CRUISE PASSENGER TERMINALS, SPATIAL PLANNING AND
REGENERATION: THE CASES OF AMSTERDAM AND ROTTERDAM

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Abstract

Recent growth in the cruise tourism industry has been accompanied by the development of new cruise passenger terminals in many port cities, in part to assist aims for spatial planning and urban regeneration. Such terminals can bring specific benefits but also problems, though application of spatial planning and related policy can help to maximise benefits and ameliorate or mitigate problems. The cases of cruise terminal developments in Amsterdam and Rotterdam in the Netherlands are illustrative in this context, and offer lessons for spatial planning and regeneration involving cruise tourism elsewhere.

1. Introduction: cruise tourism and its effects on host cities

A cruise may be defined as ‘a trip by sea in a liner for pleasure, usually calling at a number of ports’ (Dowling, 2006, p. 3), and the main areas globally for cruise tourism are the Caribbean, Europe (particularly the Mediterranean) and Alaska. The importance of the cruise tourism sector is indicated by its sustained long-term growth; indeed, there has been an average annual growth of 8.2% since 1980 as compared to the equivalent figure of 4.1% for tourism in general (Gibson, 2008). Growth was particularly significant in the 1990s, and the number of cruise ship berths almost doubled (from 68,474 to 127,943) between 1988 and 1998, largely due to the exploitation of a mass market consumer base (Miles and Miles, 2004). In the USA, the largest global cruise market in terms of number of passengers,
there has been a 2,100% growth in passenger numbers since 1970, and the cruise industry continues to be the fastest-growing segment of the travel industry (CLIA, 2009a). Furthermore, worldwide passenger numbers have been forecast to grow from 15.1 million in 2006 to 25 million in 2015 (Peisley, 2006).

Cruise tourism may be classified into three broad types, with implications for the infrastructure needs of, and potential effects on, ‘host’ cities (also referred to as ‘cruise ports’). First, ‘destination cruises’ involve a ship leaving from a ‘home port’ (from which passengers start and/or end their journey) relatively close to its itinerary area, visiting various ‘destination ports’ or ‘ports of call’ and returning to the home port to end each cruise. Second, ‘repositioning cruises’ involve a cruise ship starting a cruise at one home port (for instance as this moves into its winter period) and travelling to another port (termed a ‘turnaround port’) where passengers leave the ship to return home, usually by air, and are replaced by new passengers. Third, ‘world cruises’ involve a ship embarking on a round-the-world journey, starting and finishing at the same home port.

The effects of cruise tourism on specific cities will depend in part on their role in this respect. For instance, if a city acts as a home port or turnaround port, many passengers may begin or end their cruise with a short-stay visit in the city, bringing tourism income (interview, executive director Cruise Port Rotterdam, June 2010). Alternatively, where a city acts as a destination port at which cruise passengers may spend only some time off the ship as day visitors, there may be more limited benefits. Cities aspiring to act as home ports and turnaround ports in particular, or destination ports seeking to enhance their cruise tourism function,
may require some form of passenger terminal development to facilitate the embarkation and disembarkation of passengers and (where appropriate) luggage. Moreover, cruise ports may often be seen to undergo a ‘destination life-cycle’, starting with introductory and growth phases (when terminal development is likely to be necessary, though the cruise function is likely to be restricted to that of a destination port), and possibly leading to a maturity phase (when some cities will expand to a ‘turnaround’ or even a ‘home’ function) (Doucet, 2009).

The central theme of this paper is cruise passenger terminal development as part of wider urban regeneration projects, in this case waterfront regeneration. It focuses on the potential of terminal developments to deliver benefits which assist with the achievement of broader spatial planning and regeneration aims, and on the role of relevant policy in shaping terminal developments in order to maximise associated benefits and minimise potential problems. To do this, it uses the examples of cruise terminal developments in Amsterdam and Rotterdam, set in the context of broader spatial policies and regeneration projects.

The benefits associated with terminal development are set within the context of a world in which place competition between cities has become ever more fierce (Waitt, 1999; Tallon, 2010). Local policy makers and planners commonly see terminals as assisting with the strengthening of cities’ competitiveness in terms of attracting people (residents, employees and visitors), money (investment and visitor spending) and jobs. In fact, however, cruise terminal development may include broader benefits within the three dimensions that make up the concept of sustainable urban development according to virtually all definitions of this
concept: not only economic competitiveness, but also environmental quality and social well-being (Tukker, 2009; Healey, 2010; Shen et al., 2011). Moreover, it can assist in maximising a diverse array of durable benefits linked to cruise tourism at a variety of scales ranging from the immediate locality to the city region (McCarthy, 2003b). In considering such benefits of cruise terminal development in specific cases, and the linkage to relevant policy, this article adds significantly to the literature on spatial planning and urban regeneration, against the background of sustainable urban development.

The article is structured as follows. First, the implications of cruise passenger terminal developments are explored, in terms of potential positive and negative effects on cruise ports, together with the potential role of spatial planning and related policy in maximising net benefits. Second, the national policy context for spatial planning and regeneration in the Netherlands is explained, in view of its importance for development in Amsterdam and Rotterdam. Third, the cases of cruise terminal developments in Amsterdam and Rotterdam are considered in the context of wider urban regeneration projects and linkage to relevant policy. Fourth, these cases are evaluated using a conceptual framework for analysis applying sustainable urban design and regeneration principles, so as to identify and analyse the extent to which specific net benefits have been or might be maximised. Fifth, the demonstrated role of spatial planning and related policy in helping to achieve such net benefits in the cases considered is summarised. Finally, broad conclusions are suggested with implications for cruise terminal development elsewhere.
2. The effects of cruise passenger terminals and role of spatial planning and regeneration policy

An important implication of the global growth in cruise tourism (and the increasing size and capacity of cruise ships), is the need for more (and larger) cruise passenger terminals, particularly where cities aspire to become home ports or turnaround ports, which enjoy relatively high local income multipliers in relation to cruise tourism revenue. However, cities new to cruise tourism are likely to aim initially for the lesser role of destination ports, particularly where they lack relevant infrastructure and facilities (Robbins, 2006). Nevertheless, cruise terminal development may be difficult to finance from associated income, particularly for potential destination ports, since port charges to cruise operators often cannot cover such developments, and this problem is exacerbated by the trend for larger terminals. Consequently, terminal developments increasingly involve multiple uses including for instance exhibition halls, IMAX theatres, museums and retail and entertainment uses, and the complexity of such schemes means that they are often funded and developed by public/private partnership mechanisms.

