PROJECTS

PRINS HENDRIK-ZANDDIJK* (NL)

BEATRIXSLUIS* (NL)
DREDGING AND MARITIME WORKS

Dredging and reclamation projects worldwide: Jan De Nul Group does it all. Whether it’s dredging or maintenance dredging, land reclamation or beach replenishments, construction or maintenance of harbours, coastal and bank protection works or ecodredging.

Jan De Nul Group owes its position as a global player mainly to its technical know-how and continuous investments in an extensive high performance modern fleet, which is kept geographically well-spread. The group focusses on big and complex projects worldwide without losing sight of interesting local opportunities.

Today the emphasis is on combined hydraulic works, comprising civil construction and dredging, and increasingly on offering and executing the design autonomously. Always a creative and innovative solution, tailor-made for the client.

EUROPE

1. **Belgium**: Beach nourishment in Ostend
2. **Belgium**: Development of an ecosystem-based protection against coastal erosion under the name ‘Coastbusters’
3. **Belgium**: Maintenance dredging works in the maritime access channels on the North Sea and in the seaports of Zeebrugge and Ostend
4. **Belgium**: Maintenance dredging works in coastal marinas of Nieuwpoort
5. **Belgium**: Maintenance dredging works in the maritime access channels between Wielingen and the Wintam sea lock
6. **Belgium**: Sweep dredging works for the removal of miscellaneous driftwood and floating objects, oil skimming off the water surface in the Sea Scheldt between the new sea lock at Wintam and the Dutch border
7. **Denmark**: Design and build of a 900 m long quay wall, precision dredging on Odense outer harbour
8. **Germany**: Maintenance of the port of Hamburg with transport to the North Sea
9. **Germany**: Maintenance dredging works in the Elbe
10. **Finland**: Dredging and reclamation works in the port of Oulu
11. **France**: Expansion of the port of Calais
12. **France**: Beach reclamation in Cannes
13. **France**: Dredging and reclamation works for the expansion of the container terminal at the Quai des Flandres, Dunkirk
14. **Iceland**: Maintenance dredging works in the port of Landeyjahöfn
15. **Iceland**: Maintenance dredging works in Dalvik
| 16. **Iceland:** Deepening works Saudarkrókur  |
| 17. **Iceland:** Dredging and reclamation works in Fjarðabyggð  |
| 18. **Latvia:** Deepening Liepaja  |
| 19. **Lithuania:** Maintenance dredging works in the port of Klaipeda  |
| 20. **Monaco:** Dredging of contaminated and uncontaminated sediments, rockfill and hydraulic sand pumping for reclamation of 6 ha in Monaco  |
| 21. **Sweden:** Environmental dredging in the port of Oskarshamn  |
| 22. **The Netherlands:** Design, engineering, construction and maintenance for 5 years of the Prins Hendrik sand dyke at Texel  |

**AFRICA**

| 23. **Benin:** Design and build of an underwater breakwater against coastal erosion  |
| 24. **Congo:** Dredging and hydraulic reclamation works for the eastern expansion of the port of Pointe Noire and construction of an environmental bank  |
| 25. **Ghana:** Design and build of a quay wall, extension of a breakwater and dredging works for the expansion of the port of Takoradi  |
| 26. **Morocco:** Construction of a new seaport in Nador, West Med Port Infrastructure Project  |
| 27. **Morocco:** Deepening works for container terminal quay 4 Tangiers Med 2  |

**MIDDLE-EAST**

| 28. **Qatar:** Dredging works in the port and navigation channel for the Doha Port Redevelopment Project  |

**ASIA**

| 29. **Bangladesh:** Dredging of four trial pits for Kutubdia Energy Hub  |
| 30. **India:** Dredging works in the port of Mumbai  |
| 31. **India:** Dredging works in the port of Tuticorin  |
| 32. **Indonesia:** Dredging and hydraulic reclamation works for the new port of Makassar  |
| 33. **Indonesia:** Maintenance dredging works in the access channel of Pulau Bay Port in Bengkulu  |
| 34. **Taiwan:** Maintenance dredging in the port of Mailiao  |
| 35. **Taiwan:** Dredging and hydraulic reclamation works in the port of Linkou  |
| 36. **Turkey:** Dredging of the navigation channel in the outer harbour of Filyos  |
| 37. **Turkey:** Dredging of a turning basin and access channel for IGA Fuel Port  |

