

*Sustainable Estuary Management: Reconciling development and conservation pressures in European port-estuary spaces*

**Ports Working Papers Series**

**Working Paper 1: Port of Antwerp**

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## **The Port of Antwerp and the Deurganck dock**

Antwerp is the second largest port in Northern Europe behind Rotterdam, handling 152 million tonnes of cargo in 2004 (National Statistics/Department for Transport, 2006). Antwerp Port Authority is an independent, municipally owned company responsible for the planning and maintenance of the port as well as tugging and dredging<sup>1</sup>. The Port provided direct employment for more than 60,000 employees in 2005 (Port of Antwerp, 2007, p.16). The population of Antwerp city itself is approximately 470,000<sup>2</sup>. The issue of reconciling port-nature tensions came to real prominence in Antwerp in 1998 following a decision made by the Flemish Government to allow the Port of Antwerp to build a new container terminal, the Deurganck dock. Existing container terminals were said to have reached their maximum capacity on the right bank of the Scheldt estuary, leading to the proposal to build a new container dock on the left bank. This was to be a tidal dock, providing direct access to the Scheldt without the need for any locks<sup>3</sup>.

When the Flemish Government approved plans to construct the Deurganck dock along with proposed compensation measures for habitat losses at the site in 1998, this decision was agreed by a range of public actors as part of a new strategic port planning process for the left bank of the Scheldt<sup>4</sup>. Three issues which would become increasingly significant later on developed from this initial process. Firstly, part of the proposed new Strategic Plan included the demolition of Doel, a village close to the Deurganck dock. Secondly and critically, only public actors were included in the initial decision-making process (Port Authorities, Local Authorities and Flemish Government). Thirdly, there had up until this point been only a limited understanding and engagement of how the Birds and Habitats Directives should be interpreted in national legislation. As a result, local environmental NGOs and a residents action group from Doel submitted formal complaints to the European Union, principally focusing on the impacts to designated sites and began legal proceedings against the Flemish Government. This in turn resulted in the European Commission raising a number of questions about the need for the Deurganck dock development, its viability and its possible impacts on the SPAs in the area including whether proper impact assessments had taken place. The left bank of the River Scheldt is designated as a Special Protection Area under the Birds Directive and also has salt marshes and mud flats which have been proposed as protected sites under the Habitats Directive and the Ramsar Convention (Port of Antwerp, date unspecified, a). The Flemish government responded in 2000, re-submitting their strategic plan for the left bank, however the European Commission remained unsatisfied with this response. Some of the issues raised included:

- Viable alternatives were not found to have been fully investigated
- The Environmental Impact Assessment (EIA) for the dock was found to be insufficiently detailed
- The compensation measures which had been drawn up to replace designated sites which would be lost on the left bank were considered insufficient to comply with the EU Birds and Habitats Directives

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<sup>1</sup> Antwerp Port Authority is also responsible for maritime traffic control and operates all the bridges and locks within the port (Port of Antwerp, date unspecified, b)

<sup>2</sup> <http://www.antwerpen.be/eCache/BEN/16/392.cmVjPTE1ODgx.html>

<sup>3</sup> [http://www.portofantwerp.com/portal/page/portal/POA\\_EN/Focus%20op%20de%20haven/Havengesciedenis](http://www.portofantwerp.com/portal/page/portal/POA_EN/Focus%20op%20de%20haven/Havengesciedenis)

<sup>4</sup> <http://www.antaq.gov.br/Portal/pdf/Palestras/SeminarioBelga/TessierTEnvironmentalPolicyAPA.pdf>

- Cross-border issues were not fully addressed
- Issues relating to the viability of the village of Doel were again raised

As a result, the original planning permission which had been granted by the Flemish Government was withdrawn by the Council of State in 2001. Suspending the construction permit for the dock, the Council of State demanded a new public inquiry take place. As a result of these legal challenges, work on the Deurganck dock was halted and the objections forced the authorities involved to commission a new EIA. This had to include an assessment of the nature compensation proposals previously put forward by the Flemish Government<sup>5</sup>.

Construction work on the Deurganck dock was delayed for over a year with the direct economic costs of the delay alone estimated at €40m. Seven applications for planning permission were submitted in late 2001 by the Port Authority and the Flemish Region following a public inquiry which had been held earlier that year. The planning permissions were granted in the spring of 2002 and work on the Deurganck dock resumed in the April. The new EIA evaluated the need for and impact of the development upon the SPAs and a more detailed compensation plan was drawn up for the area. This was approved by the Flemish Parliament in 2001. Mitigation measures for the Deurganck dock included the creation of a dyke between the new dock and the nearby village of Doel. In terms of compensation measures, a series of compensation areas were identified, covering a range of different habitat types. These were to serve as compensation for the new dock but also served to replace habitats lost in the past (namely through earlier port developments which had been built in the late 1990s without any compensation). Reaching agreement on these compensation measures developed out of a process of stakeholder engagement between the Port Authority, nature conservation organisations and local communities. The compensation measures were financed by the Port Authority but responsibility for implementation was shared amongst a range of public actors through a management committee. The majority of the compensation measures for the Deurganck were completed by 2006, costing an estimated €25m. A strong legal framework (via the planning framework and the conditions of the building permits awarded) is now said to be in place such that for every compensation area, it is clearly stated who will build, design and manage it. These areas are monitored by the government via the Institute for Nature and Forest (INBO)<sup>6</sup>. Legal wrangling over land designations and the village of Doel were not resolved so easily and will be decided when a revised Strategic Plan is adopted (see below).