In addition to such multiple uses, the development of cruise passenger terminals offers a range of other potential benefits for different stakeholders in cruise ports (McCarthy, 1995; 1996; 1998a; 2003a; 2003b). Moreover, Noble (1994) indicates how tourism uses have become increasingly important as part of urban regeneration schemes, linked to the need for many cities to replace shipping and port functions which have declined as a result of technological factors leading to
the movement of port uses downstream. Such cities (as well as some nation states [Dwyer and Forsyth, 1996]) have therefore encouraged tourism as part of wider spatial planning and regeneration objectives (Bruttomesso, 2001; Kotval and Mullin, 2001; McCarthy, 2003a). The overall spread of benefits from cruise terminal developments may be summarised as follows. Economic benefits include: revenue from ancillary uses within passenger terminals; increased visitor spending; job creation; city image enhancement; attraction of new service industries; extension of the tourist ‘season’; and repeat visits resulting from ‘sampling’ of destination areas (CLIA, 2009b; Figueira de Sousa, 2001; Lloyd and Peel, 2008; McCarthy, 2003). Environmental benefits include: re-use of ‘brownfield’ sites; intensivity of use, since cruise tourism activities use little space (Dinkla, 2009); preservation of historic heritage; use integration, particularly where there is a ‘master-planned’ approach; linkage of the waterfront to the city; more sustainable (higher) urban densities; and improved aesthetic amenity. Social benefits include: ‘planning gain’ such as increased access to the waterfront; enhanced local amenities (McCarthy, 2003b); and enhanced civic pride, particularly where large iconic cruise ships are attracted.

However, expected benefits of cruise tourism may not be realised, and it may even lead to costs or problems for cruise ports. In particular, income derived from cruise operators and visitors may be lower than estimated (Figueira de Sousa, 2001; Jaakson, 2008), particularly taking into account income leakage and social and environmental costs (Johnson, 2002). Moreover, the fees paid to cities by cruise operators may be minimal because of operators’ power to drop ports from their itineraries (Chin, 2008); furthermore, of course such fees are removed (and
any earlier investments in terminal development are devalued) if ports cease to be used (Seidl et al., 2006). In terms of visitor spending, the broadening range of facilities on board cruise ships means that cruise operators are increasingly competing with cruise ports for the consumption spending of tourists, and so may seek to maximise the time (and money) spent by passengers on-ship (Seidl et al., 2006). While some cruise itineraries increasingly involve opportunities for off-ship excursions (Ward, 2008), the economic benefits of these activities for host areas may not be significant, and may be concentrated on relatively few businesses (Dinkla, 2009). In addition, cruise tourism revenue is particularly vulnerable to fluctuating demand, linked for instance to changing perceptions of risk (Bianchini, 1993), related to cases of mishaps at sea (Jaakson, 2008) as well as publicity in relation to negative environmental impacts or nuisance arising from large numbers of cruise passengers visiting particular destinations (Dinkla, 2009). Development of cruise passenger terminals can also lead to the homogenisation of waterfront areas of destination cities, reducing their distinctiveness and therefore appeal to visitors.

The employment benefits of cruise tourism may also be limited, with jobs historically tending to be seasonal, low-wage and low-skilled, though it may be suggested that the reality is increasingly of high skills, relatively high incomes and more opportunities for advancement (Gibson, 2008). In addition, environmental problems may include congestion, where transport infrastructure is inadequate (Capocaccia, 2001), with particular implications for historic urban areas (Shaw, 2001); damage to natural habitats; and air and water pollution (Butt, 2007) – though cruise operators are increasingly adopting sustainable
environmental management systems to reduce waste (Dowling, 2006). Finally, social effects may include crime, anti-social behaviour and displacement of local communities (McCarthy, 2003b), and more generally cruise tourism can be seen to contribute to a ‘tourist bubble’ (Judd, 1999), by ‘creating affluent, consumption-oriented zones which do not cater to local needs, and also feel alien to the local environment’ (p. 160). As a result of these potential problems, Seidl et al (2006) suggest that investment in cruise passenger terminals may not necessarily represent a good use of public resources.

Application of spatial planning and related policy can assist in optimising the economic, environmental and social benefits of cruise terminal developments as part of broader projects as well as avoiding or mitigating problems arising from such developments. For instance, effective masterplanning or design can maximise the integration of uses (including the terminal itself) within the immediate area, as well as the functional and physical linkage of such uses to the surrounding area and wider city. It can also manage potential tensions or conflicts between the tourism function and other uses, for instance by promoting synergies arising from integrated mixed uses and, in the case of cruise terminals, shared uses (for example use of the terminal building for events). In addition, effective strategic planning can ensure optimum location of the terminal in view of spatial planning policy aims at the scale of the city or city region (such as for more intensive use of land implying a central location), and can help to ensure effective support from – and linkage to – wider infrastructure such as public transport (McCarthy, 2003a, 2003b).
However, it may be argued that spatial planning, including the planning of urban regeneration areas, is increasingly fragmented, and participation in planning processes is increasingly dispersed between different agencies and territorial scales. These trends are related to a growing diversity of dimensions in which the qualities of urban places are perceived, and an increasing variation and asymmetry in the coalitions of stakeholders with a legitimate interest in the quality of place, which shape policies and programmes. Hence Healey (2010, p. 58) observes that ‘the formal machinery of representative democracy has evolved, in the field of place governance, into a complex multilayering of political processes’. While local or regional government still plays a key role as coordinator of these processes, landowners, investors, developers and local residents’ organisations are also involved in both policy development and implementation, via for instance public-private partnership mechanisms. The significance of partnerships of stakeholders within urban regeneration at different scales is highlighted by other commentators such as Mackintosh (1992), Bailey \textit{et al} (1995), McCarthy (2007), Stouten (2010) and Healey (2010). Although the term ‘partnership’ has the connotations of peaceful, constructive, collaborative and communicative forms of place governance by a plurality of interests, the reality can also be one of a battleground of competing interests. What therefore seems to be the most effective overall approach for urban regeneration projects is the application of a comprehensive and integrated spatial planning and regeneration vision at local level, combined with a pragmatic, implementation-oriented programme, both of which are underpinned by a broader strategic framework for city-wide development which takes into account economic, environmental, social and physical aims.
The processes of policy application in relation to cruise passenger terminals in Amsterdam and Rotterdam have also been multi-actor and multi-level in nature. However, this article is not primarily focused on the complexity of processes of policy development and implementation. Nevertheless, some consideration of this complexity is helpful in understanding the role of relevant policy in shaping terminal developments in the cases discussed below. One feature of this complexity that is particularly appropriate to examine, because it affects the attractiveness of the two cities for cruise tourism and sets the context for cruise terminal development, is spatial planning and regeneration policy at the national level in the Netherlands. This is examined below.