**AMERICA**

| 38. **Argentina:** Concession for the deepening and maintenance of rivers Paraná and la Plata  |
| 39. **Argentina:** Maintenance dredging works in the port of Quequén  |
| 40. **Argentina:** Maintenance dredging works Bahia Blanca  |
| 41. **Argentina:** Maintenance dredging works Ushuaia  |
| 42. **Bahamas:** Dredging works for a new cruise berth for CocoCay Bahamas  |
| 43. **Belize:** Dredging works for an access channel to the port of Big Creek  |
| 44. **Brazil:** Dredging works for an access channel, turning basin and moorings for the port of Maceió |
45. **Brazil**: Maintenance dredging works Rio Grande
46. **Brazil**: Deepening and maintenance dredging works Mucuripe
47. **Colombia**: Maintenance dredging works Rio Magdalena Baranquilla
48. **Colombia**: Maintenance dredging works Compas Buenaventura
49. **Ecuador**: Dredging works in Puerto Bolivar
50. **Ecuador**: Guayaquil
51. **Ecuador**: Dredging and reclamation works for the Posorja port terminal
52. **Ecuador**: Engineering and dredging works for the port of Manta
53. **Jamaica**: Deepening of the access channel and renovation of quays in the port of Kingston
54. **Jamaica**: Dredging works for different ports in Jamaica
55. **Mexico**: Dredging and hydraulic reclamation works for the construction of a new port next to the existing port of Veracruz
56. **Panama**: Dredging and hydraulic reclamation works for the construction of the Amador Cruise Terminal
57. **Panama**: Dredging works for the expansion of the Panama Terminal, Bahía Las Minas Phase 1-A
58. **Panama**: Dredging works for the harbour basin of the Port of Balboa
59. **Panama**: Compensation dredging AES
60. **Peru**: Dredging works in the port of Paracas
61. **Uruguay - Argentina**: Deepening dredging works in the Uruguay river

**OCEANIA**
62. **Australia**: Maintenance dredging of moorings, harbour basin, access channel of Port Hedland
Jan De Nul Group offers specialized services for the installation of submarine structures for the oil, gas and renewable energy markets. Our offshore services comprise the preparation of the seabed, the installation, stabilisation and ballasting of all kinds of offshore structures, and lifting and salvage projects.

Installation of structures: we install submarine cables, umbilicals, foundations, platforms or even entire offshore wind farms. Because of an integrated approach from design to execution, Jan De Nul Group always offers a creative comprehensive solution.

A fleet with a number of very specialised multifunctional ships combined with international teams of highly educated experts delivers innovative solutions.

### INSTALLATION OF CABLES AND UMBILICALS

#### EUROPE
1. **Germany - The Netherlands (Deutsche Bucht Cable Transport):** AC-cable transport between Germany and The Netherlands
2. **Germany (Nord Stream 2):** Trench dredging and backfilling of two pipelines over a length of 50 km
3. **Germany:** Transport and installation of a high voltage cable for the offshore Trianel windfarm
4. **Germany:** Transport and installation of foundations and two high voltage cables for Borkum Riffgrund 2
   - [annualreport.jandenul.com](https://annualreport.jandenul.com), projects 2018
5. **Italy - Norway (North Sea Link):** DC-cable between Italy and Norway
6. **United Kingdom:** Transport and installation of two export cables for the offshore windfarm of Race Bank
   - [annualreport.jandenul.com](https://annualreport.jandenul.com), projects 2016

#### AFRICA
7. **Egypt:** Transport and installation of two umbilical cables for the West Nile Delta Project

#### MIDDLE-EAST
8. **United Arab Emirates:** Transport, installation and burial of three high voltage cables and ten medium voltage cables for the NASRII project
SEABED INTERVENTION WORKS, SUBSEA ROCKFILL INSTALLATION

EUROPE
9. Belgium - France - United Kingdom: Preliminary sweeping and rockfill for the installation of a HVDC cable for the Nemo Link project between Belgium and the United Kingdom
10. Denmark: Design, build, transport and installation of 2 GBF’s (Gravity Based Foundations) for the offshore windfarm of Kriegers Flak
   annualreport.jandenul.com, projects 2017
11. Germany (Wikinger Project): Rockfill works
12. Italy - Albania: Construction of landfall installations in Italy and Albania for a subsea trans-Adriatic pipeline
13. The Netherlands (Neptunus project): Rockfill works
14. Norway (Ula Gravelpad fortification): Rockfill works for pipeline
15. United Kingdom (Hurricane Lancaster project): Rockfill for the protection of umbilicals and pipelines
16. United Kingdom - Scotland (Beatrice OWF project): Rockfill works for pipeline
17. United Kingdom (Chrysaor Lomond Pipeline Bypass Project): Rockfill works for pipeline
18. United Kingdom (East Anglia One): Preliminary sweeping for the installation of an export cable
19. United Kingdom (Nexen Telford Production Pipeline Replacement): Rockfill works
20. United Kingdom (Hull Project): Rockfill works
21. United Kingdom (Hornsea Project): Rockfill works

