products and services consistently meet customers' requirements, and that quality is steadly improved. This emphasizes the commercial approach to quality: quality is the phenomenon by which a product or service is made more attractive to the customer. (ISO Standard n.d.)

Paul Lillrank (1998) has divided quality into four different categories where either production, design, the customer or the system is in the focus. The production orientated quality is the oldest of the quality viewpoints and propably the easiest to measure. "Product is of good quality when it is without flaws". For defining what good (enough) quality is one must determine the desired product measure so the final products are then easy to classify to different quality groups. When the focus in the quality is the design, then the goal is to design a product that has superior technical properties compared to other similar products. (Lillrank 1998.)

The customer has certain expectations of a product or service. The customer is the one that pays for the products and services he or she needs and thinks are worth paying for. The quality of the product or service is what the customer wants. MacKay & Crompton (1990) also came up with a similar conclusion in their study "Measuring the quality of recreation services". According to them high quality service in outdoor recreation exists when recreation opportunities meet the needs of its visitors.

The problem in measuring the customer orientated quality is that it is not possible to measure it in one simple way. Which service or product the customer chooses is not based purely on the quality of the service or product because other factors, such as age, gender, their own experiences and also other people's opinions and experiences play a role as well. (Lillrank 1998) For example parks and green areas are used by very different people: children, young adults, elderly, people with dogs, joggers etc. Expectations for the use and quality of green areas may be very different amongst these different user groups.

System orientated quality is the hardest to measure because the quality of the product or service is determined not only by the producer/designer of the product or service but also by the customer and different stakeholders, for example, civil servants, politicians and taxpayers. The aim is to optimize the quality to meet the requirements of these different usergroups. (Lillrank 1998.)

Lindholst, Koninjnendijk, Fors and Sullivan (2012) also touch on this subject of quality in their research "The inherent politics of quality in public park management". They state that some user groups may prefer wilderness, nature-like environments and biodiversity better and other user groups like more social and playful park characteristics with lots of leisure and recreation activities. In conclusion specific characteristics of public parks and green spaces are not evaluated normatively in the same way by everyone and therefore the way people define quality in public parks and green areas is always somewhat relative. (Lindholst et al. 2012.)

2.2 Assessment and comparison of quality

To assess and compare quality you need to establish performance standards and criteria that are quantifiable and that you can evaluate your performance against by using hard numbers and data. Quality assessment and comparison are made to gain knowledge of how to improve quality and improve customer satisfaction. It can also give information about costs and provide ideas to be more cost effective. There are different ways to assess and compare quality such as benchmarking, auditing and surveys.

2.2.1 Benchmarking

Benchmarking is a comparative analysis which focuses on measuring an organization's performance in different areas and tasks. The results can then be compared with other organizations' performances in similar tasks. Dimensions typically measured are quality, time and cost. Benchmarking gives a chance to find the strengths and weaknesses in the company or organization practices just by comparing them with other companies'/ organizations' activities. This is a tool for organizations to develop plans on how to improve or adapt best practices. Usually the goal is to increase some aspect of performance. Benchmarking may be a once off event, but it is often treated as a continuous process in which organizations continually seek to improve their practices. (Kelessidis 2000.)

The different standardization tools and awards schemes for green areas that will be discussed later in this thesis work (see chapter 3) have a lot to do with the idea of benchmarking. There are different ways to achieve quality or a certain standard. The Green Flag Award or Nordic Green Space Award both have a similar scheme where quality is measured against predetermined criteria. It is not so much to do with traditional benchmarking, but it has some benchmarking characteristics. Park managers learn from each other by reviewing best practices and have their peers analyzing their work and methods. Yardstick, on the other hand, is purely a benchmarking tool that was developed in New Zealand by park managers for the landscape industry to collect, share and compare information to measure current performance and develop future improvements and best practices.

2.2.2 User Satisfaction Surveys

User satisfaction surveys are often used in measuring the quality of public services. The surveys provide knowledge about the general level of satisfaction about the product or service and if the results are analyzed in greater depth, they can be used as a tool to improve provided product or service.

The most typical type of user satisfaction survey is quantitative research: Information is collected according to some predetermined standard, such as a five-point scale, using a questionnaire or survey. The survey is objective and measurable and it can be written, oral or conducted over the telephone. After completion, statistical analyses can be conducted on the data to determine the customer satisfaction ratings and customers' ratings of the service quality. (Gerson 1993.)

Parks and Recreation services in Ontario, Canada together with Ontario Municipal Knowledge Network have created a survey module for creating better user satisfaction surveys. It is intended to guide municipal parks and recreation providers in Ontario to measure customer satisfaction and value and tracking key performance indicators. There is also interest in carrying out a long term research which estimates the outcomes of different

investments in parks and recreation and promotes effective management approaches. The results can be used to enhance park services and overall efficiency.

The survey module includes a common set of core questions and an advanced set of questions that can be used to evaluate the effectiveness of services as well as advice on approaches to conducting and administering surveys. (See figure 1) The module is an excellent tool for different municipalities in Ontario to compare and benchmark their parks and recreation services. (Parks and Recreation Ontario 2012.)

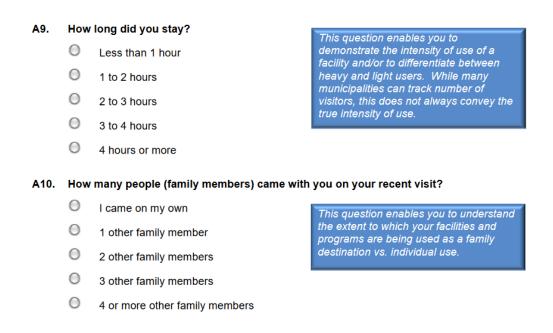


Figure 1. Example of questions and rationale for the questions in the Ontario Parks & Recreation Survey Module. (Parks and Recreation Ontario 2012)

The international Yardstick benchmarking tool also has tools for members to measure user satisfaction and then make comparative analysis of the results. (Rutherford 2016)

2.2.3 Auditing

Auditing is a quality management tool to ensure that quality standards are met. Auditing is widely used in both private and public sector to examine and evaluate management and processes. An audit can be performed internally by the employees or externally by an outside firm.

Auditing can be used evaluating parks and green spaces. For example in the Green Flag Award applying process two judges will audit the green area or park first by doing desk study about the management plan and then visiting the amenities together with park managers. (See Chapter 3.2.1)

Gidlow, Ellis & Bostock (2012) have developed The Neighbourhood Green Space Tool (NGST) for simple inspection by independent observers to make quality judgements based on appearance, maintenance and the presence and quality of various features in parks and green spaces. The results could be then used to make judgements about functionality and ways to promote use through site improvement.

The developers identified several assessment tools used in parks and green spaces, including The Green Flag Award Scheme, and tried to morph them into a simple and effective tool to enable meaningful in-the-field assessment of neighbourhood urban green space without the need for extended site inspection. The main quality score is derived from the five main domains of Accessibility, Recreational facilities, Amenities, Natural features and Incivilities, further dividing into 36-item evaluation tool. (see Table 1) There are also additional charasteristics about usage and purpose but they are not used calculationg the final score. The resulting tool provides an appropriate and simple mechanism, with moderate to good reliability that compares favourably with others. The NGST can be used both in internal and external auditing. (Gidlow et al. 2012.)

Table 1. The Neighbourhood Green Space Tool scoring chart. (Gidlow et al. 2012)

Domain	Description	Items	Scoring	Weight
Access	Number of access points Pedestrian crossing; short cuts Pathways: number and quality	1 2 2	4 point-scale (0=0-3=to open access) 2 point-scale (yes, no) 4 point-scale (0-3)	18.0%
Recreation facilities	Number of pieces of equipment/facilities for different activities	5	Number: 4 point-scale for play facilities $(0=0.3=\geq 10)$: 4 point-scale $(0=0,1=1,2=2,3=\geq 3)$ for grass pitches, hard courts, skateboard ramps, other	16.0%
	Quality of equipment for different activities		4 point-scale (0 = poor, to 3 = excellent)	
	Amount of open space	1	4 point-scale (0 = none to 3 = a lot)	
	Quality of open space	1	5 point-scale (0 = none to 4 = excellent)	
Amenities	Provision/quality of: seating; litter; bins; dog bins; lighting	4	5 point-scale (0 = none to 4 = excellent)	22.0%
Natural features	Provision/quality of: grass; trees/shrubs/plants; flowers/flower beds; water/water features	4	5 point-scale (0= none to 4= excellent)	20.0%
Incivilities	Extent of: litter, alcohol debris, drug paraphernalia, graffiti, broken glass, vandalism, dog mess. noise	8	3 point-scale, reverse scoring (2 = none to 0 = very noticeable)	24.0%
Total quality score	validatistit, dog tiless, noise		Sum of weighted domain scores	100
Additional items to characte	erise space			
Primary purpose	Formal/informal recreation; access/green corridor; bio-diversity/conservation; general amenity space; other	1		
Secondary purpose	Formal/informal recreation; access/green corridor; bio-diversity/conservation; general amenity space; other	1		
Usage	Suitability for: sport, informal games, walking, child's play; conservation/biodiversity	5	3 point-scale (0= not at all to 2= very)	
Total	conscivation productisty	36		

The international Yardstick benchmarking tool is also an auditing tool because the company that has developed the benchmarking tool will audit the member municipalities to get accurate data. (Rutherford 2016)

2.3 Promoting quality

The 1970's was the period of awakening of environmental awareness and environmental concerns among public have been increasing steadily since then. The world discussed for the first time about the sustainability of our planet. Today environmental consciousness is a current issue and people demand for better quality and better management of their environment. (Mihalič 2000.)

The tourism industry has recognised and used environmental quality as a marketing tool for a long time. Mihalič (2000) also mentions in her study about tourism competitiveness that people are ready to pay for quality and it has increased competition among destinations. Environmental quality is understood as the quality of natural features of the destination. They can be

deteriorated by human activities so maintaining a high level of environmental quality is important for the competitiveness of a tourist destination. Another study argues that purchasing decisions are influenced not just by environmental credentials but also by the price: each consumer will decide their "shade of green" when making a decision about the purchase or visit. Quality is still an important factor so people are ready to pay more if the quality meets their standards. (Font & Tribe 2001.)

Branding is a way to to promote quality in parks and tourist destinations. An environmental brand can give the customer information and confidence about the products quality. It can also help to manage the environmental expectation and perceptions of the visitors. (Mihalič 2000) Favourable branding can also improve relations with the public sector including improved access to public funds. (Font & Tribe 2001) The City of Kotka in Finland is a good example what a good quality environment can do to the city brand and vice versa. Public parks in Kotka are highly valued and the city invests to the parks. This brings visitors to the city and the businesses benefit, which then of course benefits the city in the form of taxes.

There are different ways for tourism businesses to promote quality and try to brand it. They can try to get recognised certification such as ISO 4000 for their environmental efforts in order to develop green branding but there are also self-developed environmental programs. There are also third party environmental accreditation awards, labels and seals that are granted based on specific preset criteria. Environmental accreditation schemes are useful if they offer criteria for managerial acting and a well-known marketing logo. A well-known logo is a good base for green branding. It can help create the wanted environmental image of a destination and can be a powerful tool in increasing the competitiveness of the place. (Mihalič 2000.)

Environmental awards and labels try to create an environmentally responsible image for the stakeholders and visitors but even though all these initiatives are welcomed because they represent a movement in the right direction, customers can get confused by all the different labels and awards. This can lower the value of every single green brand. An independently run environmental award is probably the only way of formalizing an environmental claim. (Font & Tribe 2001.)

3 STANDARD FOR GREEN AREAS

There are different quality models, tools and concepts applied in planning and management of public parks. For example, the Finnish Green Area Maintenance Classification categories are determined already in the planning stage. Maintenance class describes an area's general appearance, use and the quality of maintenance and it makes the comparison of costs between different cities and municipalities easy. Different kinds of environmental awards and green space awards can be effective marketing tools if they are recognized by the public. They help to raise expectations about what a good quality public park or green space should be.

3.1 Green Flag Award

The Green Flag Award scheme was launched in England in 1996 to promote and encourage good quality public parks and green spaces that are managed in environmentally sustainable ways. It helps to raise expectations of what public parks and green spaces can offer to park users and thus helps create a public recognition of a good quality green space. (Greenhalgh, Newton & Parsons 2006.)

3.1.1 History

The Green Flag Award celebrated its 20th anniversary in 2016. The Green Flag Award Scheme was set in motion in England in 1996 and presented its first awards a year later in 1997. The scheme was directed by a steering group made up of individuals and representatives of larger organisations. The group was led by Mark Davis of the Pesticides Action Network UK, who worked closely with the following institutions to develop the scheme forward: ILAM (The Institute of Leisure and Amenity Management), CIWEM (The Chartered Institution of Water and Environmental Management), KMC Consultancy, English Nature and some independent consultants. The project also benefited from the involvement of the Children's Play Council

and from the feedback provided by the Green Flag Award Judges. (Green Flag Award n.d.)

The scheme expanded to Wales, Scotland and Northern Ireland and by 2008 The Green Flag Award was established throughout the UK making it the benchmark national standard for parks and green spaces in the UK. (See figure 2 for the timeline of The Green Flag Award). The number of awarded parks and green spaces has gone up steadily since it was first launched in 1996 (Figure 3).

The scheme has been piloted internationally in The Netherlands, Germany, Australia, New Zealand, The Republic of Ireland, United Arab Emirates and Finland. (Green Flag Award n.d.) The first international Green Flag Awards were presented to two parks in the Netherlands in 2008. The awards resulted as part of a park mentoring partnership and this successful pilot initiated further development of the Green Flag Award Scheme as an international standard of excellence in parks management. (Appleby 2008.) The Lepaa Campus of HAMK University of Applied Scieneces joined the community of Green Flag Awarded green spaces and piloted the Green Flag Award first in Finland in June 2016.

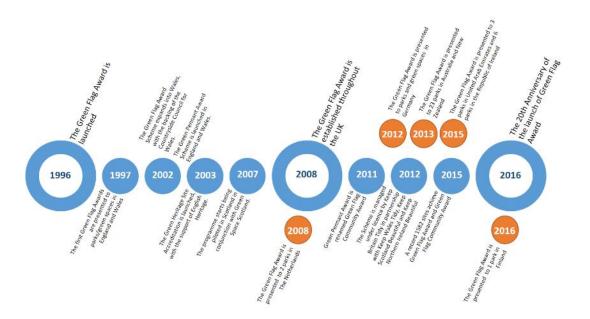


Figure 2. Chronological overview of key events in the Green Flag Award development. First International Green Flag Awards were presented in 2008.

The Green Flag Award Scheme has also two additional award types for parks/green spaces. The Green Flag Community Award is a national award that recognizes high quality green spaces in the UK that are managed by voluntary or community groups. The Green Heritage Site Accreditation is given in recognition of achieving the required standard in the management and interpretation of a site with local or national historic importance. The accreditation is sponsored by Historic England. To receive Green Heritage Site Accreditation sites must also achieve Green Flag Award. (Green Flag Award n.d.)

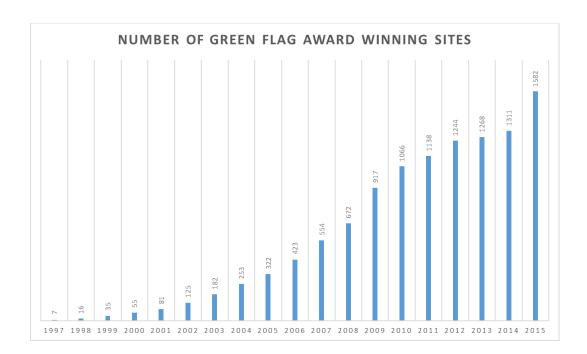


Figure 3. The number of Green Flag awarded parks and green spaces in 1997-2015. Katja Virtanen (2016). (Data assessed from Green Flag Award. n.d.)

3.1.2 Criteria

Green Flag Awards are given on an annual basis and winners must apply each year to renew their Green Flag status. All green spaces are different and the diversity is welcomed, with each site being judged on its own merits and suitability to the community it serves. Country parks, cemeteries, ecology sites, nature reserves, botanical gardens, neighbourhood parks and the traditional mixed urban parks are all winning Green Flags.

The judging is carried out by a peer group of judges who bring together a range of different expertise. Judging is carried out in two stages. In the first, a preliminary assessment of the application and supporting papers is reviewed to take account of the management plan, views of user groups and promotional materials. For the second stage, a pair of judges assess the site during an accompanied visit with the park staff. The judges work through a checklist (Appendix 1) and make their own judgement on whether the park meets the basic criteria and whether the facilities, management processes and community involvement techniques meet the claims of the management plan. The peer group judging has in itself provided a significant mechanism for disseminating good practice. Each winning site must fly a Green Flag and display a certificate that explains to park users the purpose of the Award. Every applicant receives feedback detailing the assessment of strengths and weaknesses (Appendix 2). (Greenhalgh *et al* 2006.)