Cruise terminal development is not an explicit objective of national spatial planning and urban or regeneration policy in the Netherlands. Nevertheless, the terminals in Amsterdam and Rotterdam are both part of nationally-originating urban regeneration initiatives – the Zuidelijke IJ-oever (Southern IJ Riverbank) in Amsterdam and the Kop van Zuid (Head of South) in Rotterdam – that date back to the 1980s (Bureau Stedelijke Planning and TU Delft, 2009). At that time, national spatial planning and related policy shifted from a traditional redistributive approach to a market-oriented approach focused on economic growth (Majoor, 2007), with ‘the urban environment as a major spearhead in national economic revitalization, vital to the competitive strength of the Dutch economy in a globalizing market’ (Mommaas, 1999, p. 178). Hence the 1988 Vierde Nota Ruimtelijke Ordening (Fourth Report on Physical Planning)
emphasised intensification of uses and concentration of development on brownfield sites such as former docklands (Ministry of Housing, Spatial Planning and the Environment, 1988). At this time, the national government also declared the intention to work more closely with the private sector in urban redevelopment, and consequently the Fourth Report introduced ‘Pilot Projects for PPP [Public-Private Partnership] in Urban Regeneration’ (Schuiling, 1996). These projects – five in total – were intended to focus public investment in infrastructure for urban regeneration to be implemented by a spatial planning- and design-led approach.

As a result of a change of national government and criticism of the Fourth Report, it was substituted in 1991 by the Fourth Report on Physical Planning Extra, generally known by its Dutch abbreviation VINEX (Ministry of Housing, Spatial Planning and the Environment, 1991). VINEX included criteria for selection of sites for a new urban regeneration programme, the national Key Projects initiative, which was aimed at addressing the economic and social decline of Dutch cities. Such decline had resulted from de-industrialisation and selective migration, a shift from nations to cities as the primary loci of territorial competition, and a continuing growth in motor traffic. To address these trends, the Key Projects were aimed at furthering the following: intensification and functional integration of land uses; provision of a broader range of services; development of competitive international milieus for business location; a shift from car-borne to public transport; and high-quality urban design (Bureau Stedelijke Planning and TU Delft, 2009). The five PPP projects from the Fourth Report were included in a total list of 11 Key Projects by 1995.
Ultimately, 8 of these 11 Key Projects were implemented. These included the Kop van Zuid, but not the Zuidelijke IJ-oovers, largely because the national government shifted its priorities for Amsterdam away from investment in the east-west public transport link (which formed part of the Zuidelijke IJ-oovers) to a metro line between the northern and southern banks of the river. Hence another Amsterdam Key Project from the list of 11 – Oostelijk Havengebied (Eastern Docklands), immediately east of Zuidelijke IJ-oovers – was implemented. However, in 1994, the Zuidelijke IJ-oovers was designated as a metropolitan project by the Amsterdam municipality, and subsequently implemented.

A key concept of VINEX was that of the ‘compact city’, which involves intensification of urban land uses and linking of employment and residential uses (De Roo, 2003; Stouten, 2010). While the compact city as a spatial concept evolved in the 1990s into that of the ‘complete city’, formalised in the Vijfde Nota Ruimtelijke Ordening (Fifth Report on Physical Planning; Ministry of Housing, Spatial Planning and the Environment, 2000), this concept retained aims for use intensivity, urban reconcentration and functionally integrated land uses. Hence developments such as cruise passenger terminals were considered appropriate in central areas for integration within a broader array of uses such as housing, offices and retail.

The national policy context of the Netherlands would therefore seem to have played an indirect but significant role in encouraging and shaping cruise passenger terminal projects in Amsterdam and Rotterdam, since these became
part of urban regeneration projects which originated from national policy initiatives.

This article now turns to consider the impacts (actual and potential) of cruise tourism development in the cases of Amsterdam and Rotterdam, as well as their linkage to relevant policy. These cases have sufficient similarities to allow comparison, since both are located in the Netherlands (and are therefore subject to the same national policy context), both involve relatively new cruise passenger terminal developments, and both developments form part of broader projects aimed at regeneration of obsolete port areas close to city centres. However, the cases also illustrate differences in local context and linkage to local spatial planning policy. The case studies are based on research conducted by the authors, using primary data (via semi-structured interviews of key actors) and review of secondary data (particularly public sector policy documents and plans).

4. The case of Amsterdam

Amsterdam is a city of around 743,000 people (with around 375,000 housing units). It is the national capital and largest city of the Netherlands, as well as its major cultural and financial urban centre. Partly as a consequence of the municipality’s decision in the 1970s to transfer port activities downstream to the western side of the city (Lebesque, 2007), urban land use in Amsterdam expanded to obsolete port areas north-east of the city centre; hence the regeneration project Oostelijk Havengebied now houses around 17,000 people, and the IJburg project further east will house approximately 45,000 people.
4.1 Emergence of regeneration issues and the Zuidelijke IJ-oovers project

The Amsterdam cruise passenger terminal is part of the broader Zuidelijke IJ-oovers regeneration project, involving the restructuring of the southern banks of the River IJ, west and east of the central station, which has a rear entrance on the riverbank. The 2km-long Oostelijke Handelskade (Eastern Trading Quay) (where the terminal is sited) forms the ‘spine’ of the eastern part of the project area, which previously comprised railway yards, quays, warehouses and other uses associated with harbour activities, but which was left largely obsolete when these activities transferred westward. The project, initiated in 1994 and planned for completion in 2012, includes creation of new apartments, office and business space, and retail, catering and cultural and tourism uses including a hotel and concert hall (http://www.oga.amsterdam.nl/, accessed June 2010).

