Chapter 10: Reviewing the evidence for good planning and design

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Introduction

Part Three of this book focuses on the character and quality of places and spaces which facilitate and encourage the public to go to and make use of water-related landscapes (blue spaces). As noted in the introduction, we define blue spaces as outdoor environments – either natural or manmade – that prominently feature water and are accessible to people either proximally (being in, on or near water) or distally/virtually (being able to see, hear or otherwise sense water). It is a basic requirement that in order to obtain all of the proximal and some of the distal benefits, people need to be able to get close to or in the water, so the places which allow this most effectively are likely to provide valuable lessons for anyone wishing to plan and design a new blue space. The objective of this chapter is to set the context for the next set of chapters, each of which deals in detail with a selection of specific blue space types. One of the outputs of this review process is a database of projects for use as inspirational examples by planners and designers and, perhaps especially, by students learning how to apply evidence-based design. The database presents nearly 180 projects as a set of “Blue Profiles” which can be found in the <https://bluehealth.tools/> website.

The projects selected as examples to illustrate a range of common design aspects were drawn from a wide-ranging search, the process and summaries of results of which are briefly described below (more detailed information is available from the website noted previously). The method and criteria by which the examples which feature in Chapters 11–15 were chosen from the larger sample is also described here so that readers may understand why some were included and some excluded.

The first task for setting inclusion criteria for the wide survey was to identify the key elements of a successful blue space regeneration project. We used the following six categories, with between five and seven aspects within each category (derived from an overview of the tools we reviewed for developing the BlueHealth Environmental Assessment Tool described in Chapter 5). These are reflected in the detailed information and assessment ratings provided for each project in the BlueProfiles database and summarised in text for those featured in Chapters 11–15.

- Accessibility (site visibility, pedestrian bicycle or car access, car parking and inclusive access);
- Design quality (design quality, on-site circulation, views and landmarks, inclusion of cultural heritage values, site furniture fitting the context and cost effective maintenance);
- Facilities (range of facilities, accessibility of facilities, amount of seating, quality of nature, degree of shelter or shade and lighting);
- Health and well-being (genius loci, sense of being away, contact with nature, sensory stimulation, contemplation, safety and security);

- Water connections (land-water connectivity, water visibility, access from and to water, water safety equipment); and
- Physical activities (formal sport activities, informal sports, water sports, children's play and activity zoning).

The review examined a large number and wide range of relatively recent projects which had or have the aim of redeveloping or rejuvenating blue spaces for improved public use. These are projects which have been implemented and, in general, become established and well-used spaces within their local or regional urban setting. We identified a range of types of projects and assessed them critically according to the criteria under the headings listed previously. From this, it was possible to identify the key factors which make such projects successful blue spaces.

The concept of the project review

A systematically undertaken review of evidence from architectural/landscape architectural projects is an unusual but not unheard-of activity (from a scientific perspective). Post-occupancy evaluations are becoming common in architecture and also in landscape architecture, but these are usually of single sites or buildings, not a large selection of projects. While in those scientific disciplines which publish results in peer-reviewed academic papers (e.g. the natural or social sciences), it is relatively easy to carry out a review since the evidence has been quality controlled (through peer-review) during the publication process, what is an equivalent system for reviewing landscape architecture projects? In the art and design disciplines, it is the role of criticism to perform the equivalent of peer review, and in architecture and landscape architecture, this is also the case. In addition, there are design competitions where juries of experts evaluate entries in a completely anonymous way, and, finally, there are annual award schemes where the best projects are also assessed by juries of peers. This is the approach we used in our search for selecting the projects for inclusion and assessment. The detailed method is described in the next sections.

There have been several recent publications – books mainly – which have examined and reviewed certain specific types of blue spaces from different perspectives (e.g. Prominski et al., 2012; Rottle and Yocom, 2011; Macdonald, 2013; Smith and Ferrari, 2012) but none through a health and well-being lens, although they also contain some excellent examples which were, in some cases, included in the review. This is the first attempt at a wider and more comprehensive review of an extensive range of project types.

Project search method

The search included an initial trawl through the internet for projects from anywhere in the world constructed in the last ten or so years. Many projects are presented by the designer's websites and could be found there (in the range of languages noted previously). Professional (and some scientific) landscape architecture journals were searched online or in libraries for projects which featured waterside redevelopments. These included those of the professional organisations in the United States, United Kingdom, Canada, Australia, China and Denmark, as well as several specialised journals published for the profession and which feature critical reviews of projects from around the world. In addition, we consulted some recently published books (in English and German) where some projects were also critically reviewed. Table 10.1 shows the main journals, books and websites and their publishers, country of origin and focus of coverage used for identifying the projects.

