

PEOPLE FLOWS VERSUS PUBLIC SPACES – LONDON WATERLOO STATION

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Summary: *As a central London railway terminus and London Underground station complex, Waterloo is Britain's busiest railway station by passenger usage. It is also the 15th busiest passenger terminal in Europe and the 91st busiest railway station in the world. In order to satisfy growing needs for transportation the complex was facing tremendous expansions throughout its long history, but was at the same time largely constrained by the surrounding urban fabric. Two opposing development demands in the midst of bustling London resulted with a rather chaotic urban situation, with the patchwork of station facilities usurping and affecting public urban space. This study includes historical analysis of the complex, spatial analysis of its surrounding urban area, as well as access and flow analysis. The main objective is determination and evaluation of effects that intensified people flow can have on urban infrastructure and public spaces.*

Keywords: *London, Waterloo Station, intensified flows, erosion of public spaces*

1. INTRODUCTION

Based on the growing concerns regarding the effects of globalisation on physical urban spaces, this paper deals with the following two phenomena. Firstly, transportation facilities play an increasingly important role as they provide basic predisposition for cities to operate as nodes in the global urban network. Reflecting on sociologist Saskia Sassen [9] some cities acquired certain global importance, due to their inclusion into the transnational networks of flows of people, goods, ideas, practices and performances. Also Hall's concept of world cities [4] includes hubs of international flows, transshipment centres of importance for own and neighbouring countries, etc. Global cities could thus be considered as important *nodes* in the established *global network* of power as a consequence of economic activities getting decentralized and network oriented [7]. Secondly, increasing flows along with technological advancements might directly influence transformation of forms and roles of public urban spaces. Many authors acknowledged immense impact of technological advancements in development of cities [3, 8, 11]. Both place hypermobility and rising global communications deeply changed understandings of the time, space, way of life, feeling of community and even personal perception. Also knowledge, information and fun are increasingly perceived rather through mass media than as a result of personal experience, which imposed a new kind of

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reality. The involvement of new technologies indeed contributed to the anticipated speed of people and information flows, however, particular emphasis on suppression of distance directly resulted with neutralisation of place [10]. It is not surprising, therefore, that *public spaces* within modern cities suffered some damage that was often described as their *erosion*.

The two above-mentioned phenomena were observed on the case study of the British busiest train station in the capital London. The Waterloo station experienced tremendous expansions throughout its history to satisfy the growing transportation needs, along with constrains and conflicts with surrounding urban fabric. Two opposing development demands in the midst of bustling city resulted with a rather chaotic urban situation, with station facilities affecting both functions and characters of surrounding urban fabric. As such, this case serves as convenient to examine the effects of extreme flows on functions and liveability of public spaces in contemporary cities.

2. LONDON WATERLOO STATION ANALYSIS

2.1. Historical development

Relatively complicated spatial situation that characterizes Waterloo station complex and its surroundings is primarily a consequence of its development dynamics. As Waterloo stands for one of Britain's busiest stations in the course of a century, the structures that made up current complex are the product of many interventions in order to cope with the progressive increases in passenger traffic since the last decade of nineteenth century. In fact, according to Chivers and Wood, Waterloo station has probably never intended to become the great transportation hub as it did [1]. Its location was determined by some circumstances that deprived the main line of the railway company to reach the city core. After the connection with the City of London got later established through underground railway, the hoped-for idea of aboveground extension was abandoned. This decision, however, enabled then-temporary Waterloo terminus to become the focal point of all railway operations of the company. As a response to the growing needs, the station was regularly extended every five to ten years through generally sporadic and random interventions, without an accurate way of predicting or planning the traffic growth. As a result, by the end of nineteenth century Waterloo was a scattered complex of several independently functioning station buildings, which according to Jerome J. [5] often made confusion for travellers. Such a state lasted until early twentieth century, when a successive reconstruction finally unravelled the messy legacy of the former extensions. After the slum clearance, extensive groundwork and sporadic construction, the successor station building was officially inaugurated in 1922 [2], baring until today some spatial features of its predecessor.