The main aim of the Zuidelijke IJ-oovers project is to restore the connection between the inner city and the river, by providing a mixed-use area for ‘living, working and shopping’, as set out in the municipality’s Terms of Reference for the IJ Riverbanks (Nota van Uitgangspunten voor de IJ-oovers; Gemeente Amsterdam, 1989, p. 5). This aim is reflected in the IJ Riverbanks Land Use Plan (Bestemmingsplan IJ-oovers) (Gemeente Amsterdam, 1994), which also seeks to incorporate public transport links to the city centre, and restrictions on car traffic and parking (Gemeente Amsterdam, 1989).

The project contributes to several of the aims of the city’s 1996 Structure Plan Open City (Open Stad) (Gemeente Amsterdam, 1996), including promotion of the
following: intensification of uses around public transport nodes, mixed uses, international competitiveness, and polycentric development of the city. Specifically, the Plan proposes that, while the inner area should remain the city’s major focus of employment in relation to knowledge-based industries, prime offices and high-quality cultural services, other employment uses should increasingly be located in sub-centres with links to public transport (Gemeente Amsterdam, 1996). To achieve these aims, the municipality designated so-called metropolitan projects of which the Zuidelijke IJ-oevers is one. In addition, the project contributes to the aims of the 2003 Structure Plan Opting for Urbanity (Kiezen voor stedelijkheid) (Gemeente Amsterdam, 2003), which continues the emphasis on intensive use of space and accessibility by public transport and bicycle, and emphasises even further the need to establish the city as an internationally attractive location for tourism (Gemeente Amsterdam, 2006). It is now appropriate to turn to the development of the cruise terminal itself.

4.2 The Amsterdam Cruise Terminal

The Passenger Terminal Amsterdam (PTA), located at Piet Heinkade 27, 25km from the open sea, was opened in 2000, though the city was a significant cruise destination prior to this (operating from an older terminal in the same location), with for instance 108 cruise ship calls in 1993 (Dahles, 1998). The terminal building contains three decks which can house events such as exhibitions, conferences or parties. The exterior is mainly composed of glass, so that upper decks have a clear view of the river and city. While the appearance of the building (with an undulating roof is in the shape of a wave or whale) was
controverisal (interview, city planning authority representative, March 2001), it is clearly distinctive. A mechanised system assists substantially in ensuring the efficient movement of passengers’ luggage, (interview, managing director of PTA, March 2001). The main physical characteristics of the terminal are summarised in Table 1.

In terms of connectivity, the terminal is close to the city centre and the central railway station is only 500m away along the river bank. The terminal is also linked to the city’s tram network, with tram stops for lines 25 and 26 adjacent to the terminal, together with a taxi rank. Furthermore, the proximity of Schiphol airport, a public transport journey of only 40 minutes, makes Amsterdam attractive for ‘turnaround’ passengers (interview, managing director of PTA, March 2001). Nevertheless, several cruise operators organise private coach travel for their passengers from the terminal to the airport since this is a journey of only twenty minutes (according to the PTA website) and it avoids the need to walk for some distance to access the train connection. This unfortunately exacerbates traffic congestion within the city and runs counter to the transport aims of both national and city policy.

In terms of usage, in 2005 the PTA received 88 sea cruise calls with 122,105 passengers, in 2006 it received 75 calls with 135,548 passengers, in 2007 it received 77 calls with 161,380 passengers, and in 2008 these figures had risen to 116 sea cruise calls with 220,000 passengers. Each call involves 100 to 125 employees (Gemeente Amsterdam, 2008, p. 75). In terms of the tourism lifecycle, the PTA may be considered to be in the ‘growth’ phase, with fewer cruise
calls than many other ports in the Baltic and Mediterranean for instance (Dinkla, 2009).

4.3 The terminal development as part of spatial planning and regeneration policy

The terminal development contributes to the achievement of spatial planning policy at both strategic and local scales. At the strategic scale, it has contributed to aims for intensification of land uses, mixed and integrated land uses, and linking of the river bank to the city. More recently, it has also assisted with the municipality’s strategic objective of distributing tourism uses more evenly across the city, since the ‘tourist heart’ of the historic city centre has become increasingly mono-functional and congested, due in part to the growth of ‘sex and drugs’ tourism which is also accompanied by nuisance and criminal activities (Gemeente Amsterdam and Stadsdeel Centrum, 2008).

At the local scale, the cruise passenger terminal is one of the ‘design anchors’ of the Zuidelijke IJ-oever project. In 1995, the municipality produced the development strategy Anchors in the IJ (Ankers in het IJ) for this area (Gemeente Amsterdam, 1995). This strategy defined a series of design anchors, comprising major public buildings or squares as strategic nodes within a framework of larger infrastructure investments. It also used a series of separate masterplans to maintain the identity of local neighbourhoods.

The new terminal has also become the focus of a series of water-based activities which assist broader regeneration policy aims by enhancing the vitality and
attractiveness of the southern bank of the IJ. These activities include sea cruise arrivals, river cruise calls, calls by naval vessels, and the ‘SAIL’ maritime event which has been held every five years since 1975. This event involves large numbers of ships visiting the city and mooring near the PTA, and many visitors come to view the ships. These activities would seem to have resulted in part from the design-led approach to regeneration in the area, as applied for instance by the use of masterplans within the Zuidelijke IJ-oevers project, since these emphasise environmental quality and attractiveness, thus encouraging visitors and leisure uses.

5. The case of Rotterdam

Rotterdam is a city of around 596,000 people that contains by far the largest sea port in Europe. After World War Two, municipal development policy prioritised reconstruction and growth of the port, which became the world’s largest between 1962 and 2004, linked to container trans-shipment and the petrochemical industry (Nationale Havenraad, 2009). The harbour areas at the edge of the inner city were unable to accommodate this growth, so many port functions moved significantly downstream, which led to extensive underused areas. The relatively underdeveloped international image of Rotterdam required increasing efforts to ‘re-image’ the city to attract investment and visitors, and so the city competed more assertively after the 1970s for investment and visitors than cities such as Amsterdam (McCarthy, 1998b; 1999). Partly as a result, former port areas were transformed into urban regeneration projects, of which the Kop van Zuid (containing the cruise terminal) is one of the largest.
5.1 Emergence of regeneration issues and the Kop van Zuid project

The Kop van Zuid project area comprises former docklands on the southern bank of the River Nieuwe Maas, opposite the city centre. In addition to the historic significance of this area for port uses, it contained the Dutch headquarters and arrival and departure hall of the shipping company Holland America Line (HAL) which operated a regular passenger connection to New York between 1873 and 1978. The Kop van Zuid is directly connected to the city centre by the Erasmus Bridge, which has become one of the city’s most iconic structures.