AFRICA
22. Egypt (Al-Hamra Terminal): Intervention works seabed for the installation of a new SBM unit and lead-in for a 36” pipeline

MIDDLE-EAST
23. Qatar (Barzan Pipeline Project): Construction of landfall installation, trench dredging and backfilling of two 36” pipelines

ASIA
24. Indonesia (Tangguh Expansion Project): Trench dredging for a pipeline and rockfill
25. Philippines (Malampaya Gas Export Pipeline): Rockfill works
26. Vietnam (PLD project): Rockfill works

OFFSHORE RENEWABLE ENERGY MARKET

EUROPE
27. Belgium (Northwester 2 Offshore Windfarm): Design, engineering, purchase, production and installation of foundations, purchase and installation of rock protection, and installation of wind turbines for the windfarm
28. Germany: Installation and mechanical finishing of 32 wind turbines in the Trianel Windfarm Borkum II
29. Germany: Wikinger crane installation project with Taillevent

ASIA
30. Taiwan (Formosa 1 + 2): Design, engineering, purchase, production and installation of 20 WTG-foundations, 3 export cables and 17 inter-array cables
31. Taiwan: Purchase, transport and installation of the foundations and cables and wind turbines for 21 turbines + 5 year maintenance of the Changua Windfarm
Civil works: the cradle of the company Jan De Nul Group. Even today this is a very important part of the activities. From design and execution until financing and maintenance for years. We build locks, quay walls, roads, bridges, tunnels, wastewater treatment plants, sewages and architectural highlights.

The civil branch manages all modern building techniques. With the integration of Soetaert, Jan De Nul group has now become also an expert in complex foundation, trench shoring and land improvement techniques.

The group does not only have a long-time experience and an extensive range of machinery, but also the people and means for the creation of detailed designs. This means that Jan De Nul Group belongs to the absolute top.

OFFICE BUILDINGS

BELGIUM
1. Aalst (Penne Wijngaardveld): Office extension
2. Aalst: Extension and renovation shopping mall ‘De Bisschop’
3. Brussels: Renovation of office buildings Solidaris
4. Erembodegem (Skyline E40): Construction office building with underground car park
5. Verviers: Construction of new SWDE office buildings

SCHOOL BUILDINGS

BELGIUM
6. Anderlecht (Porta): New build school and refurbishment former church building
7. Opwijk: Primary school ‘De Boot’

RESIDENTIAL BUILDINGS

BELGIUM
8. Aalst (Mijlbekelaan): 25 flats + underground car park and bike shed
9. Aalst (Penne ‘t Overhamme): Construction 22 flats + underground car park and bike shed
10. Aalst (Station district): Construction of an office and parking building NMBS
11. Antwerp (Markgravelei): Construction of 13 flats + underground car park
13. Brussels: Construction of hotel B&B with 91 rooms and 3 flats at the Fosnylaan
14. Erembodegem (Bosrand): New build 12 flats
15. Izegem (Dac’Art): Construction of 61 flats with underground car park
16. Jambes (Magondeaux): Construction residential complex with 191 flats
17. Kortrijk (Project Broelkant): New build flats with underground car park for Immogra
18. Liège (Project ECO Résidence Leopold): New build apartment building (own project)
19. Ninove (Residentie Axelle): Construction flats and shop units