If the park is granted the Green Flag Award the application process in the following years is different. It is carried out with "Mystery Shopping" where judges visit the site independently with no liaison with the park staff. There is no reference documentation and the feedback is concise compared to the detailed feedback in the first stage. If the standard is not achieved there will be a warning with guidance followed by a 2nd Mystery Shopping. There is a possibitity to suspend the Green Flag and after that the site will need a full assessment by two judges. (Suomalainen 2017.)

The park or green space has to meet eight preset criteria: (Greenhalgh et al 2006)

1. A welcoming place

A welcoming place invites people to visit. The park should be visually attractive and have standards for maintenance. The place should be easy to access, both physically and socially, and have a range of

fascilities available for visitors with different needs. Road signs guiding to the location and signage inside the park should be easy to read and have a coherent design. Also the staff should be easy to identify and trained to respond to the needs of park users.

2. Healthy, safe and secure

Equipment and fascilities should be safe to use and the legal requirements for health and safety policies should be met. The park should be a safe place for everyone. Health and well-being is encouraged by promoting physical activities. These can include jogging or walking routes, outdoor gyms or guided health walks.

3. Well maintained and clean

The grounds, infrastructure, equipment and buildings should be well maintained and managed. Equipment maintenance applies also for all the machinery and vehicles the staff uses. There should also be a policy how to address and respond for example graffiti or other vandalism, dog litter, chewing cum and flyer posting.

4. Sustainability

The parks should demonstrate that they are following the principles of an environmental management system by adopting a sustainable environmental policy and setting objectives and targets for continuous environmental improvement. Making environmentally sustainable decisions on pest control, materials, recycling and composting, plants, water and energy, air quality and waste management sets an example for the public also.

5. Conservation and heritage

Conservation is about recognizing the unique features of the environment and seeking to increase their value through appropriate management. Protecting grasslands, woodlands, water bodies, cultural landscapes and other habitats is important for the diversity of the environment and their fauna. Some parks may also contain important landscapes or geological features which should be

protected and conserved. Built environments and historical artefacts need concervation and protecting as well.

6. Community involvement

Community involvement is about knowledge and understanding of the park and green space use and opening up the green space to a wide range of people. There are different ways people can get involved with their green spaces. As a form of community involvement "Friends groups" and volunteering have developed steadily over the years. Also different organizations can arrange activities on the grounds, such as teaching about wild life or plants. Public outdoor events also help engage people.

7. Marketing

Marketing can be part of a greater accountability in the way parks are managed. Information and interpretation can be shared and promoted in different ways, such as in newsletters, annual reports, information leaflets about history or wildlife, management plans, web pages and press releases. Green Flag Award itself is a way to promote the park or green space.

8. Management

A Green Flag site must have a management plan because it provides a clear framework for making decisions and describes the current situation as well as a development plan. It should not be a document which is once produced but ever developing tool for self assessment. Management plan is the basis of the desk study the Green Flag judges do before visiting the park.

3.2 Nordic Green Space Award

The Nordic Green Space Award is a partnership with more than 25 different stakeholders in the Nordic region operating a quality scheme for green areas in the urban environment. The scheme is very similar to the Green Flag Award. With the evaluation of the green area you get a proof of quality,

a unique marketing opportunity and professional input from a number of competent professionals. Today there are 16 parks and green areas in Scandinavia, which have received the award. (Nordic Green Space Award n.d.)

3.2.1 History

In December 2009 the Danish organizations Forest & Landscape and Danish Outdoor Council gathered in Denmark with representatives from different Park Administrators in Sweden, Norway and Denmark. Sid Sullivan from England was invited to give information about The Green Flag Award Scheme to initiate a similar project in the Nordic countries. Over the following years, 2010-2012, a joint Nordic quality standard for parks and urban green areas was developed in cooperation between 25 different municipalities, organizations and institutions in the Nordic countries Sweden, Denmark and Norway. The first Nordic Green Space Award was granted to the park administrators of Østre Anlæg in Aalborg, Denmark in September 2012 (See figure 4 for the timeline of The Nordic Green Space Award scheme). (Nilsson, G. 2015.).

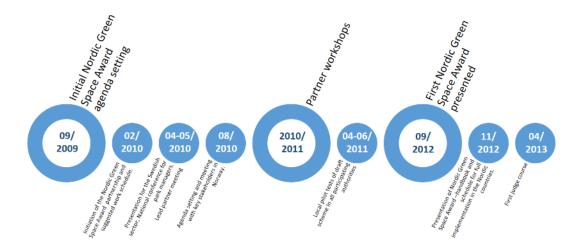


Figure 4. Chronological overview of key events in the Nordic Green Space Award development.

3.2.2 Criteria

The green areas which meet the requirements of the criteria set in the Nordic Green Space Award will be awarded the quality seal and included in the Scandinavian network of particularly excellent parks and green areas. The judging process is similar to the judging process in the Green Flag Award: the park or green space is assessed by a jury which makes its decision based on the preset criteria by examining the area management plans and documents (desk study) and visiting the site. The quality criteria are grouped under three themes: Structure and general aspects, Functionality and experiences, and Management and Organization. (Nordic Green Space Award – Fra A til Z –handbook n.d.)

1. Structure and general aspects

The size, location, accessibility, character and environmental aspects of the park/green space are assessed. It is important that the park fulfills the main function of which it has been created for and the accessibility, size, features and attractions are tailored for the users.

2. Functionality and experiences

Recreation and social aspects are evaluated in year-round use. It is important that the area has different types of experiences to offer to different user groups. Also the availability of facilities and their quality are assessed.

Culture and history examines how the park is attached to the environment and its history. Culture can mean either that there is art in the park and/or the park is used for cultural activities.

Nature and biodiversity should also be assessed, including special habitats, measures that promote biodiversity and the presence of old tree species.

Landscape and aesthetics emphasize how the park appears as a scenic whole and how it has adapted itself to the surrounding landscape or urban environment.

Environmental aspects evaluate the sustainability of the park management/maintenance and how the park contributes to local climate adaptation. It is also important that the materials used in the park are sustainable.

3. Management and Organization

The management plan is evaluated and also the community involvement in the park. The management and maintenance work should be carried out by professionals and communication and information should work well. The websites, signboards and billboards should be informative and also take into consideration the tourists who do not speak the local language

3.3 Other international standards for green areas

The Green Flag Award and Nordic Green Space Award are just two examples for standards for green spaces and parks. Yardstick relies on sharing of knowledge and practices between Yardstick member municipalities, it is not a standard per se but rather a tool for making cost effective decisions and good quality environment by comparing best practices. The European Association for Flowers and Landscape (AEFP) and The Liveable Communities (LivCom) both focus on parks, green spaces and built environment in the municipal level.

3.3.1 Yardstick

Yardstick is a benchmarking tool to collect, compare and share information between members to measure current performance and encourage future developments in municipal level decision making. Yardstick was developed in New Zealand by park managers originally for the landscape industry. Later Yardstick method has spread also for benchmarking fascilities and

roads. At the moment Yardstick is owned, operated and supported by a collaborative partnership of industry organisations including the New Zealand Recreation Association (NZRA), World Urban Parks (WUP), the Institute of Public Works Engineering Australasia (IPWEA), Alberta Parks and Recreation Association (ARPA) and Ontario Parks Association (OPA). (Yardstick n.d.)

Sharing of knowledge and information between the member municipalities and cities is essential to innovate and develop better management practices. The Parks Yardstick programme is currently operating in New Zealand, Norway, Australia, Denmark, South Africa, Finland, Canada, Ireland and Swaziland. (Yardstick n.d.)

Yardstick provides tools to collect and compare both management and user information. The Benchmarks questionnaire collects a wide range of information from the member municipality or city to identify costs, service quality and accessibility, strategic planning and asset management best practice. The Survey projects identify what is important to the user and how well the municipality is meeting their expectations. It measures the levels of service the municipality or city is delivering, and identifies the service level gaps. (Yardstick presentation n.d.)

Benchmarking

Yardstick does the benchmarking for the municipalities and cities to give credibility to the process. With the data it is possible to compare different management practices locally, nationally and internationally (see figure 5). It identifies, plans and improves strategic goals and direction. Different operation costs are recorded against a variety of criteria and with accurate and up to date information it is possible to make cost/benefit analysis. The comparable data can be used to lobby for additional resources, evaluate different systems and overall performance, develop park strategies and levels of service, and prioritise areas for improvement. (Yardstick n.d.)

Provision of playgrounds per 1,000 children under 15

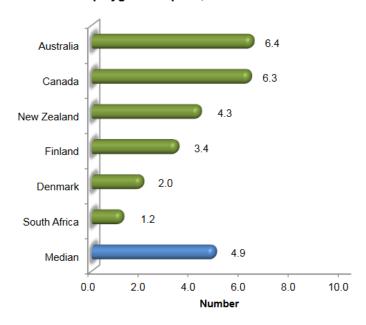


Figure 5. Example of collected Yardstick data from Annual Global Benchmark Report. The collected data gives info not only about different provisions but also costs and budgets for the membership municipalities and cities. (Yardstick Global Benchmark Report 2014)

Survey

With surveys/questionnaires the Yardstick identifies for example the park users' community profile and records user expectations and satisfactions to measure gaps in levels of service. With the analyzed data it is then possible to prioritise improvements and development programmes as well as learn from shared information and common experience. There are three different research options available: Intercept survey of park users, Online self completion survey and door to door survey. (Yardstick n.d.)

3.3.2 AEFP - The European Association for Flowers and Landscape (Entente Florale)

The European Association for Flowers and Landscape (AEFP) is an international non-profit association, which aims to enhance horticulture, tourism and environment by social and cultural development. The association organizes an international competition, "Entente Florale Europe", to promote a greener environment in European towns and villages and to create international network for the participants. The competition was founded in 1975, first only Great Britain and France participating. At the moment there are eleven member countries. (Entente florale n.d.)

Each participating country puts forward a representative town and/or village. The town and village are then visited by the jury and an assessment is made. Through the annual competition, public authorities, private bodies and individuals are encouraged to cooperate in improving the quality of life for both inhabitants and visitors. The assessment is made from different criteria: planning and development, natural environment, built environment, landscape, green spaces, planting, environmental education, involvement and effort and tourism & leisure. It takes into account the sustainability issues as well as policies for managing different environmental factors such as water, air, soil, flora and fauna, waste and energy. It analyses the overall design and management of built and natural landscapes, green spaces, plantings and buildings. (Entente florale n.d.)

3.3.3 International award for Liveable Communities

The Liveable Communities (LivCom) Awards were launched in 1997 and it is the world's only awards competition to focus on International best practice regarding the management of the local environment. The objective of LivCom as stated in the management company's www-pages is

"to develop and share International Best Practice, with the further objective of improving the quality of life of individual citizens through the creation of 'liveable communities'." (LivCom n.d.)

The LivCom Management Company is a UK registered charity and it is non-political. Over 50 countries have been represented within the awards and each year communities exchange best practice and practical experience and join forces to address mutual challenges. (LivCom n.d.)

The LivCom web-pages state numerous benefits from participation in the LivCom Awards. The communities go through a self-audit process when they compile the initial report. During the finals the members see examples of international best practices applied to challenges similar to facing themselves and can form international partnerships to exchange information and experiences. This can produce accelerated technical benefits and financial savings year on year. Innovation is encouraged. Success in the Awards may be used to promote tourism and lobby for funds for further development.

The judging focuses on enhancement of the natural and built landscapes, strategic planning, Arts, Culture and Heritage, environmental best practices, community participation and empowerment, and healthy lifestyle. (LivCom n.d.)

3.4 Comparison

Both the Green Flag Award and Nordic Green Space Award are awards for individual parks and green spaces. The two award schemes share the principle that all green spaces can be awarded when meeting a certain standard. The Nordic Green Space Award is based on the Green Flag Award so there are a lot of similarities but one must also remember that these two award schemes are adapted within different national and cultural contexts, each with their own requirements and characteristics. Because environmental matters are often varied and site specific, awards might take

an open perspective and require the applicants set their own environmental agenda and sets of criteria. One example is the use of peat. In the Green Flag Award criteria the use of peat in substrate is regarded negative. In the UK peatlands are not common, but in Finland peatlands cover 1/3 of the land area so using peat in substrate is very common. Also the percentage of peat extraction for use in substrates or for use as energy source is minimal compared to for example the extent of forestry in peatlands. (Geologinen tutkimuskeskus n.d.) Whether the peat use should be considered differently in different countries in the green flag criteria can be debated. Peat is considered as a non-renewable energy source and the use in substrate was researched in a study by Natural Resources Institute, LUKE, during 2010-2014. The decomposition of peat to carbon dioxide causes the biggest climate impact in the case the substrate contains peat. This favours the solution that peat should be replaced with compost materials from bio-waste or sewage sludge. (Silvenius 2015)

Yardstick, AEFP and LivCom focus on parks, green spaces and built environment in the municipal level. There are similarities with the Green Flag Award and Nordic Green Space Award in all of them even though the scale is different. All of these award schemes take account for the management of green areas and each of them have a built-in auditing process. Yardstick is the only one that is purely just a tool for benchmarking and no award is granted during the process.

4 CASE LEPAA CAMPUS AREA

Lepaa Campus decided to apply for the Green Flag Award during late 2015spring 2016. Lepaa has a rich history and tradition in gardening and landscaping so bringing the Green Flag Award to Finland is one way of valuing the tradition.

4.1 Area and history

Lepaa is situated next to Lake Vanajavesi about 15 kilometres north of Hämeenlinna (Figure 6). The history of the area is rich and there are signs of human activity that dates back to the early Stone Age. The oldest ancient artifact found in the Lepaa stream is estimated to be 7500 years old. Also other Stone Age artifacts have been found in the stream, such as stone axes and stone chisels. The location was favorable for settlement because of the good connections along the stream and lake. The local microclimate was also favorable for settlement. There are many Iron Age relics and artifacts found in the current Lepaa campus area, most of them dating back to the Viking era and the Crusades in 800-1100. (Ojanen 2010.) Protected relics or ancient monuments in the Lepaa Campus area are shown in figure 7.



Figure 6. Lepaa is located about 15 kilometres north of Hämeenlinna by the lake Vanajavesi. (Google maps 2017)

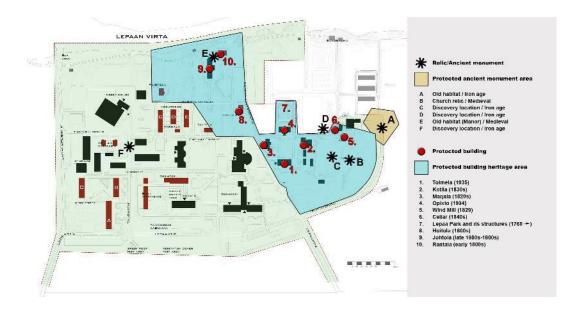


Figure 7. Relics, ancient monumets and protected buildings in the Lepaa Campus area. The green area shows the limits of the Green Flag application area. (Katja Virtanen)

Lepaa is mentioned in historical documents as a physical place for the first time in 1460s. The name "Lepäys" is listed in the property list of the Master of Häme Castle, Olof Tavast. During the 1500s Lepaa Manor was one of the most influential places in Finland. The family was among Finland's most influential noble families having close relationship with the royal family. In 1600s Lepaa lost its previous politically central position but remained as a central place in the Häme region. The 1700s was difficult time for Lepaa and for all of Finland because of the Great Northern War and Russian occupation. In 1820 the Manor was bought by Marie Antoinette Sommer who married a wealthy German manufacturer Phillip Peter Heimbürger. Most of the protected buildings in Lepaa area are from this era (Figure 7). After Heimbürger died Marie Antoinette married steward Carl Packalén, who in 1889 bequeathed the Manor grounds to the state on the condition that the state would give education in horticulture there. (Ojanen 2010.)

The lack of proper education in the horticultural sector was a known fact in the late 1800s. There were many small gardening schools around Finland that gave mostly practical training but to get theoretical education in horticulture one had to travel abroad. In 1898 the Emperor of Russia, Nikolai II, gave a declaration to arrange horticultural education in Finland. Mustiala

in Tammela was considered for a possible location because there was already education in agriculture. However, in 1902 the Lepaa Manor grounds were transferred to state after Carl Packalén's brother Nils Packalén died and this changed the plans. Lepaa's grounds had a total area of over 1100 hectares and the place was considered favorable for growing different plants. In 1910 the horticultural school was established in Lepaa and the first 12 students started their training in 1912. (Laurila 2010.)

Today Lepaa provides both higher education and vocational education in landscape design, landscaping, horticulture and gardening. There are about 400 students in two study programmes in the Häme University of Applied Sciences and about 100 students in Häme Vocational Institute.

4.2 The Process applying for the Green Flag Award

In spring 2015 Senior Lecturer Sari Suomalainen visited the Birkenhead Park in the UK as part of gaining international professional experience. The exchange was made possible by Maiju & Yrjö Rikala's Horticultural Foundation (Maiju & Yrjö Rikalan puutarhasäätiö) and Häme University of Applied Sciences. Birkenhead Park has the Green Flag Award so the management issues and the award scheme was discussed during the visit. The following autumn three of the Birkenhead park staff members, Mary Worrall (manager) Paul Davies (park manager) and Nick Harding (park ranger), visited Lepaa Campus in Hattula and after getting to know with the area and the management of the green areas they suggested Lepaa Campus should apply for the Green Flag Award. They thought that Lepaa Campus green areas meet the criteria of the award and Finland would be a great addition to the international Green Flag Award scheme. (Suomalainen 2017.)