The first proposals for redevelopment of the Kop van Zuid area were conceived in 1987 (Communicatieteam Kop van Zuid Rotterdam, n.d.), and later developed by the municipality into an overall masterplan for the area (adopted in 1991). This plan formed part of a new approach to spatial planning in Rotterdam which aimed to make the city more attractive for investors and visitors, by incorporating luxury residential development and tourist attractions amongst other uses, with an emphasis on high-quality design. However, while the former departure hall of HAL was included in the plan, it was not (then) intended for a cruise terminal.

Designation as a national Key Project in 1992 enabled the project to claim large subsidies from the national government, and its main objectives were as follows: to link both river banks; to develop internationally competitive business locations; and to stimulate the local economy (Ministry of Housing, Spatial Planning and the Environment, 1992). The project sought to increase the concentration of urban uses by applying high densities and land use mixing (McCarthy, 1996; 1998b). It
also sought to maximise environmental quality by the provision of high-quality infrastructure, and use of a series of masterplans for distinct ‘quarters’, with an emphasis on high-quality design for instance by the use of ‘quality books’. In addition, the project incorporated social regeneration objectives to reduce social divisions between the northern and southern parts of the city (McCarthy, 1998b).

To that end, in 1991 the municipality approved the Mutual Benefit (Wederzijds Profijt) initiative which uses the Kop van Zuid redevelopment to improve socio-economic conditions in the neighbouring underprivileged districts, for instance by encouraging local employment (URBED and Van Hoek, 2008).

The City Plan Rotterdam 1992 (Stadsplan Rotterdam 1992) includes the Kop van Zuid as one of nine development projects, and the Kop van Zuid project contributes to the aims of the Plan for sustainable development of the city and the port (Gemeente Rotterdam, 1992). Moreover, the project contributes to the aims of several more recent policy and planning documents. First, it contributes to the aims of the 1993-2000 Inner City Plan (Binnenstadsplan 1993-2000) (Gemeente Rotterdam, 1993) for urban reconcentration (Rotterdam City Information Centre, 1996), and linkage to transport infrastructure (McCarthy, 1999). It also contributes to the aims of the Spatial Plan Rotterdam 2010 (Ruimtelijk Plan Rotterdam 2010) (Gemeente Rotterdam, 2000) which includes the project in a strategic development area, and to the aims of the Spatial Plan Rotterdam Region 2020 (Ruimtelijk Plan Regio Rotterdam 2020) (Regio Rotterdam, 2005) for strategic development. Furthermore, it contributes to the aims of these plans for enhanced environmental quality and international competitiveness (particularly regarding port-related functions); indeed, the Spatial Plan specifically calls for
use of part of the Kop van Zuid for use by cruise ships. Finally, the project contributes to the aims of the *Spatial Development Strategy 2030* (Ruimtelijke Ontwikkelingstrategie 2030) (Gemeente Rotterdam, 2007) to expand the city centre. It is now appropriate to consider the terminal development itself.

5.2 The Rotterdam Cruise Terminal

The Cruise Terminal Rotterdam (CTR) is situated at the Kop van Zuid’s Wilhelminapier (Wilhelmina Pier), around 40km from the open sea. Its reception area is located in the Holland America Line’s former arrival and departure hall, which was renovated in 1997. The main physical characteristics of the terminal are summarised in Table 1. The building is distinctive, with a six-arched roof and a 120m-long glass façade which offers the most open view of the river, the Erasmus Bridge and the city centre of all locations in the Kop van Zuid project area.

In terms of connectivity, the terminal is 2km from the city centre, which can be reached by car, metro or shuttle bus in 5-10 minutes. The terminal is well linked to the wider public transport system, with a metro connection and a water taxi stop jetty, and the city’s central railway station is 5-10 minutes away by metro and 10-15 minutes by tram. By train, Schiphol airport can be reached in 40 minutes, and Rotterdam airport can be reached by public bus from the central railway station.
The number of cruise ship arrivals and passengers has shown an increasing trend since the terminal opened, with a total of 50 ships and 38,550 passengers using the terminal between 1998 and 2004 (inclusive), and 80 ships and 213,000 passengers using the terminal between 2005 and 2010 (inclusive; estimation) (interview, executive director of Cruise Port Rotterdam, June 2010). However, Rotterdam remains a much smaller cruise port in terms of ship and passenger numbers than Amsterdam.

5.3 The terminal development as part of spatial planning and regeneration policy

Like the Amsterdam terminal, the CTR contributes to spatial planning policy at both strategic and local scales, via the Kop van Zuid project of which the terminal is a part. At the strategic scale, development of the CTR meets policy objectives to expand the city centre to the south, together with improved links by means of an iconic new bridge and public transport services. It also contributes to a series of strategic development policy aims, as set out above. In broader terms, the project contributes to aims for expansion of the leisure and tourism sector, as set out in the vision document The City as an Experience (De Stad als Belevenis), produced by several municipal agencies (Ontwikkelingsbedrijf Rotterdam, 2001).

At the local scale, development of the CRT involves historic renovation and reuse of obsolete, former HAL buildings, thereby contributing to enhancement of the environmental quality and design of this previously derelict area, an aim which is set out in City as a Lounge: Inner City Plan Rotterdam 2008-2020 (City as a Lounge: Binnenstadsplan 2008-2020) (Gemeente Rotterdam, 2008). The cruise
terminal is now (in 2011) part of a largely implemented overall masterplan for the Kop van Zuid that includes various other renovated historic buildings, particularly in the Wilhelminapier, as well as highly distinctive new buildings at the eastern side of the project area.