### **Objections and tensions**

Opposition to the Deurganck dock proposal came from a range of different stakeholders. The reasons for this opposition can be broadly grouped according to three key issues; potential impacts upon nature; potential impacts upon nearby residents and potential impacts upon farming. These objections have emerged at different points in the development process:

- State and EU objections to the initial proposal for the Deurganck dock were principally based on the loss of habitats in European designated areas which

<sup>5</sup> [http://www.newdelta.org/navigatie/frameset.asp?knop\\_id=20000601&mnu=1](http://www.newdelta.org/navigatie/frameset.asp?knop_id=20000601&mnu=1)

<sup>6</sup> <http://www.antaq.gov.br/Portal/pdf/Palestras/SeminarioBelga/TessierTEEnvironmentalPolicyAPA.pdf>

would occur if the dock were to go ahead as originally proposed. The new Environmental Impact Assessment which was carried out for the Deurganck dock found the revised compensation measures complied with the ‘status quo’ and ‘maintenance’ principles of the EU Birds and Habitats Directives. The objections voiced by local and regional nature conservation organisations and NGOs concerning the scale and extent of the compensation earmarked for the Deurganck dock were resolved by more active engagement with NGOs. Following close stakeholder engagement between the Port Authority and nature conservation groups, principally Natuurpunt, a Belgium NGO with a focus on bird and wildlife conservation, the compensation measures were jointly selected and agreed upon.

- The village of Doel is located on the River Scheldt and close to the proposed entrance to the Deurganck. A legal challenge was made by a protest group comprising largely of lawyers called ‘Justice for Doel’ that under the current regional planning laws, the designation of Doel as industrial land was illegal<sup>7</sup>. As a result, the Council of State suspended the regional plan for the port area, reverting back to the 1978 regional plan. Under the 1978 regional plan, the village of Doel was allocated as residential land use (as opposed to industrial use as it had been classified under the current plan), making it still valid and thus an issue in future rather than current developments<sup>8</sup>. The viability of the village of Doel has remained a source of contentious debate for almost a decade. Some residents have left the village, having been bought-out by the Authorities however remaining residents in the village sent a petition to the European Parliament to protest over their desire to preserve rather than demolish this polder village<sup>9</sup>. A final decision on the future of the village was to be made by the Flemish government in 2007 when the new Strategic Plan for the Antwerp port area was to be assessed.
- Over recent years, local farming communities in villages located close to the port have raised objections about the loss of agricultural land, firstly due to the expansion of the dock itself, but also due to the preference for utilising agricultural land for the compensation sites. This is something of a double blow to local farmers, who associate this loss of land with a loss of agricultural productivity and as eroding traditional rural livelihoods. One way in which the authorities have attempted to overcome this problem is by buying land from farmers or offering land for exchange in other locations via the Flemish Land Authority, however many communities are opposed to this strategy. Plans are currently being developed to flood large areas of agricultural land or polders on the left bank (located on the fringes of Antwerp port on the Belgium-Dutch border) to serve as permanent compensation land or ‘habitat banking’<sup>10</sup>. The goal is to ensure that conservation objectives will continue to be met if future development in the left bank port-industrial zone encroaches onto temporary compensation sites. Solutions are being sought which do not impact upon local communities too heavily.

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<sup>7</sup> <http://www.portofantwerp-theotherside.be/>

<sup>8</sup> [http://www.newdelta.org/navigatie/frameset.asp?knop\\_id=20000601&mnu=1](http://www.newdelta.org/navigatie/frameset.asp?knop_id=20000601&mnu=1)