Lepaa Campus decided to apply for the Green Flag Award and during winter and spring 2016 Lepaa Campus management plan was updated and translated in English (chapter 4.3). Figure 8 shows the time line of the Green Flag process in Lepaa. The area limits were decided to contain the traditional park areas and exclude the nursery and orchard. There were

preliminary plans of Lepaa elementary school moving to the Lepaa campus area so the area limits were changing during the process. The final Green Flag area limits can be seen in Figure 9.

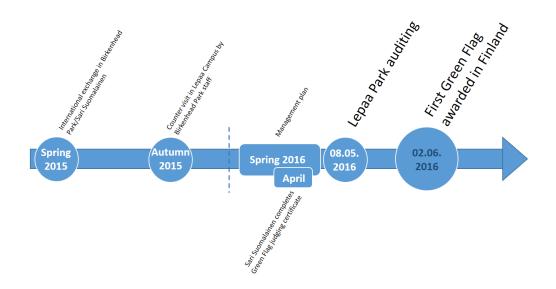


Figure 8. Chronological overview of key events in the Green Flag Award -process in Lepaa.

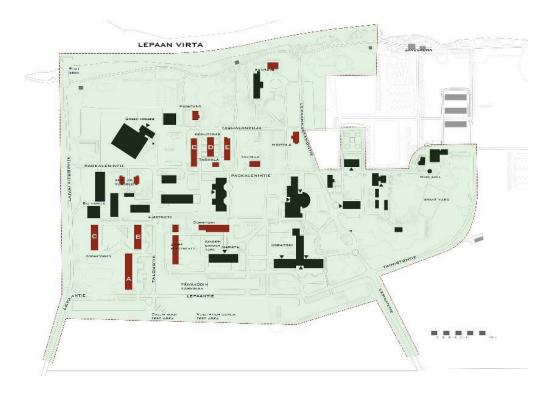


Figure 9. Green Flag Award area limits inside the Lepaa Campus. (Katja Virtanen 2016)

The Green Flag Award criteria was studied for the preparations. The average maintenance level in Lepaa was estimated to be good. The signage leading to the campus and inside the campus, and emergency contact information in the lake front area were revised and fixed if needed. All trash receptors inside the campus were marked with stickers for litter and dog waste (Figure 10). The children's playground needed a new safety surface material under the equipment and a safety check up but this was not possible to achieve before the auditing. This was acknowledged in the application as a problem to be solved and the playground was marked as closed.



Figure 10. All the trash reseptors were marked with stickers for litter and dog waste. (Katja Virtanen 2017)

Later in the spring some small community projects were scheduled. Lepaa staff members took part in the "one million bird houses" -challenge started by YLE. The students gave some old chairs a new look and placed them around the campus (Figure 11).

During April 2016 lecturer Sari Suomalainen also participated in the Green Flag judges induction training in Victoria embankment, London. The certificate allows her to take part in the judging process and mystery shopping process in the future. (Suomalainen 2017.)

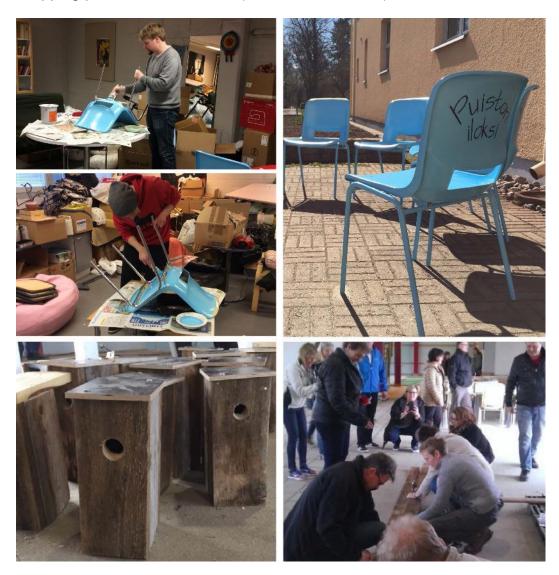


Figure 11. Collage of photos about community projects. The Green Flag Award application process generated some fun projects in the campus: The staff built some bird houses for nesting birds and students painted chairs for everyone to enjoy. (Häme University of Applied Sciences 2016)

The Green Flag assessment and auditing took place on Mother's Day May 8th 2016. Both the management plan and site was assessed by two Green Flag judges, Teresa Hoare and Nigel Thorne (Figure 12). The site visit was

accompanied by Lepaa staff members, Sari Suomalainen, Leena Huhtama and Katja Virtanen. The visit was thorough and the judges asked clarifying questions for example about the maintenance, the equipment, facilities, recycling and composting, and pesticide and peat use.



Figure 12. Green Flag Judges Teresa Hoare and Nigel Thorne discussing Lepaa Park with Sari Suomalainen and Leena Huhtama. (Katja Virtanen 2016)

Lepaa Campus was granted the Green Flag Award on June 2nd, 2016. Usually the new Green Flag parks are announced in July but Lepaa got an exception because of the Finland's Green Year opening ceremony in Hämeenlinna where the news about the Green Flag Award were made public.



Figure 13. Some of Lepaa staff members celebrating the first Green Flag Award in Finland. The award was announced in the opening ceremony of Finland's Green Year on June 2nd, 2016. (Teo Kanniainen 2016)

4.3 Management Plan

The application process for the Green Flag Award set in motion the need to update the Lepaa Management Plan. The management plan (Appendix 3) was updated, translated into English and compiled during Spring 2016 by Senior Lecturer Sari Suomalainen and two students in the degree programme in Built Environment, Hanna Vuori and Taija Kalliola-Korpinen with the help of some other staff members also.

The base for the management plan was the development concept for Lepaa parks which was completed in 2014 in a thesis work by Kati Jukarainen in collaboration with Senior Lecturer Outi Tahvonen. The development concept of Lepaa park is meant to be a tool that guides the procedures of the personnel. The concept takes a stand on the aspiration for the park's

future, management, view of space and vegetation and materials of the park. (Jukarainen & Tahvonen 2014)

To be eligible for a Green Flag Award, sites must be freely accessible to the public and perform well in the eight pre-defined criteria: 1) A welcoming place, 2) Healthy, safe and secure, 3) Clean and well maintained, 4) Sustainability, 5) Conservation and heritage, 6) Community involvement, 7) Marketing and 8) Management. The compiled management plan takes account these criteria and lists them in the action plan showing the actions and responsibilities (See Table 2 for example and chapter 12 in Appendix 3).

Table 2. Excerpt from the Management plan showing the actions and responsibilities of the listed objects/errands. (Lepaa Management Plan 2016, Appendix 3)

 Welcomir 		ng places				
Obj.			Responsibility	Resource	Year	Monitoring
1 A	Wine	ery yard	HAMI	Revenue		Annual
	signa	age				review
1 B	Cam	pus signage, a	HAMI/HAMK	Revenue		Annual
	camp	ous map				review
1C	Rour	ndabout and	HAMI/HAMK	Revenue		
	signa	age				
1 D	_	age from the	HAMI	Revenue		
	l	platform for				
	visito					
1 E		has trained	KIPI/HAMK/HAMI		ongoing	
	l	ents in duty to				
		t visitors and				
		elpful				
1 F	Infor	mation leaflets	HAMK		2016	
	abou	ıt campus				
1 G	SMA	RT PARK	HAMK		2013, 2016	
	mob	ile guide				

The auditing process and feedback from the two judges gave useful information how the future management plan should be carried out. The desk- and field assessment feedback report gives recommendations and suggestions what should be developed and where to focus on (Appendix 4)

The desk assessment directly focuses on the management plan and shows where it is lacking information and where to look for best practice guidance for creating a comprehensive management plan. The field assessment gives suggestions to the green areas and park as a whole. The feedback from both assessments will be the base for creating the next version of the management plan.

4.3.1 Online version

The next management plan for the Lepaa Campus area is going to be available online. The overall layout is developed as part of this thesis but the contents will be updated along the way (Figure 14). The feedback from the judges gave recommendations about where to look into when developing the structure of the management plan. Cape Space's "A guide to producing park and green space management plans" was suggested. It recommends to keep the structure simple focusing only on four key questions: Where are we now, where do we want to get to, how will we get there, and how will we know when we have arrived? (Cape space n.d.)



Figure 14. Screen capture of the overall layout of the www-pages for Lepaa Campus Green Flag. The www-address is http://www.hamk.fi/green-flag-award.

The online version is easy to share and keep up-to-date. The content is in English because at the moment the Green Flag judging is carried out in English.

4.3.2 Use of GIS

One way to manage green infrastructure is utilizing GIS technologies. At the moment Lepaa campus area's trees for example are managed in PuuAtlas GIS-application. (Figure 15) PuuAtlas is developed by Geometrix Ltd which specializes in developing mobile technologies in environmental and property management. There are currently 1625 trees uploaded in PuuAtlas, but because the software only focuses on trees there is a need to get another application to manage other types of areas in Lepaa Campus. Trimble TerraFlex is considered as one option. As for how these different applications communicate with each other is still under investigation.

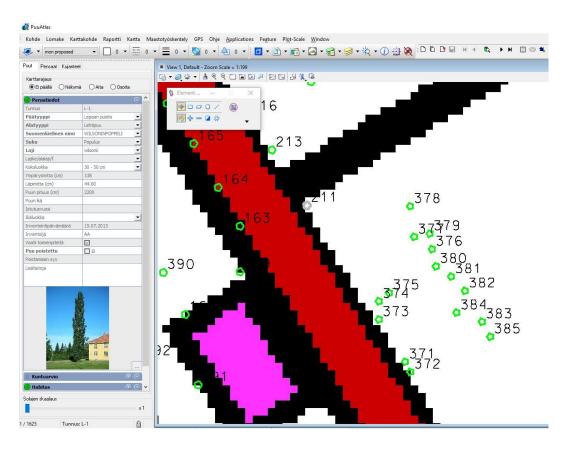


Figure 15. Lepaa Campus area's trees are currently managed with PuuAtlas GIS-application.

Students in Lepaa have been using QGis as their primary GIS application since autumn 2016. QGis replaced the previously used ArcGis because it is a cross-platform, free and open source application that provides similar data viewing, editing and analysis features as the commercial ArcGis.

The lakefront green areas were surveyed as part of a property maintenace (Kiinteistön piha-alueen korjaus ja ylläpito) -module. Two students used Trimble R2 GNSS-satellite receiver (Figure 16) to survey different distinctive vegetation patches in the area. R2 GNSS receiver supports multiple satellite constellations and correction sources and can get to centimeter (10cm) accuracies. It is also compatible with different mobilephones and tablets. The data was then processed with Trimble TerraFlex web-application which converts the survey data to shapefiles which then in turn can be imported for example to QGis application for further study and editing. (Äystö 2017.)



Figure 16. Trimble R2 GNSS –satellite receiver. The survey accuracy is in centimeters. (Katja Virtanen 2016)

The green areas in Lepaa provide an excellent learning environment and modern survey methods and applications can be used to map different areas that need different level maintenance. Surveying the lakefront vegetation patches was one example of this (Figure 17). In the future student work can be used surveying other parts of Lepaa Campus area and the data can be used in the management plan.



Figure 17. Screen capture of QGis window after importing the shapefiles from survey data. The distinctive vegetation patches by Lake Vanajavesi are shown in different colours.

Another example how QGis can be used for both in learning process and for management purposes is updating the Lepaa green area classification system to QGis. Example of the map and datafields can be seen in figures 18 and 19. The WGS84 was selected as the coordinate system because the Trimble R2 GNSS -satellite receiver surveys data in this coordinate system. Most of Lepaa Campus area is A2 classification. The formal garden behind Opisto building and the front of the Manor house are classified A2+ because they need some special maintenance. A2 and A2+ are coloured red in the classification map (Fig 18). The lakefront and area behind the cemetary are marked A3. The vegetation is more natural and there is no need for extensive care. A3 is coloured orange in the classification map. There are 5 special areas marked as E1-E5. These areas have specific maintenance needs and include the orchard (E1), the cemetary (E2), EUfunded agricultural lands (E3), playground (E4) and the nursery (E5). The E-areas are coloured purple in the map. The land areas are calculated automatically in the datafields so when some areas need to be added to or removed from some class the field values are updated. If more fields are needed for making notes or for other calculations, such as costs, they can be easily created in the data table (Fig 19).



Figure 18. Screen capture of Lepaa Campus with differend green area classifications. The colours show the areas with different maintenance needs.

Hoitoluok.	Tunniste Kivikko, Kasvihuone	Kommentit	Pinta-ala 140 180
72	NAME AND ADDRESS OF THE PROPERTY OF THE PROPER		1,0100
A2	Rivitalot		49682
A2	Toimisto, Kotila, Mamselli, Sikalanmäki		40442
A2	Päärakennus, Kivitalo, Puistohalli, Marata, Traktorihalli		105518
A2	Liikenneympyrä		610
A2+	Opisto ja muotopuutarha		7466
A2+	Kartano		3196
A3	Rantavyöhyke		22198
A3	Hautausmaan tausta		19952
E1	Omenatarha ja marjanviljely		76245
E2	Hautausmaa		2711
E3	Viljely (EU-rahoitus)		1638
E3	Viljely (EU-rahoitus)		2077
E4	Leikkikenttä		791
E5	Taimisto		10236

Figure 19. Screen capture of Lepaa Campus Gis data table. Different areas are shown in square meters.

The maintenance classification can be further developed to for example differentiate vegetation areas from paved areas. Figure 20 shows this kind of example from A2+ area behind and around Opisto building. The map is drawn directly on top of Google satellite map so it serves as an example only. Students can survey the different areas similar way they surveyed the lakefront vegetation patches and make more accurate maps.



Figure 20. Screen capture of Opisto formal garden in QGis. QGis can be used to differentiate for examples pavement areas from lawn areas.

5 DISCUSSION

The Green Flag Award is well known in the UK by both professionals and park visitors. It helps to raise expectations of what public parks and green spaces can offer to park users and helps create a public recognition of a good quality green space. As it is expanding to other countries, it is also beneficial for Finland to be involved and increase the significance of green spaces. Lepaa Campus of the Häme University of Applied Sciences has offered high quality education in horticulture and landscape design since early 1900s so bringing the Green Flag Award to Finland is one way of valuing this tradition. The Green Flag Award can be a way to start an open discussion about the value of good quality parks and green spaces in Finland. Lepaa Campus was granted the Green Flag Award in June 2016. This was the first in Finland but it has already triggered some interest and for example the City of Lahti is in the process of applying for the Green Flag Award for Pikku-Vesijärvi Park. If other cities and municipalities follow the award scheme could become more recognized by the public.

The Green Flag Award application process was beneficial on its own for Lepaa green areas. It was a way to do self assessment and update the Lepaa management plan. The auditing process and site visit gave useful information for the staff members. The Green Flag judges are volunteers and dedicated professionals who by visiting the sites learn from each other and share good practice. The judging gave practical recommendations for developing both the management plan and park as a whole. Peer assessment provides new ideas and international contacts can lead to new forms of cooperation.

The Green Flag Award can be utilized in education as well. The green areas in Lepaa provide an excellent learning environment and projects involving the management plan either directly or indirectly can benefit the Lepaa green areas. For example modern GIS survey methods and applications can be used to map different areas that need different level maintenance. Surveying the lake front vegetation patches was one example of Lepaa

Campus area and the data can be used later in the management plan showing the biodiversity of the area. The tree stock in Lepaa is managed with PuuAtlas at the moment, but other softwares are considered to be added especially to manage other types of areas, equipment and structures within the campus. Qgis is used as the primary GIS application since autumn 2016 so updating the green area classification maps to Qgis serves purpose for future student projects concerning the management plan.

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APPENDICES

Appendix 1 Green Flag Award Score Sheet

Appendix 2 Green Flag Award Feedback document

Appendix 3 Lepaa Management Plan 2016

Appendix 4 Desk & Field Assessment Feedback

Green Flag Award Score Sheet



Scoring line

0 1	2 3 4	5 6	7	8	9	10
Very Poor	Poor	Fair	Good	Very Good	Excellent	Exceptional

Name of green space	
Managing authority	
Judge(s)	
Date of desk assessment	
Date of field assessment	

Scoring

Final score

- Each category must be scored out of 10
- Work out the average score for desk assessment and multiply by 3 (score out of 30)
- Work out the average for field assessment and multiple by 7 (score out of 70)
- By adding the two scores together you will get a final mark
- For a site to pass each section they must reach a minimum of 15 on the desk assessment and 42 on the field assessment.
- An overall score of 66 must be scored for a site to achieve Green Flag Award status
- Rounding up or down of numbers must be done at the very end of each assessment, when you multiply the average.