However, in spite of its linkage to spatial planning objectives, the Cruise Terminal Rotterdam development would seem to have been less the consequence of explicit policy application than the Amsterdam case. Instead, in terms of its specific siting within the Kop van Zuid, it may be argued to be in large part the result of a coincidence of opportunities. The specific opportunities were as follows: first, there was the availability of the renovated arrival hall of the Holland America Line; second, the demand for cruise tourism was increasing noticeably; third, the Port Authority indicated its intention to enhance port-related activities in the city as a result of the relocation of port uses westward; and fourth, the opening of the Erasmus Bridge in 1996 encouraged the aim of restoring some of the historic maritime character of the Wilhelminapier.

Partly as a result of these factors, the municipality subsequently attached increasing importance to development of a cruise terminal. This accorded with previous strategic spatial planning objectives since for instance the location here of maritime activities such as the cruise terminal further links the two banks of the river. In addition, the terminal was seen as an important source of income for the locality and city, and it was seen to assist with the broader aim of restoring the unity of city and port, so as to strengthen the ‘city brand’ of ‘Rotterdam World Port World City’.
Overall, therefore, while aspects of the development of the cruise terminal in Rotterdam may be seen as somewhat opportunistic (particularly early in the process), it nevertheless contributes to broad policy aims for international competitiveness, urban intensification, land-use mixing and environmental quality. Equally, strategic spatial planning policy can be seen to have encouraged its general location in the Kop van Zuid (if not the specific siting), and local policy (for instance via the design approach of the Kop van Zuid project) can be seen to have encouraged its distinctive appearance as well as other features such as linkage to transport networks.

6. Analysis

It is now appropriate to evaluate the two terminal developments (as part of wider projects) set out above, in terms of a summary and comparison of their (actual and potential) outcomes in relation to spatial planning and regeneration policy principles, and a summary of the role of relevant policy in framing these developments and therefore their outcomes.

6.1 Evaluation of cases

To evaluate the two cases, it is appropriate first to consider the theoretical basis for evaluation in terms of a conceptual framework. A working definition of urban regeneration may be considered as ‘comprehensive and integrated vision and action which leads to the resolution of urban problems and which seeks to bring about a lasting improvement in the economic, physical, social and environmental
condition of an area that has been subject to change’ (Roberts, 2000, p. 17). This clearly incorporates the need for durable benefits in line with accepted notions of sustainable urban development and spatial planning, though the definition is not at a level of detail sufficient to be operationalised into key criteria against which specific development projects can be tested.

However, Carmona (2001) has proposed a set of principles of sustainable urban design which underpin sustainable spatial planning and regeneration. These principles apply to a range of scales including the metropolitan or city-region scale and the local scale of specific projects (McCarthy, 2004). Carmona suggests that sustainable urban design (as part of sustainable spatial planning and regeneration) is commonly accepted as necessarily embracing ‘visual, morphological, social, perceptual and functional concerns’ (2001, p. 165). From this, he proposes the following key principles: ‘stewardship’ (applying a durable, long-term vision); ‘resource efficiency’ (efficiency in the use of energy and materials, including implications of the project for energy consumption via travel demands); ‘diversity and choice’ (incorporating for instance diversity of uses and choice in movement, facilities and amenities, including access for all); ‘human needs’ (incorporating comfortable environments which are socially mixed, of a human scale, and available to all via their design and mix of uses); ‘resilience’ (incorporating robust benefits, for instance with buildings that can adapt to different functions, and spaces that can cater for different functions); ‘pollution reduction’ (for instance by reducing waste emissions); ‘concentration’ (encouraging higher densities and re-use of brownfield sites, for instance by intensification of land uses around transport nodes); ‘distinctiveness’
(maintaining environments with a distinctive character for instance in terms of design); ‘biotic support’ (harnessing the wider ecosystem for instance by integration of soft landscaping and green spaces); and ‘self-sufficiency’ (for instance by incorporating active participation in the development of the vision or plan for an area, and encouraging a variety of uses).

These principles would seem to be appropriate for use in the context of the impacts of cruise passenger terminal developments (interpreting ‘development’ as not merely the terminal building but also the immediate locality insofar as this forms part of a coherent vision or plan), since the principles align to broader spatial planning policy objectives. However, in view of the scope of this article, which encompasses the economic, environmental and social dimensions of sustainable urban development, it would seem appropriate to add the principle of ‘economic regeneration’ (for instance by enhancing competitiveness and bringing additional employment and income for the locality and city). In addition, in view of the urban location of the cases, it would seem appropriate to combine the principles of pollution reduction and biotic support; stewardship and resilience; and concentration and self-sufficiency. The application of this set of principles to the cases is considered below, taking into account both actual and potential benefits (or problems), after which the contribution of spatial planning and related policy to the achievement of the principles in the cases is considered.
Economic regeneration

In both cases, there would seem to be clear economic benefits for the city as a whole, via income for city businesses from cruise passengers, for instance for hotel and restaurant/bar uses. In Rotterdam, for instance, while some cruise passengers travel outside the city, for instance to the nearby historic city of Delft, Amsterdam or Antwerp, a larger number stay in Rotterdam itself (interview, executive director of Cruise Port Rotterdam, June 2010). The Port Authority also earns income and publicity from cruise activities. In Amsterdam, cruise tourism contributes to broader policy aims to increase international visitors (Bontje, Musterd and Pelzer, 2011), increases ‘quality tourism’ at the expense of ‘drugs and sex’ tourism (Dinkla, 2009), and enhances the city’s economic diversity (Bontje et al, 2011). In addition, there are broader benefits arising from the cruise terminals in terms of ‘re-imaging’ and city marketing, since international competitiveness is a key aim of both cities, particularly Rotterdam, in view of its relatively undeveloped international image. The combination of a new, distinctive terminal building combined with visits by cruise ships would seem to assist in this respect – with such ships lending an enhanced international image associated with modernity, leisure and luxury (Figueira de Sousa, 2001; Dinkla, 2009). Moreover, the use of iconic ‘flagship’ buildings can be argued to provide a catalyst for regeneration within waterfront areas more generally, providing that such buildings contribute to the needs of the wider city, and both terminals are clearly embedded within broader regeneration projects linked to local and national policy. There would also seem to be important benefits in terms of civic pride (McCarthy, 2003b), since the arrival of large cruise ships would seem to
have an important symbolic effect, particularly in Rotterdam with its historic marine tradition, and this can have economic as well as social benefits.