**HEALTH CARE BUILDINGS**

**BELGIUM**

20. Aalst (WZC Sint-Job): Replacement new build of residential care centre
21. Aalst (ASZ): Conversion delivery ward
22. Aalst (ASZ): New build Blok S Lots closed structural works and finishing
23. Baardegem (WZC De Faluintjes): New build + landscaping and finishing
24. Charleroi (Grand Hôpital): Preparation new build Grand Hôpital de Charleroi [JV with Franki]
25. Grâce-Hollogne (WZC La Boisellerie): Replacement new build
27. Jemeppe-sur-Sambre (WZC Van Cutsem): Extension
28. Lovendegem (WZC): Construction [45 rooms + 29 service flats]
29. Liège (University Hospital CHU Sart Tilman): Construction of a new building CIO-Unilab
30. Melle (ORSI): Construction of an expertise and innovation centre for robotic surgery
31. Oostende (Project Rialto for Senior Homes): Construction of 80 service flats, 7 commercial units, cafeteria and wellness
32. Oostende (WZC Lacourt): Extension existing RVT
33. Ransart (RVT Les chênes): New build
34. Sambreville (RVT ’Charmilles’): Extension
35. Soumagne (RVT): New build
36. Temploux (RVT): Renovation retirement home and construction residence with service flats
37. Tielrode (WZC Huize Vincent): Extension of retirement home
38. Varsenare (Stuyvenberg for Senior Homes): Construction of WZC [92 service flats, cafeteria, wellness and underground car park]
39. Vedrin (Manoir de la Quiétude): Renovation retirement home

**INFRASTRUCTURE WORKS**

**BELGIUM**

40. Antwerp (Schijnpoort): Infrastructure works, preparatory works for the Oosterweel link
41. Gaurain (CCB): Earthworks of circa 750,000 m³ per year for CCB
42. Jette (Spiegelplein): Construction of underground car park under the Spiegelplein
43. Luik (Herstal Alegro project): High voltage line + conversion stations

**RAILWAY INFRASTRUCTURE WORKS**

**BELGIUM**

44. Antwerp (Kennedy rail tunnel): Construction of an evacuation shaft
45. Antwerp (Spoorbakken): Realisation of 6 trough decks on the existing railway bridges over the Albert Canal
46. Brussels (Schuman-Josaphat): Construction of the railway station and tunnel
47. Dilbeek (Tucrail): Railway repair works
48. Oostkamp (Station): Removal station building for expansion of bedding
ROAD INFRASTRUCTURE

BELGIUM
49. Aalst (Nieuwe Tragelweg): Sewerage works, construction of a tunnel and road works for the Nieuwe Tragelweg
50. Aalst (Tunnel R41): Construction of underpass and two cycle tunnels
51. Aalter (Woestijnebrug): Construction new bridge and quay walls
52. Brussels (Leopold II-tunnel): Renovation and maintenance of Leopold II tunnel
53. Couvin (Tunnel): Construction of a tunnel under the railway line for bypass
54. Deurne (Brug van Azijn): Reconstruction and construction of quay wall
55. Kortrijk (Station district): Construction of bus and cycle tunnel
56. Liedekerke (Station district): Construction of road and cycle bridge

LUXEMBURG
57. Clervaux (Irbich): Construction of the viaduct
58. Luxemburg (Pont Passerelle): Widening/renovation of the bridge

WATER TREATMENT INFRASTRUCTURE

BELGIUM
59. Mons: Construction of a pumping station
60. Bree: Construction of a new water treatment plant
61. Hastière: Water treatment plant
62. Kinkempois: Construction of a new collector pipe and pumping station
63. Maurage: Construction of a new collector pipe and pumping station
64. Vorst (Geleitsbeek): Piping of the burn and construction of collector pipe

LUXEMBURG
65. Troisvierges: Construction of new main collector pipe

HYDRAULIC ENGINEERING, LOCKS AND QUAY WALLS

BELGIUM
66. Antwerp (Klein Schijn): Pumping station for Oosterweel link
67. Brussels: Picard bridge
68. Hamme (Ringdijk Bunt): Construction of a circular dyke around the future GOG ‘Bunt’
69. Harelbeke (Weir lock): Design and build of new lock, new quay walls [D&B]
70. Kerkhove (Weir): Renovation and doubling of existing weir on Upper Scheldt
71. Nieuwpoort: Storm surge barrier
72. Temse (Groot Broek): Construction of a circular dyke around the future de-poldering area
73. Temse (Klein Broek): Construction of a circular dyke around the future de-poldering area
74. Wandre: Renovation of the dam at Ile Monsin
75. Zeebrugge (Vandamme lock): Renovation of lock door 4

THE NETHERLANDS
76. Nieuwegein (Beatrixsluis): Construction of a new lock, widening of the Lek Canal and construction of a new mooring [DBFM]
annualreport.jandenul.com, projects 2018

PANAMA
77. Panama City (PSA Panama): Design and build of an 800 m long quay wall for the International Container Terminal Expansion of PSA Panama
annualreport.jandenul.com, projects 2016
### MAINTENANCE WORKS

**BELGIUM**

78. **Brugge (A11):** After financing, design and build, as well as 30-year maintenance.