2. Location and Urban Context

London Waterloo station complex is located near the South Bank of the River Thames, in London Borough of Lambeth, and is surrounded by the network of busy urban roads: Baylis Road on the East, Waterloo Road on the North, York Road on the West, and

Westminster Bridge Road on the South. The site is connected with the city on the opposite riverside through two separate road and railway bridges. Regarding the access to the station, the structure is exclusively served by the Station Approach Road for motorized traffic, with taxi, bus, and bicycle stations. However, this partially elevated access road runs along eastern and northern edges of the complex, making the station physically detached from the surrounding urban fabric. Additional detachment caused dense railway lines on the southern side, which required several underground connecting streets and passages. Especially interesting is the access to the main entrance of the station, whose dominating image consists of a system of archways, tunnel entrances, and narrow access roads, in accordance with the prevailing functional character of the complex.

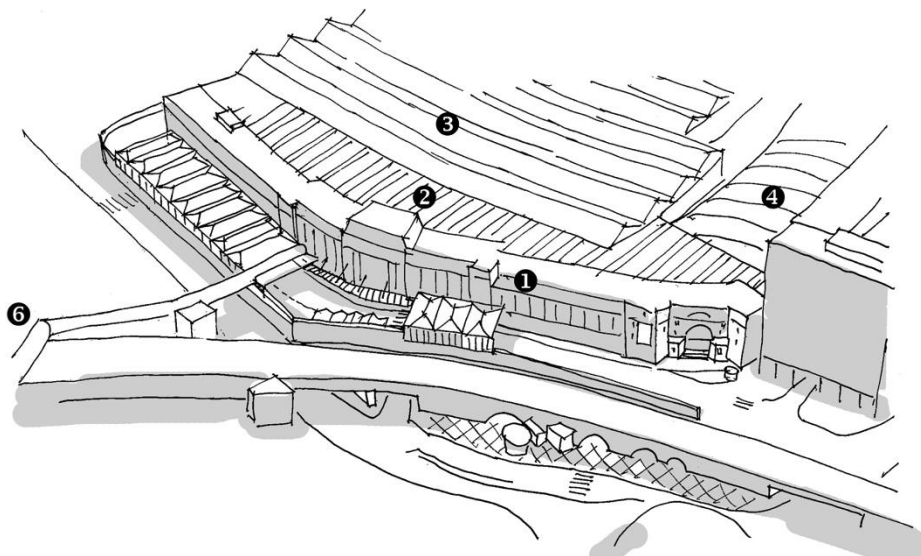
The surrounding urban fabric is mostly characterized by high construction density, domination of motorized traffic, functionality at the expense of quality, and above all by many conflicting situations. Strong physical detachment and vertical segregation to provide optimal access and operation of the transportation hub resulted with the lack of quality urban public spaces – especially of a corresponding square that is usually associated with objects of this type, size and importance. Instead, the main station building faces dense network of roads and elevated railways that didn't help preventing chaotic and congested urban situation. In sum, circulation set as an imperative disabled proper perception of the building, cancelled the possibility of establishing a quality public space and deprived any public gathering in its vicinity.

3. Architecture of the Station Complex

In terms of traffic infrastructure, the major transport interchange at Waterloo comprises of London Waterloo station, Waterloo East station, Underground station, and several corresponding bus stops. However, in terms of architecture of the complex, there are several distinct components to be recognized (figure 1).

The main station building (1) in representative Imperial Baroque style is designed by J. R. Scott, then chief assistant architect of the railway company. This structure provides entrances to the station concourse on lower and ground level, roofed stops for cars, taxis and buses, as well as access to a high-level walkway leading over the retail balcony to the Waterloo East Station. In addition, it houses corresponding station services and few retail and catering spaces on the ground and balcony level. The main pedestrian entrance Victory Arch represents company's war memorial, and although highly monumental, it doesn't correspond to an appropriate open urban space.