Equally, however, as indicated above, the income derived from cruise tourism can be fragile and volatile, with fluctuations in demand, and indeed the number of cruise calls to Amsterdam declined to 92 in 2009 from 117 in 2008 (Dinkla, 2009). At the same time, however, the number of Dutch cruise passengers grew by 47% in the first quarter of 2009 compared with the year before, indicating significant potential for future growth in cruise tourism in Dutch cities. Moreover, such potential in Rotterdam may be encouraged by the city’s recent development of an intensive annual festival calendar including the Rotterdam International Film Festival, the North Sea Jazz Festival, the World Tennis Tournament, and a range of one-day summer festivals, since such events increase the city’s attractiveness and may lead cruise passengers to extend their stay in the city. For both cities, stability in demand may have been assisted by their cooperation in marketing their cruise tourism function, and the fact that they do not compete directly for cruise tourism since, while both have a potential turnaround function (being located close to Schiphol airport), the cruise product (linked to the experience offered to passengers via day visits) differs substantially in each case (Dinkla, 2009).

Stewardship and resilience

The inclusion of both cruise terminals within long-term regeneration projects would seem to illustrate a clear long-term vision in line with the principle of
stewardship. In addition, the principle of resilience would seem to be achieved in the case of Rotterdam for instance by the refurbishment of the historic HAL building which could be adapted for other uses in the future. Moreover, Amsterdam’s Zuidelijke IJ-oever project included the aim of incorporating ‘flexible and durable building structures, developed to accommodate any future change of use and function’ (Marshall, 2001, p. 148). In addition, in both cases resilience is demonstrated by the use of meeting spaces (in the form of the main terminal areas) that are used for purposes other than tourism, including for conferences and exhibitions.

Resource efficiency

In both cases, the relatively central location of the terminal has been helpful in terms of accessibility, maximisation of walking and use of public transport, since the city centres can be accessed by foot (in around 10 minutes in Amsterdam and 15 minutes in Rotterdam), and the terminals are linked directly to the cities’ extensive public transport systems, including a fleet of fast water taxis in the case of Rotterdam. This linkage has been enabled by willingness in both cases to provide public funding for high quality transport infrastructure, so that much potential congestion has arguably been avoided.

However, in Amsterdam, access to the central station via public transport involves a relatively long walk to the tram stop, so many cruise operators provide a private coach connection direct to Schiphol airport, which fails to maximise sustainable transport use and has led to some congestion problems. Moreover, in
Rotterdam, coaches transporting passengers have added to congestion, and coaches waiting to transport passengers to locations outside the city caused parking problems after a temporary parking space adjacent to the terminal became a construction site. These problems are linked to the wider metropolitan issue of traffic congestion in the cities, and this would seem to be worsening in Amsterdam in particular (Bontje et al., 2011).

Diversity and choice

In both cases, the terminal developments form part of multi-functional, mixed-use regeneration projects incorporating residential uses and hotels, employment uses (such as offices) and leisure/entertainment uses, and these (including the terminals themselves) would seem to be integrated both internally (within the project area) and externally (with the surrounding area and city). It may therefore be suggested that the terminals contribute to increased and sustainable vitality which is associated with the mixing of uses particularly in waterfront areas (Bruttomesso, 2001; Shaw, 2001). Moreover, in both cases the projects involve increased connectivity via public transport which enhances choice, and in the Rotterdam case this was cited by poorer residents in the area as one of the reasons why they welcomed the project (Doucet, 2010).

Human needs

Benefits for the local population are evident in both cases in terms of wider usage (other than by cruise passengers) of the meeting areas of the terminals for events,
and there is also the potential for use of the ancillary terminal facilities such as cafes and bars by local people. Moreover, similar facilities in the immediate area, while catering in part for demand from cruise passengers, may also be used by local people and other city residents. For instance, facilities and uses in the immediate locality of the Rotterdam terminal (within the Kop van Zuid project) such as the Hotel New York, as well as cafes, bars and restaurants, are evidently used by city residents as well as visitors (Doucet, 2010), though it may be argued that the price levels of such facilities and uses are beyond the ability to pay of many poorer inhabitants of neighbouring districts.

The projects of which the terminals form a part are also socially mixed to a degree, resulting in part from the emphasis placed by spatial planning policy on the mixing of residential and employment uses. In the Amsterdam case, 30% of the total housing stock comprises social housing, and the project has enjoyed support from community organisations as well as the business community (Marshall, 2001). In the Rotterdam case, there is evidence that the Kop van Zuid project has been welcomed by poorer residents in the vicinity partly because of the mix of housing types (including around 30% of total housing as affordable or social housing [Tasan-Kok and Sungu-Eryilmaz, 2011]) and the inclusion of related amenities (including shops and a large supermarket) (Doucet, 2010). Moreover, one of the ancillary objectives of the Kop van Zuid project has been the sharing of benefits (such as jobs arising from enterprises in the area, due to the Mutual Benefit initiative) by the population of adjacent disadvantaged areas, and indeed this is a rare component within waterfront development programmes (Doucet and Van Weesep, 2011).
Concentration and self-sufficiency

Both examples illustrate application of the principle of concentration by their location in or near the central part of the city, as well as the incorporation of the terminal within a broader high-density area. Moreover, in both cases the broader regeneration projects in which the terminals are located were specifically aimed in part at greater intensification of uses and re-use of brownfield sites. However, in Rotterdam, the concentration of urban amenities in the Kop van Zuid would seem to have been accomplished in part by their relocation from the city centre on the other side of the river, thus reducing the concentration of activities there. In terms of self-sufficiency, both the projects within which the terminals are located were clearly included within broader spatial plans which were subject to participation, indicating active participation in the visioning process. The emphasis in both projects of use mixing – particularly of residential and employment uses – also indicates their contribution to the principle of self-sufficiency in the context of the wider city.

Distinctiveness

In both cases a degree of distinctiveness would seem to have been incorporated within terminal developments as a result of the distinctive design of terminal buildings, as well as the composition of uses in the immediate area. Moreover, the identity of local neighbourhoods more generally would seem to have been preserved within both of the broader projects, linked as indicated below to the spatial planning and design policies applied. These projects also sought to
encourage innovative design more generally: hence Amsterdam’s Zuidelijke IJ-oever applied ‘design anchors’ (including the terminal itself), and Rotterdam’s Kop van Zuid made use of internationally known architects such as Sir Norman Foster in the case of the World Port Centre on Wilhelminapier (Schubert, 2011).