79. **Couvin:** Construction of tunnel for bypass, also 15-year maintenance.

80. **Geel (Nord-South link):** Realisation of the Campine North-South link between Kasterlee and Geel, including 30-year maintenance.

### SCHOLEN VAN MORGEN

**BELGIUM**

81. **Aalter (Emmaüs instituut):** Construction and 30-year maintenance.

82. **Assenede (PSBLO Meetjesland):** Construction and 30-year maintenance.

83. **Erpe-Mere (BBBO De Brug):** Construction and 30-year maintenance.

84. **Ghent (Freinetmiddenschool):** Construction and 30-year maintenance.

85. **Lovendegem (BuBAo BuSO De Triangel):** Construction and 30-year maintenance.

86. **Roeselare (Vrije Middelbare School):** 30-year maintenance.

87. **Rupelmonde (Mercator):** Construction + landscaping and 30-year maintenance.

88. **Sint-Amands (Vrije Basisschool Zonnebloem):** Construction and 30-year maintenance.

89. **Sint-Denijs-Westrem (Vrije Basisschool Sint-Paulus):** Construction and 30-year maintenance.

90. **Sint-Niklaas (Technisch instituut Sint-Carolus):** Construction and 30-year maintenance.

91. **Veurne (VTI):** Construction and 30-year maintenance.

92. **Wilsele (Vrije Basisschool Bleydenberg):** Construction and 30-year maintenance.

93. **Zwevegem (Gemeenteschool Groene Kouter):** Construction and 30-year maintenance.

94. **Zwevezele (De Horizon):** Construction and 30-year maintenance.

### FOUNDATION AND SHORING TECHNIQUES

**BELGIUM**

95. **Aalst (Denderoever Pendelparking):** Anchored soilmix wall.

96. **Aalst (Nieuwe Tragelweg):** Sheet piling.

97. **Aalst (Zeebergkaai):** Sheet pile trench with shoring frames, partly placed in soilmix. Sheet pile walls and soilmix walls.

98. **Aalter (Beernem-Nevele):** Anchored interpile sheeting for bridge construction.

99. **Anderlecht (Parking Ceria):** Permanent anchored sheet pile trench.

100. **Anderlecht (Porta):** Anchored soilmix wall.

101. **Anderlecht (Erasme):** Soilmix walls and soilmix barrettes.

102. **Anderlecht (Prévinairestraat):** Anchored temporary sheet pile shoring.

103. **Antwerp (Klein Schijn):** Anchored interpile sheeting.

104. **Antwerp (Oosterweelverbinding):** Diaphragm walls, thickness 80 and 120 cm.

105. **Antwerp (Binnenvaert):** Anchored soilmix wall.

106. **Antwerp (Ijzerlaan):** Laying of sheet piling and tubular piling.

107. **Antwerp (LPA (Local Police Antwerp)):** Anchored interpile sheeting trench.

108. **Bilzen (Fonteinstraat):** Interpile sheeting trenches.

109. **Boortmeerbeek (Shell):** Sheet pile trench with shoring.

110. **Borgloon (Guldenbodemlaan):** Shoring in soilmix walls. Single-mix piles.

111. **Braine l’Alleud (PolyPeptide):** Sheet pile trench with shoring.