An initial search of the internet using terms such as "waterfront regeneration projects", "urban wetland parks" and "river restoration projects" led to the identification of almost 400 potential projects, but further examination in the light of the criteria listed previously allowed us to reduce that number to 180. This number became the database of evidence for the review and all the projects are now available as BlueProfiles in the database at <https://bluehealth.tools/>.

Table 10.1 **Selected professional magazines and websites used for sourcing projects to be reviewed**

<i>Magazine</i>	<i>Country</i>	<i>Publishers</i>
<i>Landscape Architecture Magazine, ASLA</i>	United States	American Society of Landscape Architects; www.zinio.com . https://landscapearchitecturemagazine.org/
<i>Landscape Architecture Frontier</i>	China	Higher Education Press and Peking University http://journal.hep.com.cn/laf/EN/column/column13253.shtml
<i>The International Review of Landscape Architecture and Urbanism (TOPOS)</i>	Germany	Georg D.W. Callwey GmbH & Co. KG Streitfeldstrasse, Munich www.toposmagazine.com/
<i>Landskab</i>	Denmark	ARKITEKTENS FORLAG http://arkfo.dk/en/shop/product/landskab-denmark
<i>Landscape – The Journal of the Landscape Institute</i>	United Kingdom	Landscape Institute www.landscapethejournal.org/
<i>Landscape Architecture Australia</i>	Australia	Australian Institute of Architects, Australian Garden History Society, Planning Institute Australia https://architecturemedia.com/magazines/landscape-architecture-australia/ ; http://landscapeaustralia.com/ ; http://landscapeaustralia.com/reviews/
<i>Landscapes/Paysages – Landscape Architecture in Canada</i>	Canada	Naylor www.csla-aapc.ca/landscapes-paysages-0
<i>Urban Design</i>	United Kingdom	Urban Design Group, United Kingdom www.udg.org.uk/publications/journal
<i>World Landscape Architecture Magazine</i>	China	http://worldlandscapearchitect.com/
Selected websites		
Landezine	Slovenia	www.landezine.com
ArchDaily	Worldwide	www.archdaily.com/
Project for Public Spaces	United States	www.pps.org/
PLANETIZEN	United States	www.planetizen.com/toppublicspaces
Coastal and Waterfront Smart Growth	United States	http://coastalsmartgrowth.noaa.gov/casestudies.html
Waterfront Centre	United States	www.waterfrontcenter.org/
Landscape Performance Series	United States	https://landscapeperformance.org/
ASLA Honours and Awards	United States	www.asla.org/HonorsAwards.aspx
GreenFlag Awards	United Kingdom	www.greenflagaward.org.uk/

Method of critical review

Once a database of projects had been compiled, a detailed questionnaire was developed for the critical assessment of each project based on the six factors and five to seven aspects of each factor listed previously. We then developed a scoring system using a 1–5 scale, where 1 was where the attribute was the least present/lowest quality and 5 the most present/highest quality. A score of 0 meant that the attribute could not be assessed (due to inadequate information)

or was not applicable to the project under review. The results for each project under each of the categories were then summarised as a set of spidergrams for each factor, which are presented in detail for each site in the BlueProfiles website.

Conclusions from the initial analysis of the main characteristics

From the analysis of the examples, we could see a clear pattern emerging:

- Waterfront re-development or revitalisation projects are currently a very important part of urban regeneration and include a wide range of types which all have a positive impact on urban life at a range of scales.
- Planners and policy makers have clearly recognised that, whether the motivations are economic regeneration, flood management, water quality improvement, cultural enhancement, provision of recreation and access or restoration of nature (and usually most of these go together in some way), blue space is a critical feature of many urban areas. The de-industrialisation of many cities, the movement of ports to larger sites for container ships, the need to clean up pollution and the recognition that flooding risks and urban microclimate issues are increasingly important are all factors driving these changes.
- The importance given to public access, the creation of waterfront parks, offering visual and physical access to water and enhancing the quality of the landscape by investing in good design has led to the vast majority of projects being given a major role in enhancing quality of life, neighbourhood liveability and the attractiveness of inner urban areas as places to live.
- The brand identity of many cities has been significantly strengthened by the design of iconic waterfront redevelopments including public spaces, and this attracts inward investment and builds tourism. It also means that people want to come to live and work in such environments, and this choice is in part due to the presence of water and the opportunities for engaging with it.
- The climatic zone has no specific impact on whether water is attractive to people – it just affects how much people can use it directly for swimming and recreation and what the degree of seasonality offers for different activities. Even frozen water bodies are attractive for skiing and ice fishing in winter.
- Small-scale interventions can have as big an impact on people as large projects, and if they are all that is possible, then they should take place. Water features which promote playful behaviour in children and adults seem especially attractive, especially for hot weather.