The main station concourse (2) is a circulating space covered with a giant industrial 'shed', also used as a hub for supporting functions (figure 2). The ground floor of the concourse is practically elevated from the street level due to the raised servicing Station Approach Road. As a consequence of a missing square, the main station concourse took over the major public role, being the only larger (semi)public space in the urban vicinity. Recently added balcony, which runs along almost the whole width of the building at the first-floor level (figure 2, left) took over much of the retail and catering outlets from the concourse and thus provided maximal circulation space on the ground level. However, besides several small and "fast" cafés and restaurants on the balcony, there are not many other facilities to provide longer retention for visitors and passengers.



*Figure 1: The main components of London Waterloo station complex:
1-Main station building, 2-main station concourse, 3-platforms, 4-former Waterloo International station, 6-high-level walkway to Waterloo East station (Author)*

Roofed platforms (3) are constructed as a large glass-covered structure. They have a single function, and are accessible exclusively for passengers traveling outside of the city with valid tickets to get access through the gates.

Former Waterloo International station (4) is the most recently added element of the station complex. The five platforms for London terminus of the Eurostar international rail service lean on the western side of the mainline station. Huge curved shape defined by the line of the tracks is a design in a manner of technical expressivism by the ‘star’-architectural firm Grimshaw Architects [12]. Nouvel [6] described the newest addition as “the first monument of a new era in rail transport” and compared the functions of the Waterloo station with an airport. However, the Waterloo International Terminus was closed since 2007, mostly due to its effect on immense traffic increase, affecting the whole complex.

Underground station (5) is accessible by escalators and elevators from the ground level over several entrances from the main station concourse, as well as from the lower entrance level. It is intended for the exclusive use of passengers accessing with the ticket. Underground station lacks larger spaces, and is constructed mostly as a system of underground corridors that are directly leading to train platforms.

Waterloo East Station (6). Although nowadays branded and managed separately, this isolated station is one of the relicts from the past when the whole complex was developed sporadically, as a result of space deficiency.



Figure 2: The main station concourse with the balcony (Author)

3. ACCESS AND FLOW ANALYSIS

Empirical analysis of the access and flows in London Waterloo station (figure 3) reveals a highly complex situation. Firstly, relatively chaotic urban environment reflects on the current flow situation in immediate environment of the station, characterized by complex network of urban roads and elevated tracks. The motorized traffic occurs on the street level, in tunnels, as well as on the elevated level of servicing Station Approach Road. This road is planned for the easy access of buses, taxis, private cars and bicycles. Such a concept of a road exclusively serving the station itself reveals a principle of segregated traffic according to the final destination – a principle which could be determined in interior movement pattern as well. Secondly, pedestrian access to the main station concourse includes several entrances directly from the surrounding streets, on the street or ground level, several entrances from the underground station, access over laterally positioned pedestrian walkway on the ground level, as well as over the balcony from the Waterloo East station. Higher concentration of people is to be found in the entrances to the main concourse, underground station and elevated pedestrian walkways, while it becomes disperse and chaotic on the main concourse itself (figure 3). Thirdly, although it resembles an indoor square, this centrally positioned space, however, doesn't provide possibilities for longer retention, which is even noticeable on the general lack of benches or similar furniture. The main role of the station concourse is to provide central circulation and thus

further segregation of passengers to and from the entrances/exits to the streets, train platforms or underground station. Finally, in contrast to disperse and chaotic movement occurring on the main concourse, the balcony is dominated by axial movement pattern, characterised by lower density and speed, as well as by some possibilities for retention, but with extremely limited capacities.



Figure 3. Access and flow of people on London Waterloo station (Y. Li and author)

4. DISCUSSION AND CONCLUSIONS

Spatial analysis of London Waterloo station and its surrounding urban environment primarily reveals strong legacy of the past development directives, characterized by an absence of any systematic predictions of traffic growth rates. In addition, the whole station complex evolved without much accordance with development of its highly dense surrounding urban fabric. Such circumstances finally produced a chaotic urban situation, which largely applies to the traffic flows. The station is characterized by a complex entrance situation, extending to its several levels. Surrounding streets are largely subordinated to motorized traffic, with narrow and exposed pedestrian paths. There is also an unusual lack of associated outdoor area or a square, which made the main station concourse the only larger 'urban' space in the near vicinity. This interior space is, however, far from being a genuine public urban space, due to its specific function and

extreme flows, which imposed rules of its own. First of all, high frequency of the station made the main concourse fully subordinated to passenger's circulation, with little possibilities for retention, public gathering, or any alternative use of this space. Furthermore, segregations according to movement destinations and restricted access zones, such as entrances to underground and aboveground platforms at the level of the concourse confirm that efficient flow management is the priority in operation of this public space. As a result, both London Waterloo station complex and its urban surroundings are strongly subordinated to the frequency of passenger flows, due to its primary function of a major transportation hub.