112. **Braine-le-Château (ZIT Brancard):** Sheet piling.
113. **Bree (RWZI):** Anchored interpile sheeting walls
114. **Brussels (Thrust boring of sewers Havenlaan):** Sheet pile trenches, thrust boring, hydraulic engineering works for outflow
115. **Brussels (site CCB):** Sheet piling with anchors – concrete works
116. **Brussels (60 flats Woluwelaan):** Interpile sheeting
117. **Brussels (Erasmus):** Sheet piling in soilmix - anchors
118. **Brussels (Tour & Taxis Parking):** Anchored soilmix trench
119. **Buggenhout (Tisselt):** Miscellaneous sheet pile trenches
120. **Couvin (tunnel):** Anchored secant pile walls and interpile sheeting, realisation of piezometers with anchor test
121. **Duffel (RWZI):** Sheet pile trenches
122. **Erembodegem (Skyline E40 FII):** Anchored soilmix walls, micro-piles
123. **Esneux (Tilff: N633: Replacement of the Ourthe bridge):** Kelly piles into the rock layer
124. **Etterbeek (Colruyt):** Anchored soilmix walls for new Colruyt
125. **Flémalle: Secant pile trenches
126. **Gaurain-Ramecroix: Sheet pile wall installation
127. **Ghent (Collector J. Kennedylaan phase B):** Sheet pile trenches with shoring frames
128. **Ghent (Sassekaai):** HDI-columns
129. **Geraardsbergen (Oude Steenweg):** Interpile sheeting
130. **Halle (Stroppen):** Anchored soilmix walls
131. **Harelbeke (Lock):** Micro-piles, stranded anchor
132. **Hasselt (Sportschool G01):** Temporary water retaining sheet pile wall
133. **Herstal (Rue Wérihet):** Sheet piling
134. **Herve (Beauvallon):** Temporary sheet pile wall
135. **Izegem (Dac’art):** Supply and realisation of ground anchors
136. **Kerkhove: Supply and installation of stranded anchors
137. **Knokke-Heist (Momentum):** Laying of an armoured and anchored CSM wall as soil and water retaining shoring
138. **Kontich: Sheet pile trench for buffer basin
139. **Kortrijk (Station district):** Supply and laying of stranded anchors, magnetic investigation
140. **Kruibeke (Removal culvert De Vliet Dijkstraat):** Sheet piling and shoring
141. **Lebbeke (Bellestraat): Sheet pile trench
142. **Lommel (wet well):** Laying of permanent sheet pile wall
143. **Maria-Aalter (Knesselaerestraat):** Removal of sheet piling
144. **Mortsel (Hendrik Kuypersstraat):** Secant pile wall
145. **Nieuwpoort (Storm surge barrier):** Sheet pile wall, tubular piles and combi-wall
146. **Oostende (Harbour):** Laying of 2 tubular piles
147. **Oostende (Quay 605):** Supply and installation of 3 tubular piles for pontoons
148. **Oostende (Rialto):** Anchored soilmix trench, tie-rods and HDI columns for support of existing facade wall
149. **Oostkamp (Station building):** Laying of temporary grout injection anchors
150. **Opwijk (Collector Mazenzele):** Sheet pile trench for pressing
151. **Poperinge (Watou):** Temporary sheet pile wall
152. **Rion des Landes (Pipeline Grands Projets):** Sheet pile trenches with shoring frames
153. **Sint-Katelijne-Waver:** Miscellaneous shoring in sheet pile wall with shorings
154. **Sint-Pieters-Leeuw (collector Zaanbeek phase 2):** Realisation of soilmix walls
155. **Temse (Siegfried Buytaertdreef):** Permanent sheet piling
156. **Temse (Tielrode):** Anchored interpile sheeting
157. **Tournai: Kelly piles into the rock layer, anchoring, micro-piles, sheet pile wall**
158. **Turnhout (TURNOVA):** Anchored soilmix trench, bored piles, micro-piles
159. **Ukkel (Ukkelbeek D01):** Laying of sheet piling
160. **Wemmel:** HDI-grout piles
161. **Wonck:** Sheet pile trench with shoring
162. **Wonck:** Secant pile trench with concrete ring girder
163. **Zeebrugge (Nemo-link):** Temporary sheet pile construction with shoring. Realisation of the permanent concrete construction
164. **Zeebrugge (Polder THV de Kustlaan):** Temporary sheet pile construction with shoring
165. **Zeebrugge (Strand Stevin Modular Offshore Grid):** Temporary sheet pile construction with shoring

**FRANCE**
166. **Bordeaux (project RGM):** Secant pile trench
167. **Strasbourg:** Secant pile trench

**LUXEMBURG**
168. **Luxemburg (Troisvierges):** Micro-piles

**UNITED KINGDOM**
169. **Londen (UK Tideway):** Guide girders in soilmix spine-beam segments for interpile sheeting trench
170. **United Kingdom (Race Bank):** Sheet pile walls
ENVIRONMENTAL WORKS

Subsidiaries Envisan and PSR Brownfield Developers are the testing ground of Jan De Nul Group for innovative processing techniques and environmental technology solutions, and even more: a springboard to a circular world.

The redevelopment of contaminated sites in situ and off site, the removal and treatment of polluted sediments from harbours, canals and waterways, the processing of excavated soils, the treatment of polluted groundwater and the sustainable development of brownfields create win-win situations for both the environment and the client.

The multidisciplinary teams within Jan De Nul Group represent an integrated approach: from design to execution with own equipment and own processing centres. Moreover, the environmental leg of the group is the ideal partner for the reallocation of industrial sites and unexploited/underused sites (brownfields), both at national and international level.