Conclusions of the overview assessment

We also concluded that waterfront developments and water-accessibility projects form a major part of landscape architecture and urban design practice at the moment, and this has been a rising trend since the initial projects were started following de-industrialisation and new port technologies in the 1980s onwards (see Chapter 14), as well as the need to introduce better means of dealing with storm water and other factors (see Chapter 13). Planners and designers are clearly aware of the need to make such places attractive, iconic, accessible, safe and easy to maintain and to offer as close a contact to water as is possible given practical and other constraints. All the sites we reviewed aimed to increase the potential for physical, mental and social health and well-being improvement by offering opportunities for physical activity, for socialising, relaxing, getting closer to nature, soaking up the sun and de-stressing. It is also clear from the evidence that the vast majority of the sites are extremely well used wherever they are located, and that in dense cities with little green space, blue space offers an additional or substitute environment.

Selection of projects for inclusion in Part Three

The following chapters in Part Three focus on a specially selected number of specific types of blue spaces as follows:

- Urban river revitalisation (Chapter 11)
- Seafronts, beaches, lakesides and promenades (Chapter 12)
- Urban wetlands and storm water management (Chapter 13)
- Docklands and ports (Chapter 14)
- Small-scale projects (Chapter 15)

The selection of a limited number of projects to encapsulate the best approaches for planning and design in each category was carried out by applying a number of criteria. As only some 10–12 or so could be included per chapter, it was necessary to try to include a range of size, location, character and different design approaches. We also wanted to present projects with really inspirational and uniquely site-specific characteristics as opposed to very worthy but rather generic solutions.

Project selection using analytical drawing

As well as the ratings used for each project as described and summarised previously, all case study projects from the BlueProfile database were analysed qualitatively using a method of analytical sketching. The essential characteristics of each project were drawn out by hand in order to express the main distinct elements or structures, such as if the project site is divided into different zones, if there are specific landmarks incorporated into it or what the main design elements are, as well as to capture the *genius loci*. We also focused on the different type of access to water within each project in order to select those with the most distinctive or innovative approaches. While we could of course look at the explanations and descriptions provided by the designers or from the professional review literature or websites, looking at sites with a fresh eye so as to see what stands out before looking at such information is a great way of testing if the design intentions have been achieved. It is another means of critique.

Compared with photographs, which just record everything without discrimination, the analytical sketching/drawing method enables us to be selective when looking at a specific place. Sketching also uses a visual language to support the numerical rating assessment and the verbal description and helps to provide a more rounded, richer appreciation of each project as well as uncovering or revealing aspects which are not captured by the numerical ratings. Figure 10.1 shows part of the complete set of drawing laid out on a table for the team to look at and for grouping into categories.

After the sketching phase, we looked at the designers' descriptions of the projects as well as factual information such as:

- Location/context: such as urban core, inner urban area, suburban area/urban fringe, urban periphery, rural hinterland/nature
- Size: such as single object, small site, medium site, large site
- Form: such as multiple interventions, linear, concentrated site
- Design function: such as natural site, urban forest/ruderal plants, ornamental park/plaza, temporary/low cost design
- Also, the subtype of the water body was defined

The main categories were chosen based on the question as to why the particular design strategy was chosen; sub-categories were identified based on the question as to how the design strategy was implemented concerning the relation to water in both questions. Figure 10.1a shows the layout of the sketched projects used for the selection,

Figure 10.1a and b
a) Many of the sketches of the projects laid out on a table for assessment and classification; b) the typology used in the evaluation and selection process
(Source: a) Jekaterina Balicka; b) Jekaterina Balicka and Anna Wilczynska)

and Figure 10.1b shows the typology used to make the final selection. The projects presented in Chapters 11–15 thus represent one or a combination of these types.

Each project was also reviewed, and a summary of the findings in relation to a range of categories (also used and presented as spidergrams with scoring in the BlueProfiles website but not the chapters) is shown in Table 10.2.