Linking the case study outcomes with the main research foci finally confirm the prevailing importance of transportation facilities in urban contexts. The prerequisite for global cities to operate as nodes in the global urban network imposed expanding demand for corresponding facilities, which as a result affected both quality and function of surrounding urban environments. Morphing of urban public spaces is in this case a direct consequence of the priority for the biggest possible expansion of transportation facilities, along with uncontrolled increases of flow rates. The final result implies reduction to circulation with little or no relevance to the genuine role of public spaces – such as retention, exchange or communication between people. Outcomes of this short study finally highlight a paradoxical situation in which urban public spaces might face a serious erosion, even in spite of rising number of its users.

REFERENCES

- [1] Chives and Wood: *Waterloo Station*, circa **1900**
- [2] Faulkner and Williams: *The LSWR in the Twentieth Century*, David & Charles, **1988**
- [3] Friedmann, J.: World City Hypothesis (1986). World Cities in a World System, Knox, P. L. & Taylor, P. J. [eds.], Cambridge University Press, Cambridge, pp. 317-331, **1995**
- [4] Hahn, B. & Zwingenberger, M. [eds.]: *Global Cities – Metropolitan Cultures. A Transatlantic Perspective*. Universitätsverlag Winter GmbH, Heidelberg, **2011**
- [5] Jerome, Jerome K.: *Three Men in a Boat*, London, **1889**
- [6] Nouvel, J.: *Architecture for the Future*, Pierre Terrail, Paris, **1996**
- [7] Özden, E. Ö., Seckin, E. & Kozaman, S.: The Effects of Global Dynamics to Urban Hierarchy: Compromising Cities Instead of Competitive Cities, ERSA conference paper, European Regional Science Association, **2011**
- [8] Robinson, J.: *Ordinary City. Between Modernity and Development*, Routledge, London, **2006**
- [9] Sassen, S., *The Global City New York, London, Tokyo*, Princeton University Press, New Jersey, **1991**
- [10] Sassen, S.: The Global City: Strategic Site/New frontier, *American Studies*, Vol. 41, No. 2-3 (Summer/Fall 2000), pp. 79-95, **2000**
- [11] Short, J. R.: *Global Metropolitan. Globalizing Cities in a Capitalist World*, Routledge, London, **2004**
- [12] Thomas, Derek: *Architecture and the Urban Environment – a Vision for the New Age*, Architectural Press, Oxford, **2002**

ЈАВНИ ПРОСТОРИ СА ПОВЕЋАНИМ ПРОТОКОМ ЉУДИ – СТАНИЦА LONDON WATERLOO

Резиме: Централна железничка и метро станица у Лондону *Waterloo* је најпрометнија железничка станица у Великој Британији. Уједно је и 15. најпрометнији путнички терминал у Европи и 91. најпрометнија железничка станица у свету. Да би се задовољиле растуће потребе за превозом, станични комплекс је претрпео многобројна проширења и преправке током своје дуге историје, али је истовремено у великој мери био ограничен околним урбаним ткивом. Два супротстављена развојна захтева резултирала су хаотичном урбаном ситуацијом, са станичним функцијама које узурпирају и утичу на квалитет јавног градског простора. Ова кратка студија обухвата историјску анализу комплекса, просторну анализу околног урбаног подручја, као и анализу приступа и протока људи, са циљем процене степена утицаја повећаног протока људи на градску инфраструктуру и јавне просторе.

Кључне речи: Лондон, Станица *Waterloo*, повећани проток људи, ерозија јавних простора