Pollution reduction and biotic support

The maximisation of public transport use in both cases, as well as the potential for walking (by virtue of design and location close to the city centre), would seem to contribute to the principle of pollution reduction, since in overall terms carbon emissions are thereby reduced. In addition, the incorporation of landscaped areas within the broader regeneration project areas in which the terminals are located, in part a result of the application of masterplanning, would seem to apply the principle of biotic support. In the case of Amsterdam’s Zuidelijke IJ-oever project, for instance, particular attention was paid to public spaces, with a separate Public Space Plan aimed at maximising the effectiveness of green spaces (Marshall, 2001).

6.2 Role of spatial planning and related policy in achieving outcomes

The evaluation and previous consideration of the two cases indicate how they have contributed to aims for spatial planning and regeneration as set out in national policy, the spatial plans of the city or city-region, and more detailed local plans or masterplans. The cruise terminal developments in both cities are aligned with and contribute to strategic policy aims including the following: to develop
brownfield sites close to the city centre; to restore the linkage between the city and the river; to enhance and extend the city centre as an attractive area to live, work and recreate, and thereby to strengthen the city’s international competitiveness; and to increase revenues for the city from the increasingly important tourism and leisure sectors. In Amsterdam, development of the terminal away from the established tourism core has also assisted in achieving the municipality’s aim of distributing tourism growth more evenly across the city.

Spatial planning and related policy could therefore be seen as instrumental in shaping the cruise terminal developments (for instance in terms of location, form and linkage to adjacent uses and areas) so as to assist in enabling the achievement of optimal outcomes from these developments, as indicated for instance by application of criteria in relation to sustainable design. For example, in both cases the incorporation of public transport linkages, encouraged by wider strategic planning policy, would seem to have minimised potential problems of congestion. Certainly, such problems have been observed around some other cruise terminal developments, linked to a relative failure of spatial planning in such areas (McCarthy, 2003a). Similarly, the policy approach applied for instance in Amsterdam by the Anchors on the IJ development strategy (encouraging distinctive buildings and separate masterplans to maintain local identity), and in Rotterdam by the Kop van Zuid project (emphasising local identity via separate quarter masterplans), would seem to have contributed significantly to the achievement of neighbourhood identity and distinctiveness.
The Rotterdam cruise terminal has only in recent years become part of the Kop van Zuid project and associated detailed policy and plans, reflecting a more opportunistic approach. Nevertheless, as in the Amsterdam case, there has been a clear adherence throughout to overarching strategic planning principles in relation for instance to connectivity, concentration and integration of mixed uses. Hence the Kop van Zuid project (now including the terminal) can be seen as part of ‘an anticipatory long-term spatial planning strategy that seeks to integrate urban and port development policies’ (Schubert, 2011, p. 89).

**Conclusions**

The cases of cruise terminals in Amsterdam and Rotterdam show that such developments can indeed contribute to aims for spatial planning and regeneration linked to sustainable urban development, particularly if we include the immediate localities (comprising in these cases the Zuidelijke IJ-oever and Kop van Zuid project areas) within which the terminals are embedded. Although not all effects of the terminal developments in these cases are beneficial, the terminals assist for instance with achieving aims for urban densification; economic development and competitiveness; increasing environmental quality and overall integration of uses; and, to a lesser extent, social well-being. Moreover, spatial planning and related policy (as applied by mechanisms such as masterplans) would seem to have played a part in shaping the terminal developments and their effects, assisted by related contextual factors such as provision of public funding for high quality infrastructure – a factor of particular importance for cruise passenger terminals (McCarthy, 2003a).
However, the cases also show that cruise terminal developments can provide such benefits, shaped by relevant policy, in the context of differing detailed approaches to policy application. Hence, in Amsterdam, the terminal formed part of a comprehensive spatial planning approach, involving for instance detailed predetermined elements such as ‘anchors’ or development nodes of which the terminal was one throughout the project period. In Rotterdam, by contrast, the siting of the terminal within the Kop van Zuid project was largely a result of opportunism rather than incorporation within a pre-established plan, and the terminal’s specific contribution to the project has grown in significance only gradually. Nevertheless, these differences would seem to relate essentially to the relative degree of flexibility evident within the spatial planning approach (enabling responsiveness to opportunities). Moreover, spatial planning and related policy have been critical to the achievement of key objectives in both cases. Consequently, the overall lessons for spatial planning and regeneration in other contexts would seem to be that a clear policy context at local, city-regional and national level can be instrumental in optimising overall net benefits from cruise terminal developments, related to the principles of sustainable urban development.

Acknowledgements

The contribution of the Carnegie Trust for the Universities of Scotland to the research on which this article is based is gratefully acknowledged.
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Table 1: Physical Characteristics of Amsterdam and Rotterdam Cruise Passenger Terminals

<table>
<thead>
<tr>
<th></th>
<th>Amsterdam terminal</th>
<th>Rotterdam terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion date</td>
<td>1999</td>
<td>1999</td>
</tr>
<tr>
<td>Ship turning capacity</td>
<td>Ships up to 340m can turn</td>
<td>Ships of up to 260m can turn (and those up to 360m can turn at Waalhaven)</td>
</tr>
<tr>
<td>Floor space (m²)</td>
<td>6,900</td>
<td>3,800</td>
</tr>
<tr>
<td>Quay size (m)</td>
<td>600</td>
<td>698</td>
</tr>
<tr>
<td>Linkage to quay</td>
<td>300m footbridge with 2 gangways</td>
<td>Covered boarding bridge</td>
</tr>
<tr>
<td>Event capacity (no. people)</td>
<td>3,000</td>
<td>2,800</td>
</tr>
<tr>
<td>Architects</td>
<td>Larry Malchik of HOK International LTD</td>
<td>Bakema and Van de Broek</td>
</tr>
<tr>
<td>Other facilities</td>
<td>Restaurant/bars, tourist information, ships, coach terminal and park, and underground parking for 550 vehicles</td>
<td>Tourist information, currency exchange, shops and cafe/restaurant</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Close to railway station, linked to tram network, 40 minutes from Schiphol airport</td>
<td>Close to railway station, linked to tram and metro, 40 minutes from Schiphol airport</td>
</tr>
</tbody>
</table>