Strengths & recommendations

 Comments and recommendations must be included against each category in the feedback sections. They should be detailed enough to provide constructive information to applicants

Desk assessment (minimum 15)	Field assessment (minimum 42)	
Total score	Green Flag Awarded?	

Field Assessment

A Welcoming Place	Score
1 Welcoming	
2 Good and safe access	
3 Signage	
4 Equal access for all	
Healthy, Safe and Secure	
5 Safe equipment & facilities	
6 Personal security in park	
7 Dog Fouling	
8 Appropriate provision of facilities	
9 Quality of facilities	
Clean and Well Maintained	
10 Litter & waste management	
11 Grounds maintenance and horticulture	
12 Building & infrastructure maintenance	
13 Equipment maintenance	
Sustainability	
14 Environmental sustainability – Energy & natural resource	
conservation, pollution	
15 Pesticide use	
16 Peat use	
17 Waste minimisation	
18 Arboriculture & woodland management	

Conservation and Heritage	Score
19 Conservation of natural features, wild fauna, flora	
20 Conservation of landscape features	
21 Conservation of buildings & structures	
Community Involvement	
22 Community involvement in management & development	
23 Appropriate provision for community	
Marketing	
24 Marketing & promotion	
25 Provision of appropriate information	
26 Provision of appropriate educational/information	
Management	
27 Implementation of management plan	
Total	
Average (total divided by 27)	
Out of 70 (average x 7)	

Appendix 1: Green Flag Award Score Sheet

Desk Assessment (Management Plan and supporting documentation)

	Score		Score
1 Presentation		7 Community Involvement	
2 Health, Safety & Security		8 Marketing Strategy	
3 Maintenance of equipment, buildings & landscape		9 Overall management	
4 Litter, cleanliness, vandalism		Total	
5 Environmental Sustainability		Average (divide by 9)	
6 Conservation of heritage & nature		Out of 30 (average x 3)	



Green Flag Award 2015/2016

Name of Site – Managing Organisation –

Bandscores

Desk	0-9	10-14	15-19	20-24	25-30			
Assessment								
Field	20-29	30-39	40-44	45-49	50-54	55-59	60-64	65-70
Assessment								
Overall	30-44	45-54	55-59	60-65	66-69	70-74	75-79	80+
score								

Status – Overall band score –

Desk Assessment Feedback (Management Plan and supporting documentation)

Band score -

Criteria	Strengths	Recommendations
Presentation		
Health, Safety & Security		
Maintenance of equipment, buildings		

Appendix 2: Green Flag Award Feedback document

& landscape	
Litter, cleanliness, vandalism	
Environmental Sustainability	
Conservation of heritage & nature	
Community Involvement	
Marketing Strategy	
Overall management	

Additional comments

.

$\begin{tabular}{ll} Field & Assessment & Feedback \\ Band & score & - \\ \end{tabular}$

Criteria	Strengths	Recommendations
A Welcoming Place		
Healthy, Safe and Secure		
Clean and Well Maintained		
Sustainability		
Conservation and Heritage		
Community Involvement		
Marketing		
Management		

Additional Comments		

Management and maintenance plan Lepaa campus park 2016-2020

1 Introduction

Visions, aims
and objectives

2

Lepaa and its surroundings

4

Vahopää woodlands

4.2

Wetlands

2.1
Living Labmodel

Lepaa Smart Park

Tiilisalinmäki

3

History and development

3.2

4.4

Golf course

4.6

Building stock

3.1 History of the park

History of the educational role of Lepaa

Lepaa campus park



Current users and community involvement

Health, safety and security

Landscape features and ecology

6

11 Maintenance zones

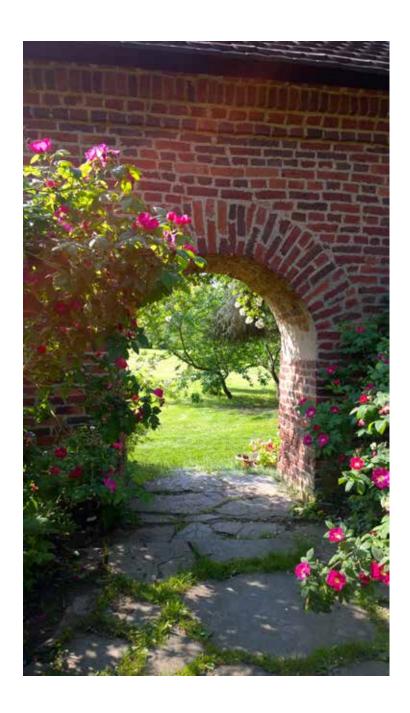
Organization and responsibilites

Action plan [2]

Marketing, information and promotion 8

Sustainability, litter, cleanliness and vandalism 9

Visions inspired by the green flag award 13



Introduction

1

he management plan of Lepaa campus park was updated into the English version during the spring 2016. The ground maintenance is carried out according to Maintenance Classification of Green Spaces which will be introduced in the chapter 6. Furthermore other management actions are carried out according to the operative schedules and programmes. This management plan combines the actions of Real Estate Agency (KIPI) and the educational units (HAMK, HAMI). Lepaa campus park is also used for education. During the semester 2010- 2011 Built environment (HAMK) used the park 266 hours, Horticulture (HAMK) 176 hours, Green space education (HAMI) 535 hours and other education (HAMI) 480 hours. Partly it was used for observation and learning, partly for maintenance and construction work which can be then multiplied by the number of students.

For the updating process also visions, aims and future prioritization action plan was provided. The main objectives for the future will be preservation of cultural historical values, promoting sustainability and health and well-being of every-day users as well as visitors all year around.

Lepaa campus park will also be a source for research as well as it provides experimental plots and space for research work. The current experiments involve 1)Covering material in maintenance, 2) Covering material and hey species, 3) a Green Roof-experiment and 4) a KIM-project. Within the framework of KIM-project (vegetated stormwater management practices) a short interval flooding test was conducted in 2015. The study concentrated to define vegetation combination that could stand the extreme conditions in bioretention cells and fulfill conventional functions of urban vegetatio n as screen or space devider. Experimental plants were in standing water and then totally without irrigation for cycles that lasted the whole growing season. The next stage of KIM is about to start in spring 2016, and now the aim is to define bioretention construction layers and materials fitting the local practices, supplayers and climatic conditions. This part includes construction of experimental field in the campus area.

Smart Park Lepaa campus is also a target of development. The aim is to develop the content to serve also park management. Smart Park provides a new way of experiencing Lepaa campus park and serves also as a guide for visitors.

The management plan involves the campus area. Some significant areas in the nearby surroundings are also dealt in the text below.

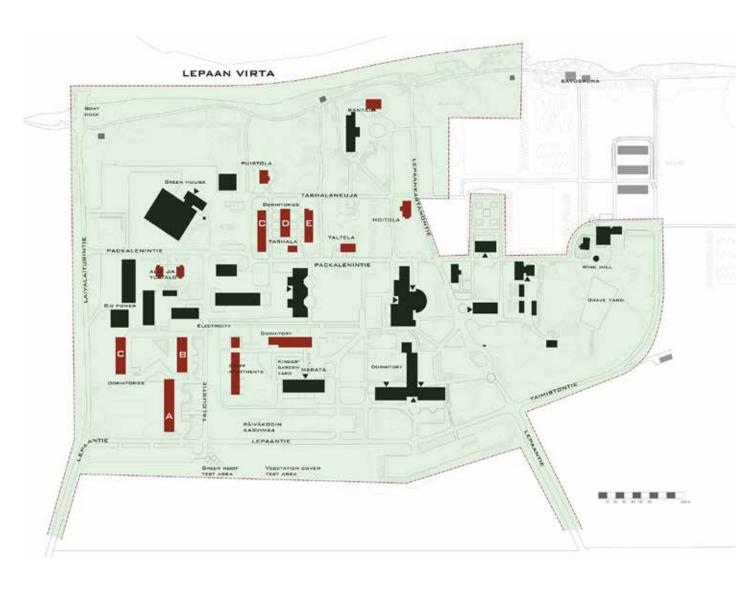


Figure 1. The area for management plan.

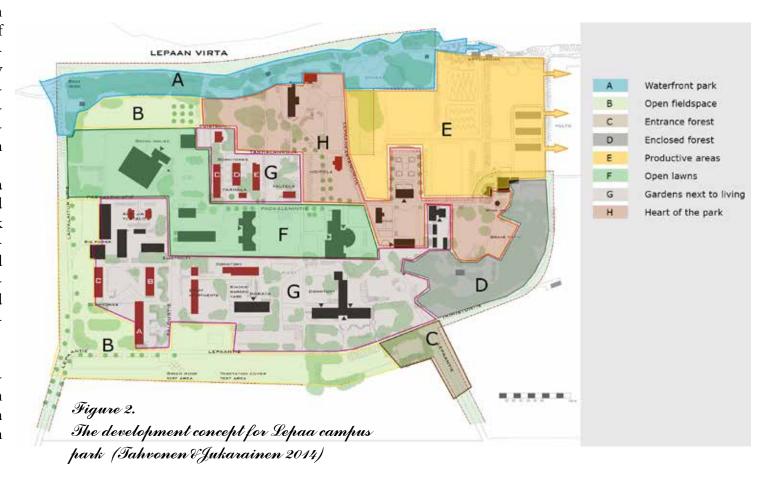
Visions, aims and objectives

he Lepaa campus will be developed according sustainable development and according The Strategy of Cultural history 2014-2020. One of the main targets is to focus on the strength of cultural, economical, social and ecological aspects and on a potentiality to enable new facilities and action according to Finnish Cultural Environment Strategy 2014-2020. Development aims and acts will be interwoven with education and research.

The development concept for Lepaa parks was completed in 2014. It is based on the history and changes in the park during different time periods. The history base is used to combain cultural history, different time layers and future development acts (Jukarainen and Tahvonen 2014). The staff and students participated in the process.

The updating proces of the management plan is completed together with the students Taija Kalliola-Korpinen and Hanna Vuori (Chapter 12: Vision inspired by the green flag award).

2





2.1 Living Lab-model

The research targets in this Living Lab model will be technology, health and well-being and cultural history.

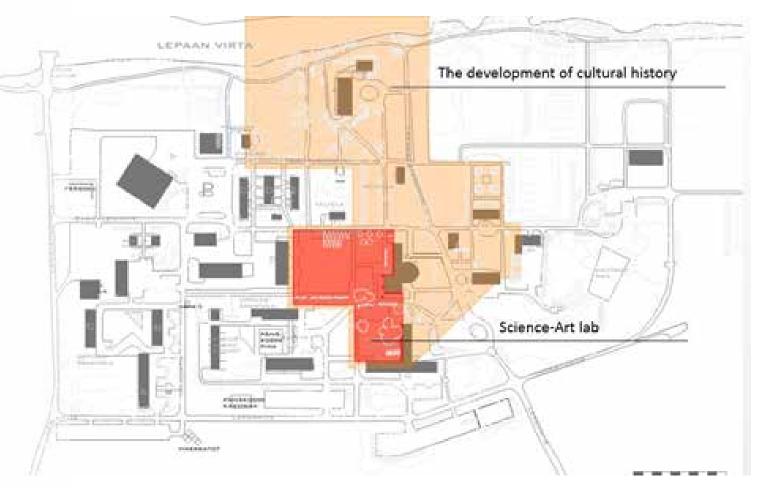
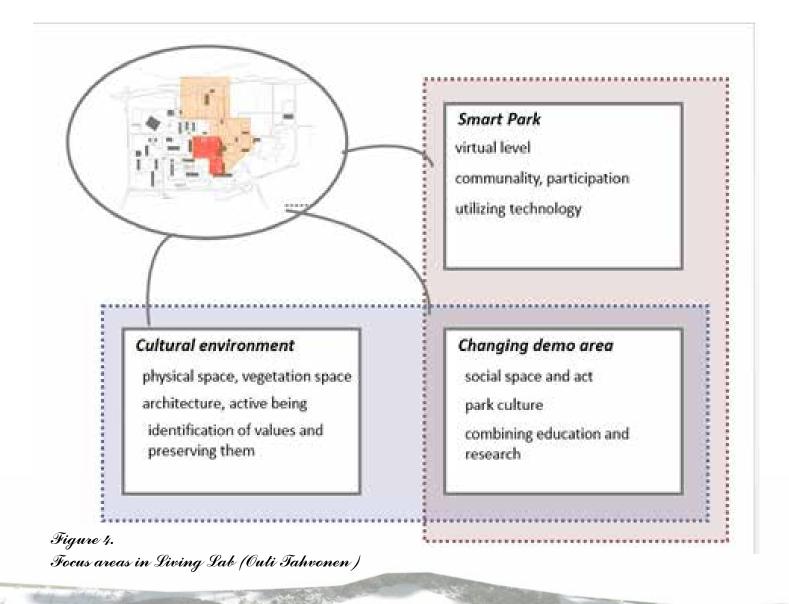


Figure 3.
The development targets (Outi Tahvonen)

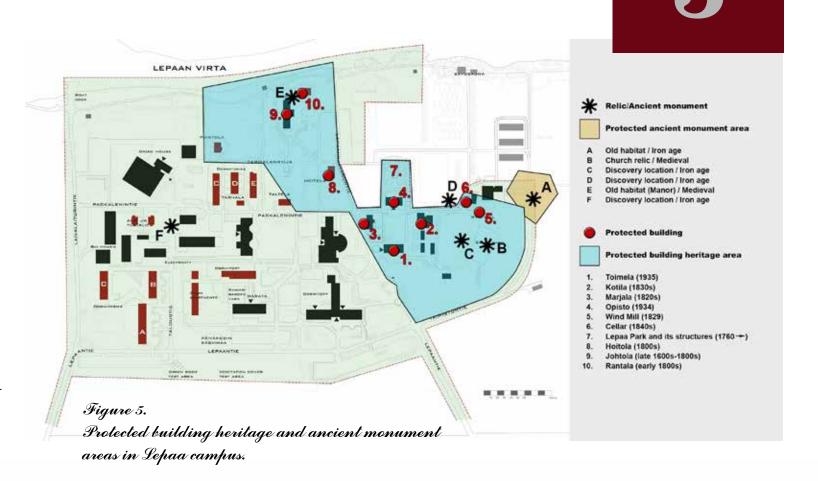
2.2 Lepaa Smart Park

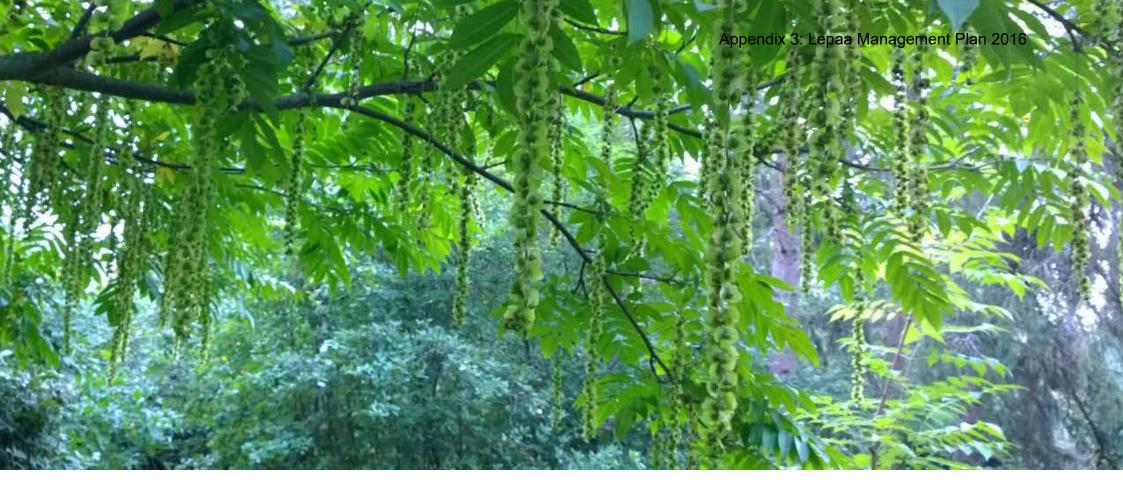
Smart Park is a new way to experience Lepaa campus park. It utilizes digitalization and mobile technology. It is possible to listen to the history and stories about Lepaa. Furthermore, knowledge about rockery perennials can be listened in Finnish, English and Swedish. This content was produced by students in 2015. The Smart Park is an ongoing project and it is an interest of research (Appendix 1). Smart Park will be developed for visitors to experience a new level of the park. Interaction and storytelling will be utilized in Smart Park in the future. It will support socioecological aspect as well as produce information for park management.



History and development

he history of Lepaa dates back to the Stone age. There have been findings of Stone Age axes and hammers close to the current campus area - the proximity of the lake made it the perfect location for settlement and traffic. The earliest estimates of the Manor house in Lepaa are from the 1200s but the first historical mentions about Lepaa Manor house are from the 1450s. There are a lot of the Iron Age and medieval findings in current Lepaa campus area. Most of the Manor area buildings are from the 1900th century, parts of the Manor house frame are from the 1700th and the 1800th century. The historical buildings are protected by law.