ENVIRONMENTAL DREDGING AND SEDIMENT PROCESSING

BELGIUM
1. Antwerp (Amoras): Management and operation of the installation for mechanical dewatering, recycling and storage of sediments originating from the Port of Antwerp
2. Ghent-Terneuzen (Maritime Access): Environmental dredging for the maintenance of the navigation channel of the Ghent-Terneuzen Canal. Dredging and processing of 100,000 m³ sediments per year
3. Ghent-Terneuzen (Maritime Access): Maintenance dredging works in the Ghent-Terneuzen Canal. Dredging and processing of 80,000 m³ sediments as well as dredging and removal of 30,000 m³ sediments to Amoras
4. Ivoz-Ramet (Sofico): Deepening dredging works and removal and processing of sediments
5. Saint-Ghislain (Spaque): Cleaning dredging works of the Hene
6. Wallonie Ouest (SPW): Maintenance dredging works in Wallonia

FRANCE
7. Valenciennes (VNF): Maintenance dredging works of the Scheldt and the Sensée Canal
SWEDEN
8. **Oskarshamn**: Environmental dredging in the Port of Oskarshamn, dredging and processing of 400,000 m³ contaminated sediments with running of the landfill site 

SOIL AND GROUNDWATER REMEDIATION

BELGIUM
9. **Aalst (Gilbos)**: Soil remediation works by excavation and processing of the contaminated soil
10. **Aartselaar (Cofely Fabricom)**: In-situ remediation of the site polluted with VOCs using multi-phase extraction
11. **Anderlecht (Autajon)**: Extraction and treatment of polluted groundwater
12. **Antwerp (Vopak)**: Pump trial, pilot trial and design and development of control measures for a groundwater plume of chlorinated solvents
13. **Antwerp (LBC Tank Terminal)**: Excavation and thermal processing of contaminated soil in tank park
14. **Antwerp (Antwerp Dry Docks)**: Installation and running of water treatment plant
15. **Beernem (Nordica)**: In-situ remediation using 'pump and treat' and soil vapour extraction
16. **Borgerhout (Texaco)**: In-situ soil and groundwater remediation of an operational petrol station using groundwater lowering and soil vapour extraction
17. **Chapois (BEP Environnement)**: Capping of old landfill site
18. **Chièvres (ERM)**: Soil remediation works by excavation and processing of the contaminated soils
19. **Cuesmes (Spaque)**: Soil remediation through excavation
20. **Brussels (Carcoke Marly)**: Soil and groundwater remediation of former gasworks
21. **Deerlijk (Fabrimode)**: Remediation of a site polluted with mineral oils, caused by a leak in an underground gasoil storage tank
22. **Dendermonde (Philips)**: Soil and groundwater remediation of chlorinated solvents through excavation and enhanced reductive de-chlorination (ERD)
23. **Erembodegem (Minit)**: Soil and groundwater remediation via compressed air injection and soil vapour extraction
24. **Ghent (Tondelier)**: Remediation of a heavily contaminated site of a former gasworks
25. **Ghent (ABC)**: Groundwater remediation via floating layer removal and groundwater extraction and decontamination
26. **Ghent (Lummerzeim)**: Remediation of a former tar plant
27. **Gijzegem (Vlabotex)**: Soil and groundwater remediation of VOC contamination via excavation, soil vapour extraction and bio-stimulation
28. **Hamont-Achel (Punch Metals)**: Soil and groundwater remediation and groundwater plume control
29. **Haren-Buda (Electrabel)**: Remediation of a former industrial site using excavation with stabilisation measures
30. **Herk-De-Stad (OVAM)**: Soil and groundwater remediation using excavation and treatment of the polluted soils and installation of an injection network and injection of carbon sources for stimulated anaerobic de-halogenation
31. **Jambes (Magondeaux)**: Management and deposit of contaminated soils
32. **Kortrijk (Barco)**: Soil and groundwater remediation for brownfield site using control measures, excavation, pump & treat and enhanced reductive de-chlorination (ERD)
<table>
<thead>
<tr>
<th>No.</th>
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<tbody>
<tr>
<td>33.</td>
<td>Liège (CHC asbl)</td>
<td>Groundworks and internal on-site transport of lightly polluted soils</td>
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<tr>
<td>34.</td>
<td>Machelen (Pegasus Park)</td>
<td>Excavation of former landfill site and high-vacuum extraction as part of floating layer removal</td>
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<tr>
<td>35.</td>
<td>Mechelen (Dupont de Nemours)</td>
<td>Removal of pure product with an active skimmer system</td>
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<td>36.</td>
<td>Menen (Luxefoam)</td>
<td>Groundwater remediation via pump &amp; treat of a groundwater plume contaminated with Freon-11</td>
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<td>37.</td>
<td>Oostende (Texaco)</td>
<td>Excavation and high-vacuum extraction as part of floating layer removal</td>
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<tr>
<td>38.</td>
<td>Oud-Turnhout (Vlabotex)</td>
<td>In situ chemical oxidation using ozone and peroxide injection</td>
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<td>39.</td>
<td>Dendermonde (Garage Meert)</td>
<td>Excavation of contaminated soil</td>
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<tr>
<td>40.</td>
<td>Pittem (Devoldere)</td>
<td>Excavation, removal and processing of contaminated soils and pump &amp; treat using high-vacuum extraction and water treatment plant</td>
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<tr>
<td>41.</td>
<td>Schaarbeek (Tuc Rail)</td>
<td>Soil and groundwater remediation of mineral oil using excavation with stabilisation measures (sheet piling)</td>
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<tr>
<td>42.</td>
<td>Schoonaarde (Allnex)</td>
<td>Remediation of soil and groundwater contamination consisting of DNAPL, naphthalene, btx and tar products using pure product extraction</td>
</tr>
<tr>
<td>43.</td>
<td>Sint Niklaas (OVAM)</td>
<td>Soil and groundwater remediation using excavation and processing of contaminated soil</td>
</tr>
<tr>
<td>44.</td>
<td>Tongeren (OVAM)</td>
<td>Pilot trial for the remediation of a groundwater plume contaminated with chlorinated solvents via enhanced reductive dechlorination (ERD)</td>
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<td>45.</td>
<td>Vilvoorde (Vlabotex)</td>
<td>In-situ remediation of VOCI contamination using compressed air injection and soil vapour extraction</td>
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<td>46.</td>
<td>Zeebrugge (Carcoke Serendipity)</td>
<td>Soil remediation of former cokes plant</td>
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<td>47.</td>
<td>Zelzate (VFT)</td>
<td>Soil and groundwater remediation of a tar plant via pump &amp; treat and soil vapour extraction</td>
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<tr>
<td>48.</td>
<td>Zelzate (CR2)</td>
<td>Remediation of a former phosphoric acid and cokes plant in Ghent/Evergem and Zelzate and redevelopment as business park</td>
</tr>
<tr>
<td>49.</td>
<td>Maubeuge (Garage Citroën)</td>
<td>Demolition works and soil remediation of former garage</td>
</tr>
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**FRANCE**