<sup>9</sup> <http://www.portofantwerp-theotherside.be/>

<sup>10</sup> quote from interview

### **Stakeholder engagement and institutional change**

Following an initial period in which the public authorities involved in the dock proposal failed to fully engage with stakeholders from outside the public arena, the legal proceedings and delays forced the authorities leading the development to engage more fully with interested stakeholders. More active stakeholder engagement was therefore encouraged in an effort to resolve some of the tensions and objections to the Deurganck dock, specifically those concerning nature conservation issues. The Port Authority attempted to collaborate with Natuurpunt, a nature conservation organisation which had initially objected to port expansion plans. In 2001, Antwerp Port Authority and Natuurpunt Antwerpen Noord signed an agreement to develop ‘a shared vision that forms the basis for long-term policy on developing an ecological infrastructure network in the Antwerp seaport area’<sup>11</sup>. The key objective of the joint ‘Making the Port of Antwerp more natural’ project was to turn 5% of land within the Port of Antwerp into ‘ecological infrastructure’, that is turning small areas of land between sites or in difficult-to-develop areas into nature habitats (Ottburg et al, 2007). This work on ecological infrastructure had no legal framework so the parties involved have asked the Minister of Public Works, Energy, Environment and Nature to draw up regulations to formalise recognise these areas. The University of Antwerp was asked by the Port Authorities to develop some baseline ecological objectives for this scheme in 2006 (Port of Antwerp, 2007). The Port Authority has also attempted to forge links with other European ports via the INTERREG 3b-funded New!Delta project in order to learn from best practice on reconciling port-nature tensions.

The tensions between the public authorities and some local residents and farming communities over port expansion plans and the implications of this for polder land along the Scheldt do not appear to have subsided over time. The authorities appear to have made a more conscious effort to engage with nature conservation and environmental NGOs, however engagement with residents and the farming community remains strained. Rather than direct engagement, the authorities have used the proposed new Strategic Plan for the port area as a tool for reconciling these issues.

### **Changing approaches to nature**

One of the key issues to emerge from the compensation areas which have been developed on the left bank of the Scheldt is the distinction made between permanent and temporary compensation sites. Although a number of areas around the port were designated as having permanent status, a number were also demarcated as temporary, that is, they would remain until the land was required for future development. Of the eleven compensation areas created for the Deurganck dock, three have subsequently been developed or are part of plans for future industrial and infrastructural developments. The notion of temporary compensation is controversial. Those involved maintain that when future development occurs on these compensation sites, these will have to be further compensated at a different location and that as long as the overall balance of the ecosystem is maintained, the disturbances which occur as new sites come forward for development should not cause major damage. A proposal to create a large area of new nature habitat (approx 1500 hectares) on the edge of the

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<sup>11</sup>[http://www.portofantwerp.com/portal/page/portal/POA\\_EN/Focus%20op%20de%20haven/Havengeschiedenis](http://www.portofantwerp.com/portal/page/portal/POA_EN/Focus%20op%20de%20haven/Havengeschiedenis)

port by flooding polder land to compensate for future developments is currently under discussion as part of the negotiations for the Strategic Plan for Antwerp.

The process of developing compensation areas for the Deurganck dock served as a starting point from which to develop more effective management of nature in and around the port. One of the key issues to emerge from the debates over the Deurganck dock was the absence of a legal framework or management policy for the ecological infrastructure around the port<sup>12</sup>. In order to conduct an appropriate assessment of the potential impacts of future developments for the European designated areas around the port, it was considered necessary to develop Conservation Objectives for the SPAs on the left bank of the Scheldt<sup>13</sup>. The University of Antwerp was appointed by the Port Authorities to develop a set of conservation objectives in 2003. Academics from the Department of Biology led a process of wide-ranging stakeholder consultation, forming a steering committee comprising of the Flemish Government, the EU, port authorities, environmental NGOs, agricultural bodies and scientists. A quantitative model was prioritised by the stakeholders and developed alongside more qualitative approaches. The Conservation Objectives which were developed were translated spatially, with densities of bird species as well as the amount and quality of habitat required being calculated (Adriansen et al, unpublished). The development of these Conservation Objectives was considered to be a necessary step in putting together a management plan for the SPAs in the port area and to inform how ecological objectives are incorporated into the Strategic Plan.

### **Implications for the Port of Antwerp**

The Deurganck dock was officially opened in July 2005. The Port Authority estimates that it will double the container handling capacity of the port, with the new dock estimated to be able to handle 6.4m TEU annually at full capacity (in its first full year of operation in 2006, it handled 810,000 TEU, [Port of Antwerp, 2007]). Deurganck dock will cover an area of 581 ha, with 5.3km of available quayside (Port of Antwerp, date unspecified, b). The final cost of the expansion is estimated to be approximately €600m<sup>14</sup>.