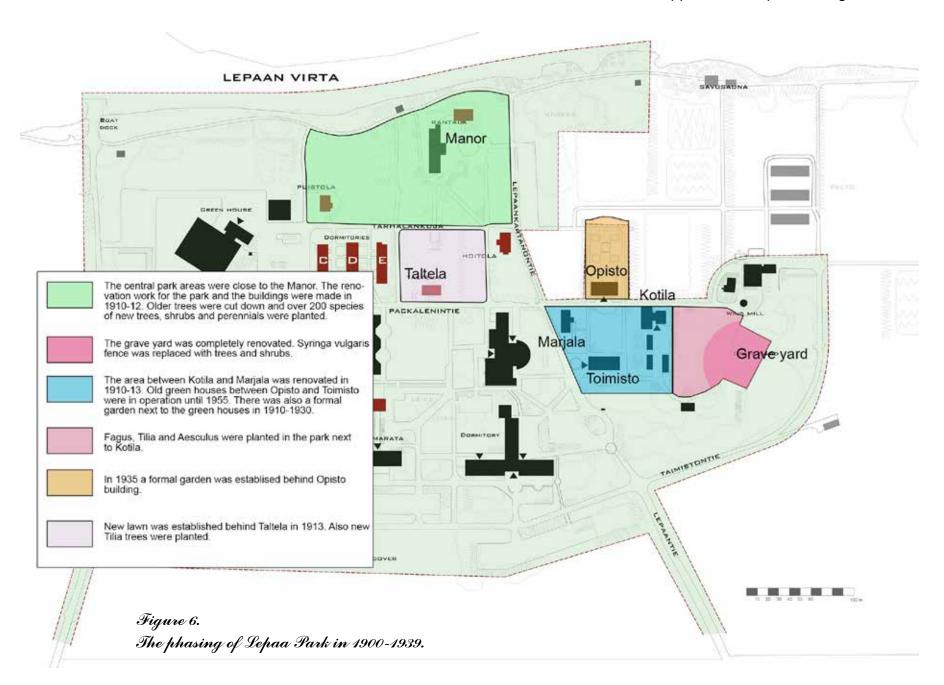


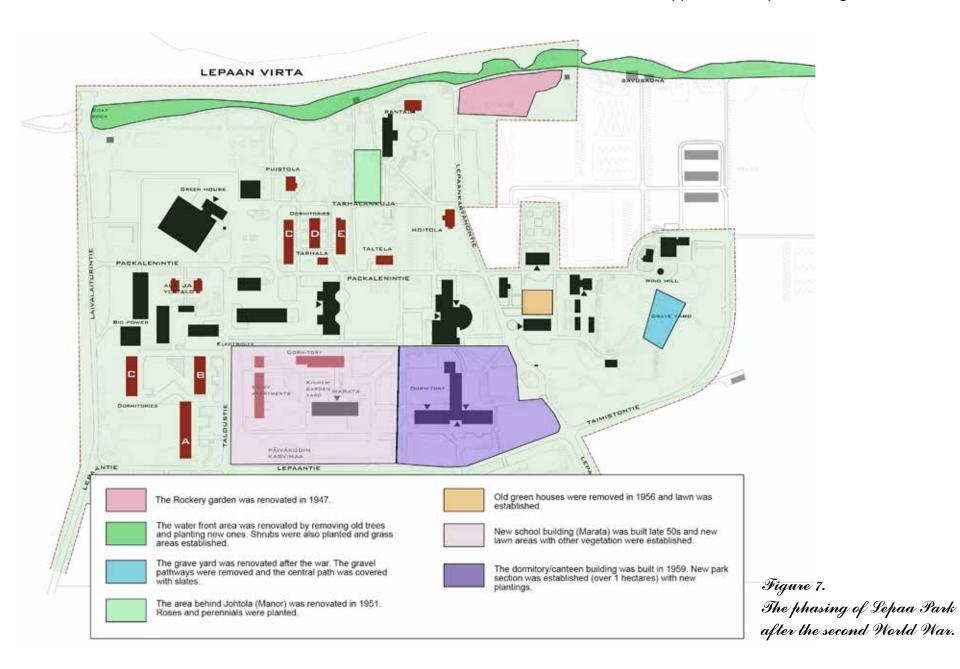
3.1 Lepaa Imart Park

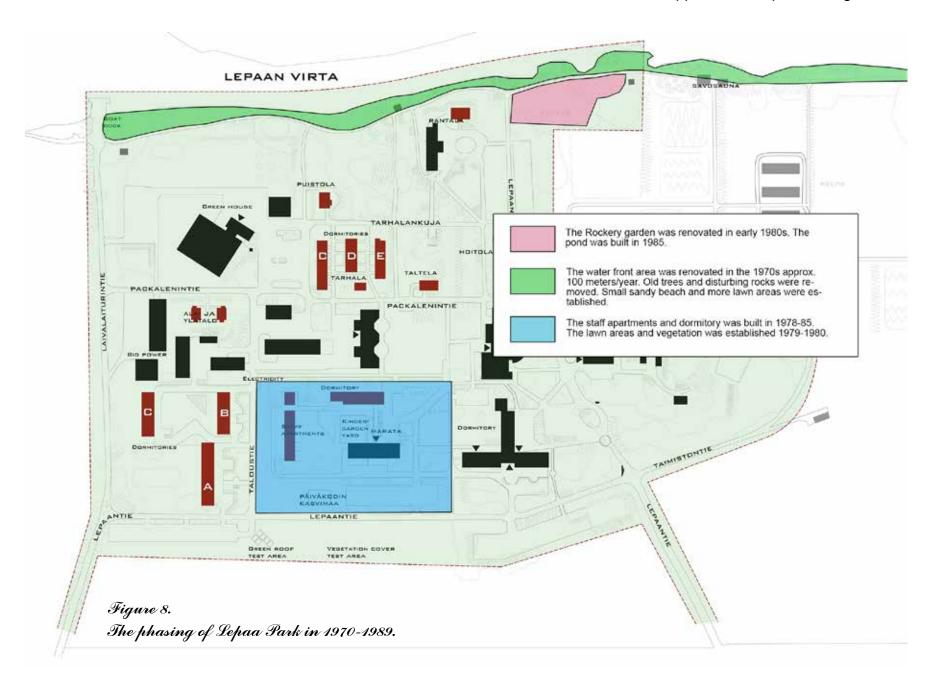
The park was established during 1840 - 1850 whereas the first trees were planted already the 17th century. In the end of the 19th century, the owner Karl Packalén had planted an orchard growing apples to Hämeenlinna area. He willed the manor to the government fulfilment of the condition that it should be used for gardening education in Finland. In the beginning of the 20th century the park area was 1,2 hectares and tree species like Populus, Acer, Tilia, Betula, Quercus and some Thuja canadensis were about 60-70 years old. Additionally to tree, shrub and perennial species there were also more than one hundred different species of apples, plums, cherries

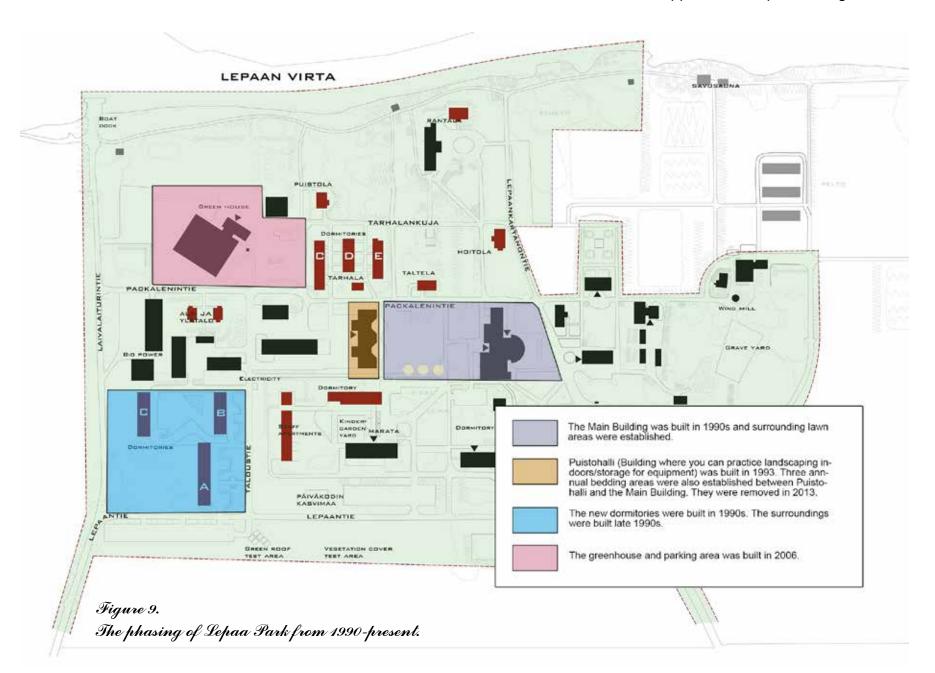
and pears. Annual flowers were grown in greenhouses and small bush berries, strawberries and vegetables were cultivated in the fields. A nursery for growing trees and shrubs was established 1904.

The park was maintained and developed. Plants were imported for example from St. Petersburg. Species used for hedges were Caragana arborescens and Picea abies. The rockery garden was started to be built in 1910. Landscape architect and a lecturer Ola Mannström designed a formal garden connected to Opisto building which was built the same year 1935. The historical phasing of Lepaa park can be seen in figures 3-6.









3.2 History of the education

In the beginning of the 20th century a government board settled a plan to develop horticulture education in Finland. By that time only practical courses in gardening had been carried out. The aim was to educate people in two year practical studies, but also at a higher level to achieve abilities to work in positions like park managers in towns as well as in big private units. The curricula were created to respond to the needs of developing garden culture and the needs of growing towns of the time being in Finland. The gardening school was established in Lepaa in 1909 and education started in 1912 after the preparation work.

The reformation of horticulture and garden design education was started by the end of the 1940s. The gardening school as a professional education offered a possibility to specify oneself for landscaping. Economical resources were not sufficient to raise up university education in Finland and as a concequence students studied landscape architecture in universities in Europe, e.g. in the Agricultural University in Ås, Norway. Garden and landscape architecture education started in the Faculty of Agriculture and Forestry in Helsinki University in 1964 and in year 1973 landscape architecture education took a place in the University of Technology in Espoo. The horticulture and garden design education was continued in Lepaa institute.

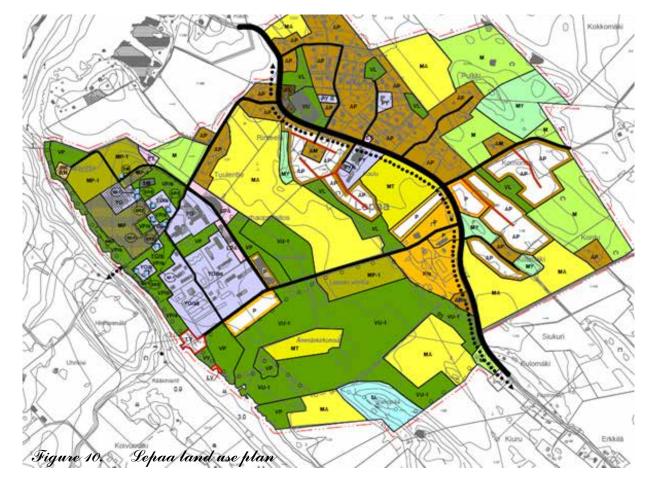


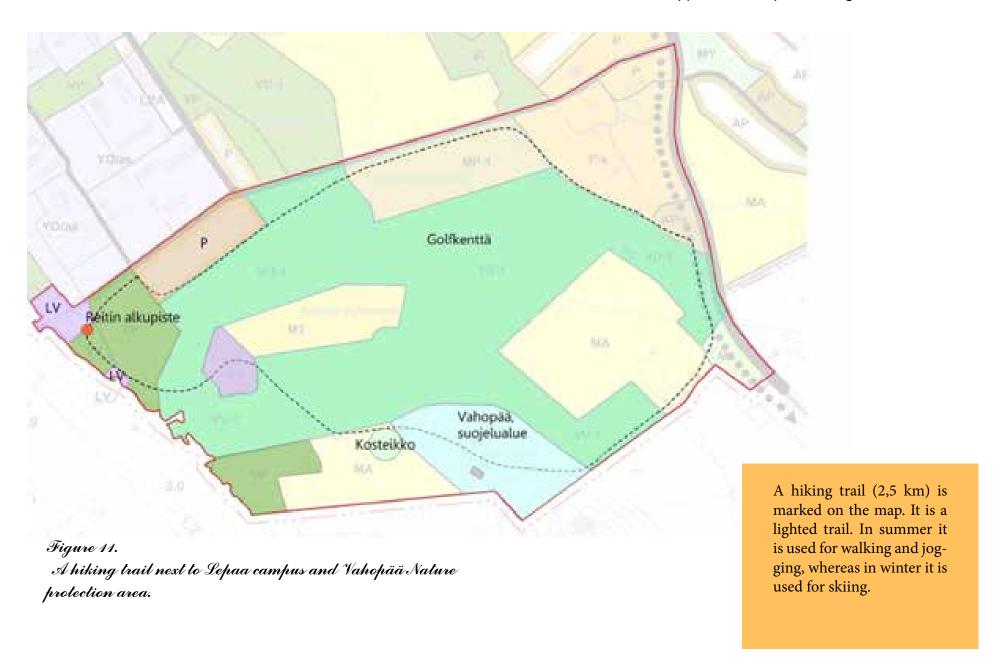
Lepaa and the surroundings

4

he campus area is approximately 25 hectares. The Lepaa surrounding areas extend a golf course, agricultural fields, biodiversity areas supported by the EU and a forest Vahopää areas protected according by Nature Conservation Act.

The oldest parts of green spaces in the campus, such as a formal garden, have been determined preserved areas (VP/s), whereas VP and VL allow more changes. When VU stands for the sport areas and other outdoor activities, VU-1 areas can be used for golf course purposes. Fields are determined into three classees: fields of important value (MA), fields for cultivating garden plants (MP-3) and other fields (MT). Areas along the costline have been pointed out for rowing boats and also for visitors' boats (LV, LT), furthermore an area for swimming has been reserved (VV). A woodland of important value has been preserved for nature conservation area (SL). Areas YO or YO/s are for educational buildings. Depending on the cultural history value the environment can be preserved (YO/s). The winery is situated in the area for enterprise purposes P and P/s.





4.1.
Vahopää
woodlands

Vahopää is a nature conservation area protected by Nature Conservation Act §29. Grove vegetation and special tree species create the significance of the area. Several bird species live in that area because of the possibility to nest in holes of Tilia cordata and other old trees.

Wetlands are important in cultivated and agricultural areas in terms of biodiversity and filtering drainage waters. These areas are maintained according to an EU accepted plan and they are supported by EU funding.

4.2.
Wellands

Tiilisalinmäki is a small woodland hillock. The place has been been used for clay burning. The material has been used for bricks (brick=tiili). The area has historical value.

4.3. Tiilisalinmäki

4.4.

Solf course

Golf course is totally about 30 hectares. The play area is 11 hectares and putting green are 0,3 hectares. There are 10 000 players from May to the middle of October. The quality management system is completed for the golf course.



Figure 12. Netlands are important filters in agricultural areas

4.5. Building stock

There are more than 50 buildings at the campus from which 40 buildings are in active use and heated. The heated area is together 26 000 m2. The energy source is Lepaa's own bio heating plant which uses wood chips and natural gas. Lepaa's own waterworks produces drinking water to the campus use.

The oldest buildings are from the 16th century and the 17th century and the manor was built in the 18th century. The ones for education purposes were built between 1950 and 1960, whereas the largest building with the library and classrooms was built 1990. The newest property consist of the bio heating plant from 2012 and the greenhouse from 2007.



Conservation covers nine old buildings and their maintenance is regulated by the National Board of Antiquities and Historical Monuments. Many buildings are used for living. There are rooms for 250 students. Furthermore, there are residences for the staff with families and students with families. Apart from educational buildings there are also warehouses for nursery production, vegetable products and winery products.