Thus, combining the systematic review with analytical sketching and extracting key aspects, we could reflect on both the structural and functional aspect as well as how each project works with the identity of the place in a unique and specific way. The entire team reviewed and discussed the final selection. Please note that while all the projects are considered outstanding examples, for a number of reasons, often practical or functional, not every project can fulfil every criterion to its maximum potential. Thus, some factors may be rated lower for some projects.

Table 10.2 The factors used for site assessment and the interpretation of the criteria used in the BlueProfiles and in Chapters 11–15

<i>Theme</i>	<i>Factor</i>	<i>Interpretation of the criteria</i>
Accessibility	Site visibility	How easy is it to see the site from outside – is it hidden, or can it be seen and does it provide visual access to the water?
	Pedestrian access	How easy is it to gain access to the site on foot (perhaps from public transport)?
	Bicycle access	How easy is it to gain access to the site by bicycle (including connections to a wider network of bicycle paths)?
	Car access	Is car access necessary, such as due to a remoter location, and if so, it is well provided?
	Car parking	If car parking is necessary, is it logically located, and does it provide enough spaces?
	Inclusive access	Is it possible for people with various disabilities to reach the site (e.g. surfaces, street crossings, absence of steps, etc.)?
Design quality	Design quality	An overall judgement on the entire project (sense of unity, organisation of spaces, fit to the context, uniqueness and originality)
	On-site circulation	How well the pedestrian and bicycle circulation works within the site (more important for larger sites than smaller ones, e.g. those in Chapter 15)
	Views and landmarks	The degree to which unique or special views or iconic landmarks have been incorporated into the overall site design
	Inclusion of cultural heritage values	The extent to which, where there are cultural heritage remains or values present on the site, these have been incorporated into the design
	Site furniture fitting the context	The design and appropriateness of materials used in the site furniture
	Cost-effective maintenance	The degree to which the cost effectiveness of maintenance of the site has been incorporated into the design (e.g. the use of materials, technology associated with water features or art installations)
Facilities	Range of facilities	The general breadth of the range of facilities provided which are appropriate for the setting and its size
	Accessibility of facilities	How accessible are all the facilities provided for people with a range of disabilities?
	Amount of seating	How much seating is available – not only formal seats or benches but also other elements which provide sitting affordances?
	Quality of nature	Depending on the character of the site, how well have natural elements been sensitively included in the design?
	Degree of shelter	Where the site is exposed and, in a windy location, how well sheltered it is
	Degree of shade	Where the site is exposed to strong sun (depending on climate and season), how well shaded it is
	Presence of lighting	Depending on the location and use of the site as well as seasonal aspects, the quality and functionality of lighting provided on the site and its impact on the surroundings

(Continued)

<i>Theme</i>	<i>Factor</i>	<i>Interpretation of the criteria</i>
Health and well-being	Genius loci	The special qualities of the site, landscape and design, which give a unique and rich aesthetic experience
	Sense of being away	The degree to which, depending on site location and limitations, it is possible to feel away from the normal environment
	Contact with nature	The degree to which it is possible to have direct contact with some aspects of nature on land and on or in water
	Sensory stimulation	The richness of different possibilities for all the senses to be stimulated in a harmonious way
	Contemplation	The potential offered by the site for people to be alone and to be able to sit and think
	Safety and security	The physical safety of the site – especially with regard to water edges – and feeling of security against crime that the design presents (good maintenance, lack of damage, etc.)
Water connections	Land-water connectivity	The degree to which there is direct contact and connection between the terrestrial and aquatic part of the site
	Water visibility	The extent to which water is visible or hidden from all or part of the site
	Access from and to water	Depending on the context and practical possibilities, the degree to which opportunities for providing access to the site from the water have been used
	Water safety equipment	Where appropriate and necessary, how well provided the site is with water safety facilities and equipment (e.g. lifeguards, life-rings, etc.)
Physical activities	Formal sport activities	Depending on the size and context of the site, the degree of provision of fields and pitches for formal sports on land
	Informal sports	The degree to which the site design supports a range of informal games and sports, depending on the size and types of surfaces used
	Water sports	Depending on the nature of the land-water interface and the risk and safety aspects specific to the site, the degree to which water activities and sports are supported
	Children's play	The degree to which children's play – on land or in the water, using formal equipment or just the site affordances – is supported
	Activity zoning	The extent to which, depending on the size of the site and its range of physical activities supported, these are zoned for maximum effectiveness

We leave readers to reflect themselves on the final choices we made and the assessments we made in the next five chapters, together with the more specific lessons we draw from the different thematic foci.

References

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