Strategic port planning was prioritised by the Flemish Government in the late 1990s with each port expected to draw up its own Town & Country Implementation Plan. A Strategic Plan for the Port of Antwerp has been in development for a number of years<sup>15</sup> (Port of Antwerp, 2007). The zoning plan will define and demarcate the borders of the port area and outline how port activities can be carried out in conjunction with other activities (e.g. nature, residential, agricultural etc) (Port of Antwerp, date unspecified, a). Preparation on this Strategic Plan was completed in 2006 with a number of possible spatial scenarios produced; final agreement on this will be reached following public consultation in 2006 and an Environmental Impact

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<sup>12</sup> [http://www.newdelta.org/navigatie/frameset.asp?knop\\_id=20000601&mnu=1](http://www.newdelta.org/navigatie/frameset.asp?knop_id=20000601&mnu=1)

<sup>13</sup> Conservation Objectives are not an essential requirement for Natura 2000 sites however they are viewed as providing a useful frame of reference when conducting appropriate assessments in order to evaluate the potential impacts of a development on European designated sites (Adriansen et al, unpublished).

<sup>14</sup> <http://www.expatica.com/be/articles/news/king-albert-opens-deurganck-dock-in-antwerp-21722.html>

<sup>15</sup> Strategic Plans were initially drawn up for the left and right banks of the Scheldt however these were subsequently combined

Assessment which was carried out in 2007 (Port of Antwerp, 2007). This remains controversial however, principally due to the tensions over the designation of the village of Doel.

### **Management of the Scheldt estuary and cross-border collaboration**

The Scheldt estuary flows through Belgium and the Netherlands. Work on a joint development plan for the Scheldt estuary to 2010 was started by the Flemish and Dutch governments in 2002. The three priorities of this plan (known as the 2010 Development Sketch or Outline) were the issues of accessibility, flood protection and nature conservation. This was one of four treaties signed between the two governments in 2005<sup>16</sup>. This particular treaty included agreements about the financing of the deepening of the Scheldt and outlines priorities and responsibilities for developing nature projects. The treaties were approved by both the Flemish and Dutch parliaments in 2007<sup>17</sup>. This project to 2010 is part of a broader plan, the Long Term Vision for the Scheldt (LTVS). This is a Dutch-Flemish management plan with a planned horizon to 2030 which is currently in development.

### **Note**

We would welcome any feedback or comments on this working paper. Please direct these to either Professor David Gibbs ([d.c.gibbs@hull.ac.uk](mailto:d.c.gibbs@hull.ac.uk), 01482 465330) or Professor Graham Haughton ([g.f.haughton@hull.ac.uk](mailto:g.f.haughton@hull.ac.uk), 01482 465006).

### **References**

Adriansen, F., Van Hove, D., Nijssen, D. and Meire, P. (unpublished paper) *A model for developing Conservation Objectives for Natura 2000 Special Protection Areas in an economically important site in Flanders (Belgium)*.

National Statistics and Department for Transport (2006) *Focus on Ports 2006 edition*, Palgrave Macmillan: Basingstoke.

Ottburg, F.G.W.A, Pouwels, R. and Slim, P.A. (2007) *Making the Port of Antwerp more natural; ecological infrastructure network for the natterjack toad on the left bank of the Scheldt*, Alterra Report 1376, Alterra Wageningen UR: Wageningen.

Port of Antwerp (2007) *Annual Report 2006*, Antwerp: Antwerp Port Authority.

Port of Antwerp (date unspecified, a) *NEW!Delta and nature compensation Deurganck dock*, information leaflet, Antwerp: Antwerp Port Authority.

Port of Antwerp (date unspecified, b) *Port of Antwerp, The Cargo Companion*, information leaflet, Antwerp: Antwerp Port Authority.

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<sup>16</sup> The three other treaties which were signed included: collaboration on policy and management of the Scheldt; joint nautical management and ending pilotage tariffs between Antwerp and Rotterdam.

<sup>17</sup> <http://www.portofantwerp.com/asp/newsdetail.asp?id=1073>

## Appendix 1: Comparator Table- Antwerp, Rotterdam and the Humber

	<b>Antwerp</b>	<b>Rotterdam</b>	<b>Humber</b>
<b>Size of port development (hectares)</b>	581ha	1000ha	20ha
<b>Cost of port development</b>	€600m	€3bn	£35m (approx €44m)
<b>Size of mitigation/compensation (hectares)</b>	11 areas created (ha not available)	25,000ha sea bed protection area, 58ha of land-based compensation	57ha of mudflat and 6ha of grassland
<b>Cost of mitigation/compensation</b>	€25m	€45m	£3.5m (approx €4.45m)
<b>Designated site status</b>	SPA SAC RAMSAR	SPA SAC	SPA SAC RAMSAR
<b>Tiers of governance</b>	EU National Flemish Municipal/Local	EU National Regional Municipal/Provincial	EU National Regional Local
<b>Legal body</b>	National Council of State	National Council of State	Secretary of State for Transport
<b>Key Stakeholders involved</b>	Antwerp Port Authority, Flemish Government, Local Authorities, Natuurpunt	Port of Rotterdam, Dutch Government, Rotterdam Metropolitan Region, Municipality of Rotterdam and Province of South Holland	Associated British Ports, Environment Agency, English Nature (now Natural England), RSPB and Wildlife Trust