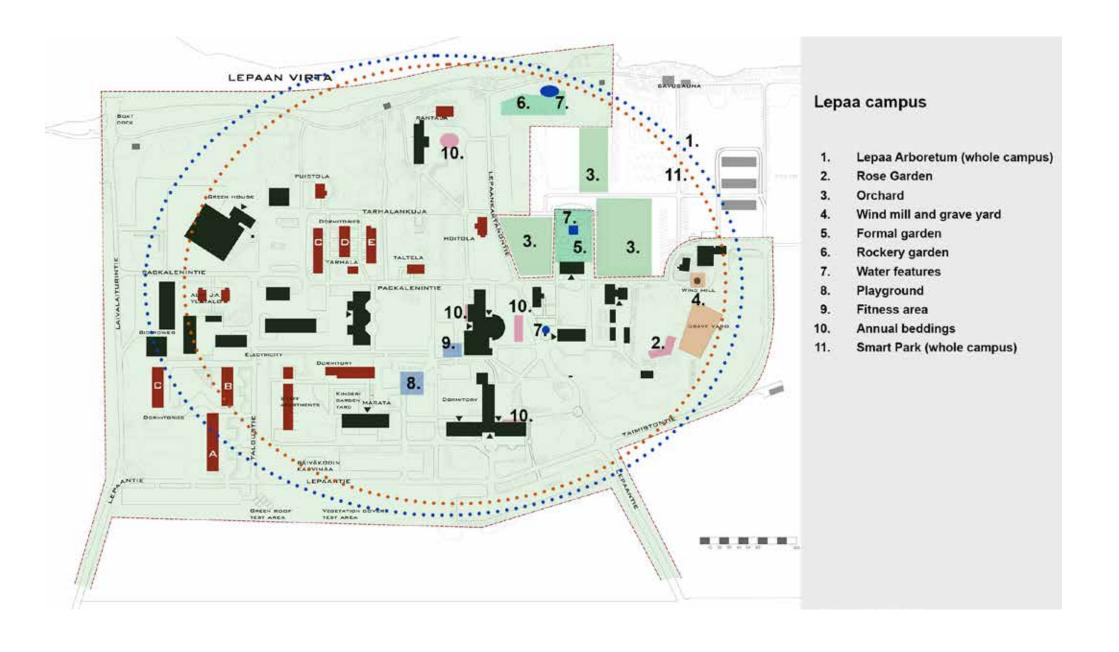
Some buildings have been let out. A municipal day care operates on the campu. The manor house and surroundings is rented out for a company to provide catering services.

4.6. Lepaa campus park

Lepaa campus area is approximately 25 hectares and it is the everyday environment for the staff and students.

Figure 13. Aerial image of Lepaa campus





1. Arboretum Lepaa park has been developed for educational purposes since the early 1900s. There are about 400 woody plant taxa growing in the park. Most of the trees are mapped and information has been uploaded to PuuAtlas-gis software.

The most valuable and most versatile areas in Lepaa park are Sikalanmäki, the park surrounding the Manor house and the surroundings of the Rockery garden. The vegetation has been allowed to develop for decades and the trees are fully grown. The only problem is the lack of younger trees.

2. Rosegarden Rosegarden locates in the north corner of the park.

It was established for the research purposes in 1999-2002.

Apples have been grown at Lepaa since 1910 and apple cultivation has a significant role in learning, in research and in raw material production. Orchards with 800 apple trees of 90 species are spreading on 1.55 ha area around the formal garden. Approximately 8 000 – 20 000 kilograms of apples are harvested every autumn by the students of Lepaa. These apples are the main raw material of the Lepaa winery products.

3. Orchard



4. Windmill Mamselli and Cemetery

On the highest point of Lepaa stands Windmill Mamselli which was built in 1829. Mamselli is a very important landmark at the campus and the end point of a view from the old Oak Tree.

A water container was placed inside the Mamselli in 1910s to help gardening. The water was pumped up here from Lake Vanajavesi by the wind- and horse power.

Beside the windmill on the east there lies a little cemetery. It is a belief that there situated an ancient sacred grove at this place and then from the 13th century there situated a wooden church. On the border of the cemetery stands a small sacristy which is the remains the old church once stood behind it. The sacristy is built in the15th century and it is made of stone to guard the most precious treasures of the church. Some large cut stones on the wall surrounding the cemetery are believed to be carried here in intention to build a stone church by the sacristy.

A gate of the cemetery was constructed in the 1830s by Philipp Peter Heimbürger in memorial of his wife Christine Sophia Sommer. Only the owners of Lepaa and Lahdensivu Manor houses are allowed to be buried in this cemetery.

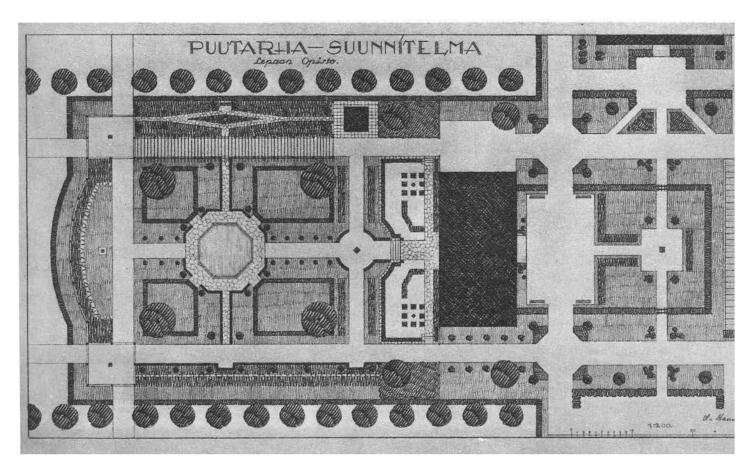


5. Formal garden

The formal garden is a conserved area (VP/s).

A formal garden was designed by landscape architect Ola Mannström in 1935. It was designed according to a barque style. It was located on both sides of the building.

The orginal design on the west side of the building included an octagonal water basin with an octagonal broadstone area. The broadstone area was surrounded by a hedge (Ribes alpinum) which was regularly trimmed. The sand trail from the building to the water basin formed a middle axis, additionally two more trails were situated on the both sides. The benches in the garden were built out of concrete stands and the three planks formed a seat. Furthermore the park had the larger lower ground part and the smaller upper part next to the building.



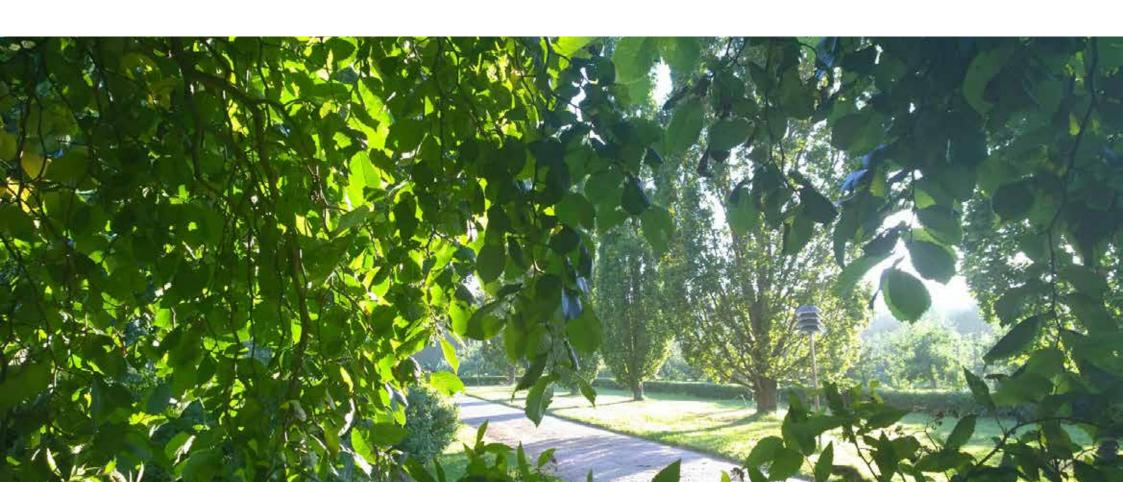
The area next to the building was braced with a broadstone wall . Furthermore Spirea x bumalda was planted around the upper part. This area is similar today. The two trees Ulmus glabra 'Pendula' were planted 1985 at that upper part.

The Taxus hedge grew just after the steps at the lower part on the both sides of the sand trail. Original desing included the square areas on both sides of the trail and they still exist. They were framed with a Berberis thunbergii hedge which was not trimmed. The trees in the squares were Quercus robur 'Fastigiata's pecies. The middle parts of the squares were lawn.

The whole baroque garden was fenced by a hedge Crataegus grayana. There were experimental plots and sample areas for annual plants between the hedge and the sand trails. Other plant species in the baroque garden were Rosa 'Splendens', Spiraea x vanhouttei and additionally Corylus avellana 'Contorta' as a speciality. Perennials were planted at the bottom of the garden and a special Paeonia species grew there at that time as it grows now in the garden. Puschkinia scilloides libanotica, in May blooming daffodils grew in the garden. The climing plants Vitis amurensis and Parthenicissus quinquefolia grew next to the building.

From the end of the 1970's and by the middle of the 1980's the garden

went thought the big reconstruction. One reason for that was that the garden was not well maintained. Taxus hedges and Berberis hedges were removed. The water basin had already been rebuilt and it formed a square instead of the octagonal form. Spirea betulifolia was planted as a farming hedge around the squares as it grows there today. Tilia cordata trees were planted as well as Populus tremula 'Erecta' along the long sites of the garden. Roses and perennial plants were removed and most of the planted areas were established lawn areas. Perennials and climbing plants are planted next to the building. Former Formal Garden is one of the main areas to be reconstructed in near future.



6. Rockery garden

A rockery garden down by Lake Vanajavesi was built in 1910 and reconstructed in 2003, 2009 and 2013. Great variety in plant species and a sheltered location by the lake guarantee a good living environment also for the fauna. Trees like Staghorn sumac (Rhus typhina) and Amur cork tree (Phellodendron amurense) are a rare sight on these levels.

7. Water features

There are three ponds on the campus. One is situated at the entrance of the office building and the second one in the formal garden. The third one is a more natural pond and it is a part of the irrigation system which uses water from the lake.

8. Play area

The play area was built 1998 partly as a play equipment fair for professionals and partly for children and young people who are visiting the campus park. The equipment was produced by three different companies.

9. Filness area

The fitness area was built in 2015 as a student co-project with a company Lappset Group LTd. It is a part of the wellbeing campus –project which will be developed in the future.

10. Annual plants

Every spring new annual plants are grown and planted on several beds, borders and pots around Lepaa Park. Some of the planting designs and planting work are done by the students. Annuals selection is based on educational purposes. Since 1997 Lepaa has had a flower bed for Fleuroselect awarded plants. This is the only Fleuroselect bedding in Finland.

11. Smart Park



Current users and community involvement



here are 500 students and 65 members of staff using campus area daily. A municipal day care is situated in a Marata building and they use the park daily. Furthermore, tourism services bring on average 50 people a week to Lepaa campus park from May to August. Some inhabitants from the neighbourhood use the park regularly.

The involvement of users has been carried out in several occasions. The participatory planning process for the development of Lepaa parks was carried out in 2013-2014. The process involved teachers, staff and students. The data was used for the Thesis work to provide a concept to develop the Lepaa campus park.

The students have worked with the theme participation and involvement during the current semester. The square in the south part of the main building was redesigned in terms of the studies. The enquiry studies included information gathering from users of the park. An interview of children in a day care was carried out and furthermore mapping of user groups and processing the future objectives from that base was done in groups. The information can be utilized in the park management and when it is developed.



Landscape features and ecology

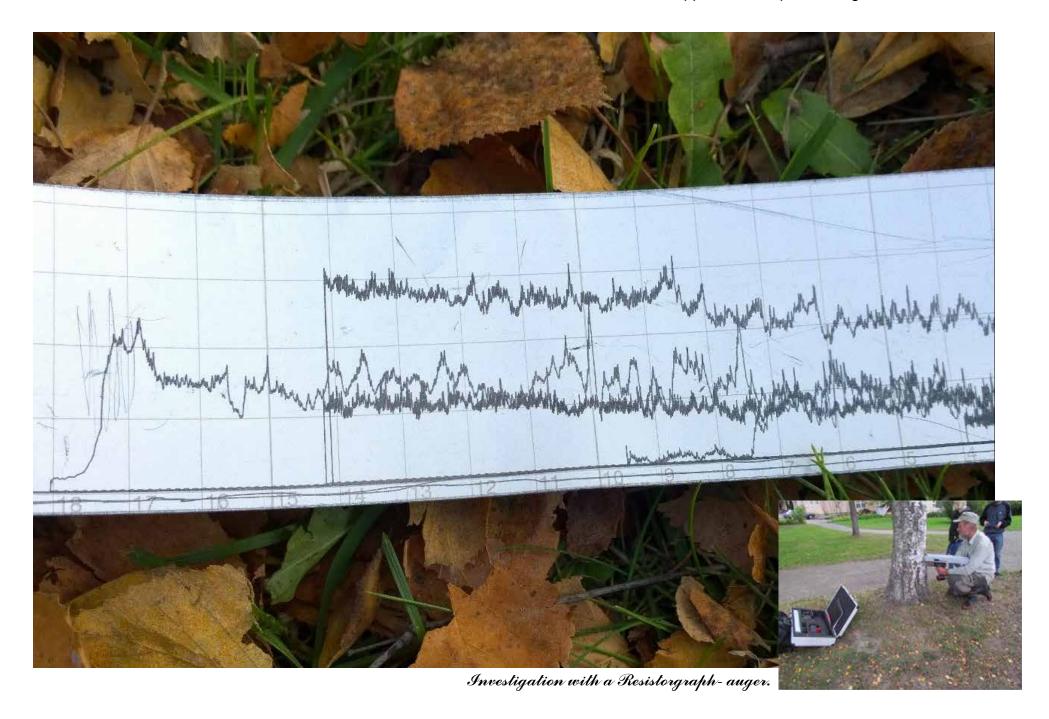






andscape features have been identified and they will we preserved. Natural features and the wildlife will be maintained and enhanced in order to promote biodiversity.

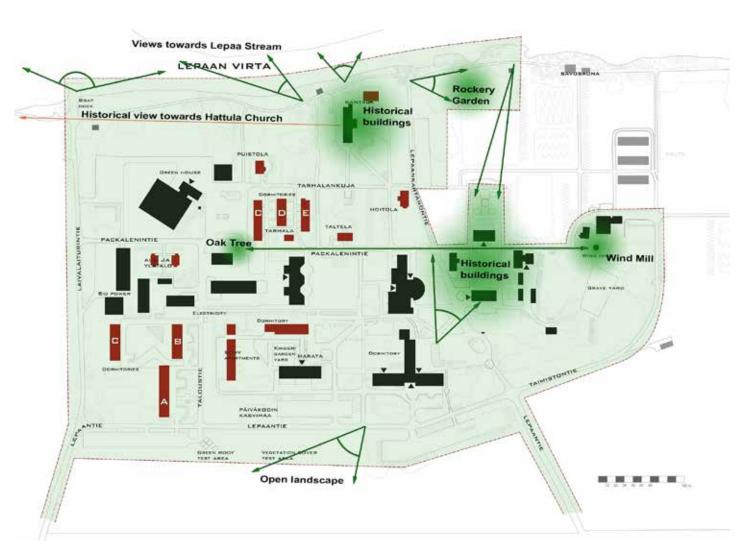
The mature trees and tree lines are an essential character of the park. From the mansion time the landlord's interest in plant species provided several tree species into the park. The development has been going on and nowadays the park earns the status of an arboretum. The tree canopies are the finest features in the middle part of the park. Tree stock is inspected regularly by using a Resistograph- auger. The information about the trees and their maintenance is downloaded in Puuatlas- gis software. The maintenance programme of trees is done and can be monitored by using Puuatlas.



The long views and open landscape are also important part of the park character. The old view from the manor to the Hattula church cannot be verified anymore. The aim is to add the information to Smart Park for visitors to get to know about it and the change of the landscape in that scale.



The study of butterfly species has been carried out in Lepaa in 1973-2008. There are 616 butterfly species in Lepaa area which is quite high and it results from biodiversity and the diversity of plant species in Vahopää and in Lepaa campus park. A butterfly perennial garden was established in the park some years ago as a thesis work.



Important views and sceneries.

organization and responsibilites

7

Häme University of Applied Sciences Lepaa campus park development and research is run by campus director Heikki Peltoniemi, whereas facilities are managed by the real estate agency KIPI.

KIPI employs a park manager and several workers in building maintenance. Seasonal ground maintenance workers are hired from 1 month to 6 month periods. Ground maintenance is partly carried out as student work, because the campus is used as a learning environment.

HAMK University of Applied Sciences LEPAA Campus

Organisation and responsibilities

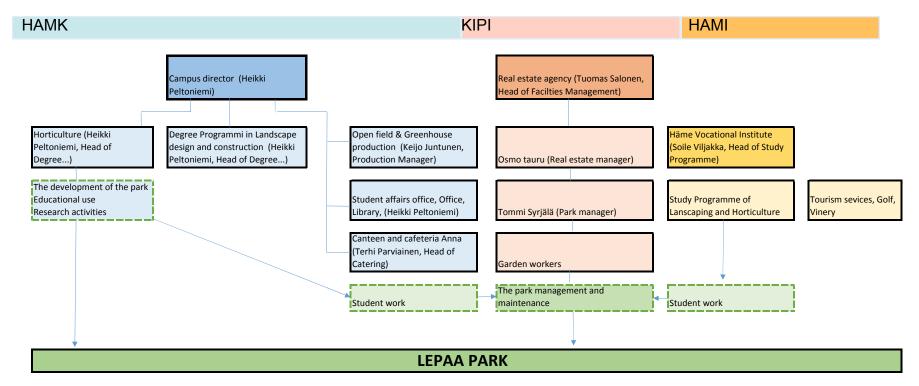
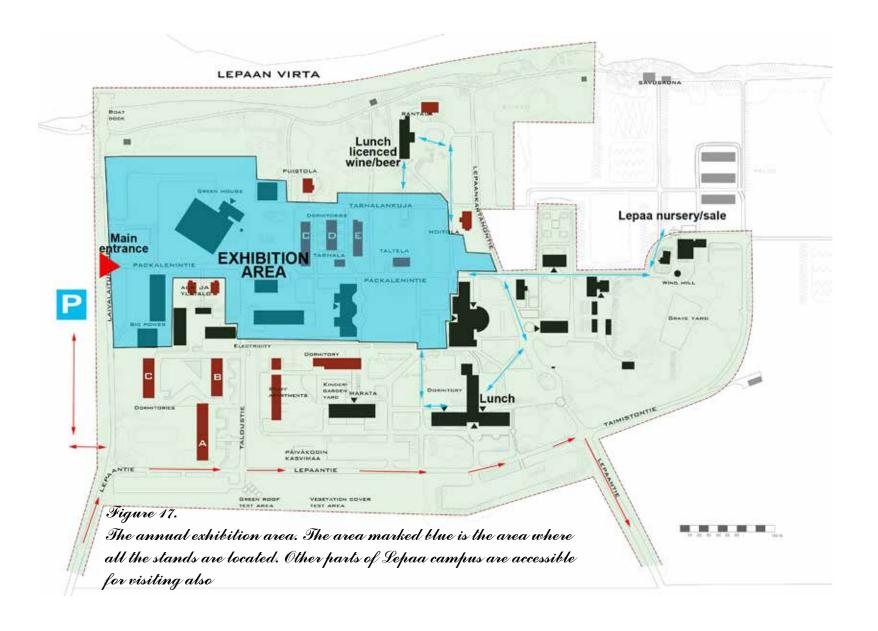


Figure 16. Häme University of Applied Sciences Lepaa campus. Organization and responsibilities.

The annual Horticultural Trade Fair takes place in the middle of August. Specific areas are kept for the exhibition and they cannot be used or developed for any other long-term purposes.



Marketing, information and promotion

8



epaa is a unit of the Häme University of Applied Sciences (HAMK). The main campus is in Hämeenlinna. HAMK has got a web address presenting also Lepaa.

Attraction of Lepaa is also waken up with the winery and a golf course. They bring visitors to Lepaa campus park: Additionally a bus trips are arranged and guided tours can be arranged in summer time.

Signage is placed in the entrances and on the boat deck. Smart Park signage is in the park.

Smart Park Lepaa campus has been presented e.g. in IFPRA world congress in Canada in 2013.

Sustainability, litter, cleanliness and vandalism

9

ustainability is carried out in many everyday duties. One of the main task is recycling and it is regulated by a Waste Management Act. It cover sorting of waste and recycling.

Bins for litter and dog fouling are in Lepaa campus park are to keep area clean. KIPI is responsible for emptying the bins and clearing up the smoking places.

Vandalism is not a problem in Lepaa campus park as it could in a public park in cities.





Health, safety and security



ne of the main tasks in developing Lepaa campus park is to promote health and wellbeing. Fitness area has been built 2015. A plan for frisbee-golf trail is going on.

The emergency plan in known among the staff and students, whereas the first aid information for all park users can be found in a swimming place and in a play area.

Maintenance zones



he management plan is partly based on the National Maintenance Classification of Green Spaces VYL 2007, (Appendix 1). The maintenance classification is a product of several associations in landscape industry, agriculture and forestry and it is widely used in Finland. The different maintenance classes are A1, A2 and A3 for constructed parks, B-classes are for open spaces and C-classes for woodlands.

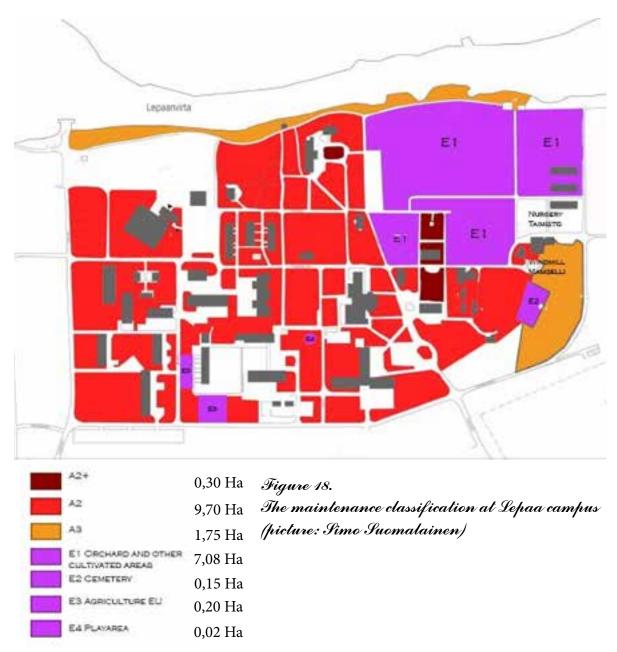
A Parks and	AT Representative green areas	
other constructed	A2 Functional green areas	
green areas	A3 Functional green areas and large areas close	to nature
B Open spaces	B1 Landscape fields	
	B2 Fields for activities	
	B3 Landscape meadows and pastures	
	B4 Open spaces and views	
	B5 Meadows of important value	
C Woodlands	C1 Woodlands in built environment	
VVOodiands	C2 Recreational woodlands close to built environ	nment
	C3 Protective woodlands C4 Productive forests	
	C5 Forests with important value	
Extra classes	E Special area	
	S Protected area	
	R Area undergoing land use change	
	0 Area outside maintenance	

A1 Representative green areas

The Maintenance Classification of Green Spaces

There are three management classes for green spaces on Lepaa campus. The park areas are mostly A2-class (9.2 Ha) According the national construction directives (VRT11), areas which will be maintained at the level of A2- class, should also be constructed according A2 - class. Some areas are old and no reconstruction work has been carried out. That is why all the determined quality targets cannot be achieved regularly. The essential targets of A2class are regular mowing, weeding, maintaining vegetation and edging gravel paths.

The areas marked with A2+ differ from the class A2. Their maintenance demands special operation, but still they are not maintained according to the class A1. The maintenance class A3 covers natural areas and wildlife areas. Extra classes are A1 for the orchard and other cultivated areas, E2 for the cemetery, E3 for EU funded agriculture areas and E4 for the play area. Extra classes have a special maintenance plan.



Action plan

12

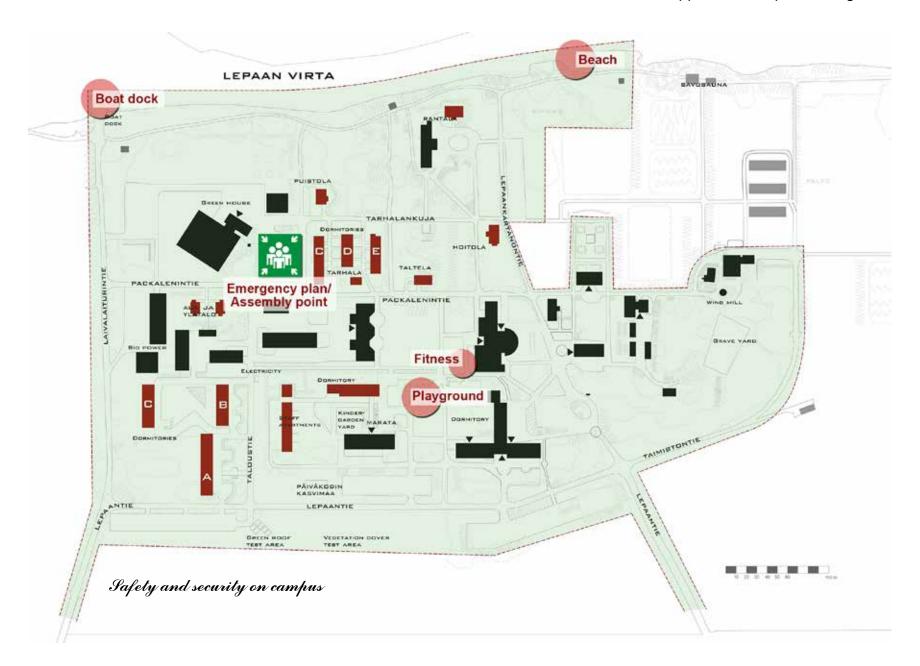
he campus area is managed by HAMK (Häme University of Applied Sciences), HAMI (Häme Insitute for) and KIPI (Real Estate Agency). KIPI is responsible for upkeep and maintenance. HAMK and HAMI are using the area as an authentic learning environment. The organization in terms of responsibilities can be seen in table

1.		Welcomii	ng places			
Obj.	·		Responsibility	Resource	Year	Monitoring
1 A	Wine	ery yard	HAMI	Revenue		Annual
	signa	age				review
1 B	Cam	pus signage, a	HAMI/HAMK	Revenue		Annual
	cam	pus map				review
1C	Rour	ndabout and	HAMI/HAMK	Revenue		
	signa	age				
1 D		age from the	HAMI	Revenue		
	boat	platform for				
	visito					
1 E		has trained	KIPI/HAMK/HAMI		ongoing	
	I	ents in duty to				
		t visitors and				
		elpful				
1 F	Infor	mation leaflets	HAMK		2016	
	abou	ıt campus				
1 G	SMA	RT PARK	HAMK		2013, 2016	
	mob	ile guide				



Signage in Lepaa campus park

2.	2. Health & Safety & Security				
Obj.		Responsibility	Resource	Year	Monitoring
1.1	Safe equipment and fa	cilities			
2 A	Play area inspected according EU- norms, risk assessment done	KIPI	Revenue	ongoing	Inspections regularly
2 B	Fitness area inspected according to EU-norms	KIPI	Revenue	ongoing	Inspections regularly
2 C	All constructed elements and hard surfaces will be controlled	KIPI	Revenue	ongoing	Inspections
2 D	All workers are provided with instructions and wear safety issued form	KIPI/HAMK/HAMI	Revenue	ongoing	
2 E	Security plan	KIPI/HAMK/HAMI	Revenue	ongoing	
2 F	First Aid information at the beach	KIPI			
2G	Jogging/walking route lighting	KIPI	Revenue	ongoing	
2H	Boat dock	KIPI	Revenue	ongoing	

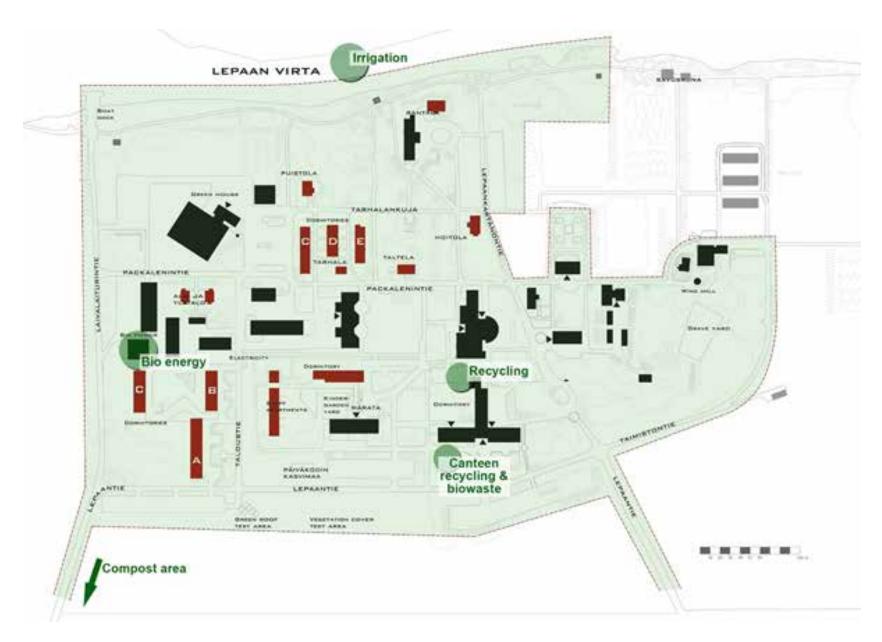


3.	3. Clean and Well Maintained					
Obj.		Responsibility	Resource	Year	Monitoring	
	a. Cleaning and wa	aste				
3 A	Area is free of litter,	KIPI	Revenue	ongoing		
	bins are emptied					
	regularly					
	b. Grounds mainte	enance				
3 B	Annual maintenance	KIPI, HAMK,	Revenue,	ongoing		
	of campus green	HAMI	student work			
	spaces according to					
	the classification					
3 C	Annual maintenance	KIPI	Revenue,	ongoing		
	of trees according to		student work			
	the tree maintenance					
	plan and inspections					
	of trees					
3 D	Annual maintenance	HAMI/HAMK	Student work			
	of orchard					
	Annual maintenance	KIPI	Student work			
	of annual flowerbeds					
	c. Building and Infr	astructure Main	tenance			

3 E	Annual maintenance programme for buildings	KIPI	Revenue	
	Annual maintenance programme for heritage buildings	KIPI	Revenue	
	Annual maintenance programme for exhibition areas	KIPI	Revenue, external	
	Annual maintenance program for parking places		Revenue	
	Annual maintenance programme for routes and gateways		Revenue	
	Annual maintenance programme for a play area	KIPI	Revenue	inspections
	Annual maintenance of water features	KIPI	Revenue	
	Annual maintenance programme of a formal garden		Revenue	
	Annual maintenance programme of a fitness area	KIPI	Revenue	weekly inspections
	Smart Park upkeep	HAMK/ Laterna Vox/Teemu Lainesalo		updates
	Smoking areas	KIPI	Revenue	

4.	4. Environmental sustainability				
Obj.		Responsibility	Resource	Year	Monitoring
	Recycling and	KIPI/HAMK/HAMI			
	biowaste				
	Bioenergy	KIPI/HAMK/HAMI			
•	Pesticide use	KIPI			
	in certain places				
•	Peat used in	KIPI			
	substrates				
	Arboriculture and	KIPI			
	woodland				
	management				
	Mouldering material	KIPI			
	used for compost				
	and later for				
	patching lawns				
	Irrigation system	KIPI			
	uses lake water				
	Living Lab and other	HAMK	External,		
	research projects		student work		

- Glyphosate used 5l/year, spreading machine saves active ingredient
- Peat is used in substrates in Finland



Environmental management

5.	5. Conservation and heritage					
Obj.		Responsibility	Resource	Year	Monitoring	
5.1 Natu	5.1 Natural Features, Wildlife and Biodiversity					
	Annual maintenance programme of EU funded biodiversity promoted areas	KIPI	External			
	A buttrerfly perennial bedding	KIPI	Revenue			
5.2 Histo	oric landscape					
	Annual visual inspection of tree stock	KIPI/students	Revenue			
	Annual programme of pruning trees	KIPI	Revenue			
	Reconstruction of a manor surroundings	Student Thesis				

6. Co	6. Community Involvement and Provision				
Obj.		Responsibility	Resource	Year	Monitoring
	"Green team"	Chairman		ongoing	
	meetings				
		HAMK/HAMI/KIPI			
	Authentic learning	Lecturers/ co-			
	environment for	operational			
	students	companies			
		HAMK/HAMI/KIPI			
	Bird nest	Teachers/staff		2016	
	volunteering	HAMK/HAMI/KIPI			
	Outside benches	HAMI/Teachers/staff		2016	

7 M	7 Marketing				
	Lepaa Exhibition	HAMK/HAMI		ongoing	
	http://lepaa.fi/?page=1022⟨=1				
	Lepaa Golf	HAMI		ongoing	
	http://www.lepaagolf.fi/				
	SMART PARK LEPAA CAMPUS	HAMK		ongoing	
	Citynomadi				
	https://citynomadi.com/				
	Lepaa facebook	HAMK/HAMI			
	SMART PARK LEPAA CAMPUS				
	https://www.youtube.com/watch?v=6VQ-				
	bHQtI-Q&feature=youtu.be				

Vision inspired by the green flag award

The vision is to bring Lepaa back to life and keep it alive for good. Lepaa campus park is too precious to hide and its history is too long to forget. This plan aims to make it well known so that it will attract visitors to enjoy its historical environment. Educational aspects of the nature and heritage will also be highlighted.

There are nine themes to support the vision.

Human (1)

Lepaa should be an attractive environment not only for the staff and students but also for the visitors from the neighbourhood and from other areas. Lepaa should be the central park of Hattula municipality.

Fauna (2)

Biodiversity should be taken into consideration in all areas to support also fauna. Landscape management is partly carried out in co-operation with sheep and goats.

Flora (3)

As an environment of the landscape and horticultural studies Lepaa offers a wide range of plant species. New trends and various forms of gardening should be represented. On the historical scene plant selections and forms of the flower beds should follow the architecture and heritage.

History (4)

Environments with such a long living history are very rare in Finland. Historical values are at the highest priority.

Business (5)

Fundings are applied to enable the maintaining of Lepaa campus park. Actual resources and budget are not enough in maintaining and developing the park.



Known (6)

Lepaa campus park deserves to be known not only as the sets of the educational unit but also as the sets of the tragic love story of Anna, for example. The long history of the area back from the Stone Age should be brought visible.

Attract (7)

Lepaa is a pearl already. But it could be a diamond. With some detailed actions the attractivity of Lepaa campus park is doubled.

Education (8)

Remarkable settings for the education are offered. Flora, fauna, gardening, landscaping, architecture, history, traditions, household, handcrafts, sports...

Sustainability (9)

Green living and sustainable thinking are prerequisites of life which can not be neglected.

Actions and ideas

Following actions are determined to follow the vision and to preserve and enhance Lepaa campus park.

Signage, information boards, leaflets, theme days, webpages and articles are working as our tools and channels.

Guidance all the way from the motorway 6

At the moment guidance is poor. Formal street sign symbols for the services will be applied.

New row of trees for the incoming road 7

To make the incoming road visible and inviting new trees should be planted. Sorbus aucuparia treeline does not grow well.

Picnic baskets to let 1, 5

To allow impulsive picnic trips in Lepaa campus park.

Adventure throughout the history 4, 6, 8

Guided tours and leaflets to tell the extraordinary stories of the past times. Telling the stories which have happened -or could have happened- at Lepaa. Signs and boards with old photos to reveal the history.

Web game 6, 8

Adventurous but educative game on the web in Lepaa surroundings.

Childrens' Lepaa 1, 8

Inviting school children and children from kindergartens to Lepaa campus park. Theme days for families. Marvellous settings for the Summer Camps and forest schools.

Old Fashioned Signs 4, 6, 7

Informative signs and boards. To show the routes, views, history, plants and animals.

Animals 2, 7, 9

Sheep and goats to maintain the historical landscape and to bring joy for the visitors.



Vahoþää 1, 3, 7, 8

The old nature path is not well known. It brings a great contrast for the golf course of Lepaa. Something for all.

Garden of Love & Friendship 1, 3, 5, 6, 7

A garden where you can plant a tree to celebrate a special day or a special person/friendship. Location next to the Mansion is perfect as it is a famous place for celebrations.

Gardening related courses 1, 3, 5, 8

Ferry Connection 1, 5, 6, 7

Silver Line Ferry sails to Lepaa from Hämeenlinna and from Tampere. The route from Hämeenlinna and Hattula should be advertised more as a lovely experience. After all, water routes were the common way to travel at the old times too. Arriving to Lepaa is easy, inexpensive (5€) and comfortable even for those who do not have their own car.



Flowering Fields (Piet Oudolf) 2, 3, 5, 7, 8, 9

More fields to lower the maintenance costs. Some of the fields taken care by the lambs and some with more flowers to bring in the beautiful greetings from Piet Oudolf.

Rotten wood fence 2, 3, 9

Deadhedge. To add the biodiversity and for educational purposes.

Reconstruction or take down of the Piggery Building 4, 7

Reconstruction of the buldings 4, 7

Formal Garden 3, 5, 7, 8, 9

A formal garden has to be reconstructed and then well maintained. A higher maintenance level is possible because many of the lawn areas are developed meadows and in that way the budget is balanced.

Tools and Machine co-operation 5, 8

Suppliers of the gardening tools and machines are willing to co-operate with future gardeners (students) and offer their goods to be tested in real circumstances. This advantage should be used.

Students Designs 1, 3, 8

Annuals Planting Designs is a competition among the students.

Work spaces for the graduating students 1, 5, 8

Empty rooms in campus to be utilized for graduating students. This would bring synergy in advance for both as the graduates could give lectures.

Art & Performance Happenings 1, 5, 6, 7

Folk Music Conserts & Dance 1, 5, 6, 7

Perfect settings for the good old traditional dancing.

Storm Water Management 3, 8, 9

A rain garden or a complete stormwater management should be implemented somewhere in the park.

Outdoor classrooms 3,8

One already exists. New ones could be constructed.

Weddings 1, 5, 7

A ceremony in Hattula Church, a ferry from the church to Lepaa, celebrating at Lepaa mansion, planting a tree in the Garden of Love, Sauna in the evening, p ossibility to stay over the night at student houses, breakfast at the mansion and then the ferry back to the church. Smaller wedding seremony could be held in the sacristy of Lepaa.

Ground cover plants to keep away the weeds 3, 5, 8, 9

Green Roof 3, 8, 9

There is only one very wild and natural green roof in Lepaa campus park. Marata buildings with flat roofs would be suitable for building new green roofs.

Annual Plant Themes 3, 7, 8

A Theme for every year when designing the Annual Plantings. For example in the year 2017 all plants could be blue and white to celebrate Finland's 100 years birthday.

Benches and picnic tables for the visitors 1, 7

Traditional Outdoor Games to rent 1, 7

Wooden carts to rent 1, 7

To allow impulsive visits in a Park with children. To allow carrying picnic basket and outdoor games.

Wishing Fountain 1

Fountain in front of the office building or pool in the formal garden could be transferred in to a wishing fountain. Proceeds used for charity.

Sauna 5, 7

There are two saunas at Lepaa by Lake Vanajavesi. These aaunas could be used more. Once or twice a week there could be a common Sauna for all visitors. There are no public Saunas by the lake anywhere nearby.

Adding Biodiversity 2, 3, 8, 9



Campfire 1, 5, 7

Possibility to prepare a meal by the campfire is advance. People living in the cities do not often get the chance to sit by the fire.

Love locks 1,4,5,7

We do not have a place for the love locks in Hattula. A temple by the lake would combine Lepaa to Hämeenlinna that has temples at Aulanko and at City Park Kaupunginpuisto. Love locks could be tied around the temples fence or to the bridge leading to the temple.

Harvesting 1,3,4,5,6,7,9

Harvesting done together and enjoyed together. This is a great way to increase a sense of community and to restore nature connection. At the end of the day Sauna is warming up.

Lighting 1, 7, 9

Lepaa Park is quite dark especially in the autumn time. Lighting has to be carefully designed so that it brings safety but does not add the light pollution and disturb nocturnal animals. Lamppost design has to suit for the Historical Environment. (ongoing thesis work)

Haystacks 4,7,9

Traditional haystacks have disappeared from the Finnish landscape and many are missing them. This nostalgic scene would be a certain attraction.

Traditional games 1, 4, 8

One number on theme days are the traditional games and plays that bring generations together and value traditions.

Boats & Fishing rods to rent 1, 5, 7

Carp pool in Formal Garden 4, 5, 7

Carp pool underlines the great history of Lepaa Mansion and brings an exotic element into the formal garden.

International Work Camps 1, 5, 6, 8

Lepaa campus park is a great place for organizing an international work camp. Park offers a lot of work to do in peaceful environment and plenty of room for accommodation.

Train 1, 4, 5, 6, 7

Lepaa already has a mini train (pulled by a tractor). During the events and high seasons this train would be very useful for the elderly and children.

Frisbee golf 1, 7

A frisbee golf trail is planned (thesis work)



Actions and ideas inspired by The Green Flag Award				
Action	Responsibility	Resource	Year	Supports the theme
Lepaa campus Park will be made visible for the neighbourhood	НАМК, НАМІ		2016	Human, Known
Guidance all the way from the motorway	намк, намі		2018	Known
New row of trees for the incoming road	HAMK, HAMI, KIPI	student work	2017	Attract
Childrens' Lepaa	HAMK, Hattula		2016	Human, Education
Animals to maintain the historical landscape	HAMK, HAMI; KIPI		2017	Fauna, Attract, Sustainable
Garden of Love & Friendship	HAMK, KIPI		2018	Human, Flora, Business, Known, Attract
Flowering Fields (Piet Oudolf)	HAMK, KIPI	student work	2018	Fauna, Flora, Business, Attract, Education, Sustainable
Rotten wood fence	HAMK, HAMI, KIPI	student work	2017	Fauna, Flora, Sustainable
Formal garden to be reconstructed	HAMK, HAMI, KIPI	student work	2019	Flora, Business, Attract, Education, Sustainable
Students Designs	HAMK	student work	2017	Human, Flora, Education
Annual Plant Themes	HAMK, HAMI, KIPI	student work	2017	Flora, Attract, Education
Benches and picnic tables for the visitors	HAMK, HAMI, KIPI		2017	Human, Attract
Adding Biodiversity	HAMK, HAMI, KIPI		2017	Fauna, Flora, Education, Sustainable
Lighting	HAMK, KIPI	thesis work	2018	Human, Attract, Sustainable
Frisbee golf	HAMK, KIPI	thesis work	2016	Human, Attract

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Appendix

Appendix 1: The new maintenance classification of green areas in Finland

Photos:

Taija Kalliola-Korpinen Sari Suomalainen

Maps:

Katja Virtanen

Layout:

Hanna Vuori

Appendix 3: Lepaa Management Plan 2016





Green Flag Award 2016

Name of Site: Leepa Campus Park Managing Organisation: Hameelinna University, Hameenlinna, Finland.

Desk Assessment Feedback (Management Plan and supporting documentation)

Criteria	Strengths	Recommendations
Presentation	Current MP follows a format used by a number of associations in the landscape industries in Finland with an adoption of the maintenances classes for parks, woodlands and open spaces. The supporting documents provide a comprehensive and colourful overview of the university's long history while providing a background to its current place in the landscape. High standards are achieved within its varied learning environment including valuable ecological studies whilst promoting horticultural history and associated skills within an applied science curriculum. The MP states its objectives and aspirations and it should be commended that both staff and the students contributed to the translation to English. Consistent use of a site map throughout the MP highlighting areas of reference and within its wider surrounds and context.	Provide a single comprehensive LMMP covering all aspects of site operations, processes and programmes of operational management that would help meet a public parks required strategic approach. The current plan also reflects the demands of the GFA system, which although useful, is not a sufficient methodology for LMMP production. It would perhaps be useful to incorporate best practice guidance from CABE Space and Heritage Lottery Fund here in the UK with specific application in Finland. (Post visit note: guidance documents mentioned have been forwarded.) Not losing site of the presented format but more detail is necessary relating to planned operational matters (a comprehensive Action plan) clarifying how the site will be managed and maintained as a park and in parallel with a

	T	
		university campus of horticultural study. Appendices would be useful with a summary document produced for future needs, aspirations and intentions.
Health, Safety & Security	The site is fortunate in that it experiences very few security or safety issues. Minor references in the LMP do acknowledge recognition of security and safety needs relating to areas requiring more attention and detail RA awareness such as the higher boat deck and river.	The LMP has only generalised references to Health and Safety in order to meet with public park status. This area will need a higher profile and it would be wise to cross-reference and test viability of process and practices where necessary such as public safety, student safety and plant and machinery safety practices. This, of course, has to be done sensitively and without unnecessary emphasis being placed upon something that is routinely managed at the moment.
Maintenance of equipment, buildings & landscape	Carried out in accordance with acknowledged Ground Maintenance Classification demands	Evidence of working schedules would be helpful to support the LMP explaining routine practices and actions. This would also clarify if reviews or changes are necessary to the GM and why – equally, it would give notice for repair, replacement and new equipment introductions (all of which help with budgets and longer term financial planning)
Litter, cleanliness, vandalism	Reference to the national Waste Management Act, which deals with regularity of litter and waste collections including responsibility, regularity and budget stream. Maintenance classification index referenced.	Further evidence necessary to substantiate the site-specific operations (and importance to the university) with possible inclusion of appendices that explain process in more detail particularly recycling and re-using as this is referenced as a "main task".
Environmental Sustainability	LMP demonstrates very good practices in sustainability with clear channels of responsibilities throughout the site.	Possibly include future aspirations as to how such a site as this might become a national leader in such matters – especially as this is a 'first' for the country.
Conservation of heritage & nature	Conservation of the heritage and natural environment is key within every aspect of the university's aims and objectives.	Links to particular areas of conservation being monitored would help determine the LMP as an active document, e.g. tree stock review, assessment &

		monitoring – Puuatlas – GIS software.
Community Involvement	The students make up the community of the campus at present.	A wider public consultation within local area possibly tied in with an ambitious marketing strategy to raise profile of the site whilst also accumulating feedback. This could be used to build and focus a realistic site management process with future aspirations, objectives and aims. The new 'communities' might include past alumni but also extend to inhabitants of local towns and villages currently at arms-length from the university.
Marketing Strategy	The university secures sufficient student in-take each year to maintain a 'healthy' teaching faculty.	There are numerous opportunities to be had in order for the campus and university to better engage with and be understood by the people of the local towns and villages, as well as a range of site-specific information for future students beyond that required under the syllabus alone (e.g. ecological, horticultural, biodiversity, history, heritage, culture, etc.).
Overall management	Current management operations present as effective and focused with a dedicated, highly-trained staff resource who are passionate about what Leepa Campus Park could offer in line with its educational objectives and the LMP is the right place to express and develop this strategy.	There is so much more that the LMP has to offer (not to take away from all of the good things it already presents) and perhaps due consideration might be given to much of the above and below to help develop this for the benefit of all its stakeholders (past/present/future).

Additional comments

A diverse college campus and park environment where old students to help promote the college to raise its profile.

It already has many of the Smart Park IT facilities that can be developed to tell many more stories and interesting aspects of the college and its campus' past, present and future in terms of heritage, history and culture, alongside its horticultural expertise.

Field Assessment Feedback

Criteria	Strengths	Recommendations
A Welcoming Place	Set in a beautiful landscape the site is charming. An intriguing, varied and interesting university campus and first impressions are extremely good. Excellent horticultural input across the campus with appropriate levels of intervention in all areas that help balance the more intimate areas of horticulture and silviculture within a localised and pertinent context. There is evidence of active student investigative studies underway throughout site.	There is a need for an improved sense of arrival and definition in terms of knowing when the campus has been accessed. This needs to be done sympathetically and introduced in a site-appropriate manner that reflects the brand image the university is happy with.
Healthy, Safe and Secure	Everywhere across the campus feels safe and secure, without exception	Information as to whom might be contacted in case of emergency ought to be part of the exercise listed above – again, at a level appropriate to the site-specific requirements without 'going over the top'.
Clean and Well Maintained	As an exemplar arena of horticultural study and advancement, the university campus and grounds are extremely well maintained. Its current working practices are fundamental to promoting the forward-thinking, long-term skills and techniques as part of national industry training.	The aims and aspirations of the campus operations might become part of the longer term 'offer' available through an extended 'Smart Park' facility (i.e. when people better understand why something is managed and maintained in a particular way, they tend to better engage with it). With the potential of more visitors in the future this may be necessary to avoid standards from falling.
Sustainability	The potential to use the river waterways more effectively and certainly as means to bring visitors to the park/campus with it being viewed more as a 'destination'. The on-site composting services for the campus delivers a range of assurances and provenance of this material. This is a very valuable resource that can be promoted much more effectively within faculty studies and to help educate visitors etc.	A major objective of the GFA has always been for a reduction in the use of peat and pesticides. Finland, because of its considerable 'natural' resource continues to use large quantities of peat throughout the landscape industry. It would be a very useful ambition for the university to try to begin to change this this philosophy otherwise this pose a major obstacle in the future with

		GFAs.
Conservation and Heritage	The conservation of the landscape and its heritage is key to the endeavours of educational objectives of the university syllabus as a horticultural university of excellence. A extensive appreciation of the site is evident.	There is a large potential to increase and improve knowledge of the ecological, habitat and biodiversity range across the college campus in addition to and in parallel with the on-going horticultural training. These aspects could add new dimensions to the 'offer' the campus can make to a more diverse visitor range whilst encapsulating the essence of its rich culture, conservation and heritage.
Community Involvement	Management are keen to expand and develop this aspect including engagement with local primary schools.	There are numerous opportunities yet to be investigated in order that the university might work and engage with local communities (towns and villages), plus past student alumni, as a beginning and outlet to promoting the park status (and more) of the site.
Marketing	The most obvious level of successful marketing relates to the annual intake of students for all faculty courses – this is obviously specifically targeted and relatively comprehensive in this regard.	There would appear to be an enormous, as yet untapped, range of audiences that the university can engage with in order for the park and campus to be fully appreciated for what it is and what it has to offer – from the enormous alumni arena to the more general public from a neighbourhood, local, regional and national visitor range. Education need not stop at just those attending the courses – this can be extended to local schools as well as those within local communities who may have a more informal interest.
Management	The management team are to be praised for everything they are already doing and their interest in expanding what they do and who they do it for.	It may sound trite but the potential for this campus-cumpark to be most anything to most anybody will be restricted only by the imaginations, ambitions and aspirations of those managing and maintaining it. It is already a very well maintained facility but has yet to reach many

audiences who are, as yet, unaware of what it is and what it has to offer. Those managing the campus have clearly huge aspirations for its future and should be commended for making this first step to assessing the resource they have under their control.

Additional Comments

If the staff commitment is anything to go by then this already quite remarkable campus has quite amazing potential. Many of the fundamental requirements are already in place and much of the future will be determined and helped by a more detailed and comprehensive landscape management and maintenance plan that should also include comprehensive conservation demands. This will help celebrate its culture, history, heritage and horticulture to the widest possible audience.