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<tr>
<td>50.</td>
<td>Antwerp (Indaver)</td>
<td>Setting up of DPA3V landfill site consisting of 3 cells: groundworks, dykes, foil and drainage package consisting of mats, sand and drainage pipes</td>
</tr>
<tr>
<td>51.</td>
<td>Evergem/Zelzate (Terranova)</td>
<td>Remediation of former gypsum landfill and operation of a new CAT2 landfill site and energy park</td>
</tr>
<tr>
<td>52.</td>
<td>Moen (Imog)</td>
<td>Capping of a new part of the landfill site</td>
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**WASTE AND UPCYCLING**

**BELGIUM**

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<td>53.</td>
<td>Brussels</td>
<td>Operation of a temporary storage centre (TOP) for non-hazardous soil</td>
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<td>56.</td>
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<td>57.</td>
<td>Zwevegem/Moen</td>
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**SOIL AND SEDIMENT TREATMENT CENTRES**

**BELGIUM**

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</tbody>
</table>
58. **Framework agreement Farys**: Processing of soils and canal silt

**FRANCE**
59. **La Seyne-sur-Mer**: Operation of the soil and sediment processing centre CPEM
   - annualreport.jandenul.com, projects 2018

**BROWNFIELD DEVELOPMENT**

**BELGIUM**
60. **Aalst (Kaai District)**: Urban renewal project of the station district into a mixed, multifunctional use
61. **Diegem (Desmedt)**: Redevelopment of the old sand quarries into a residential project
62. **Evergem (Bayer)**: Redevelopment of the old Bayer site into new business real estate
63. **Ghent (Filature du Rabot)**: Monitoring and implementation of soil remediation works
64. **Ghent (Regional Business Park Ghent North)**: Redevelopment of former tar works Lumco into Regional Business Park Ghent North
65. **Haren (Castrol)**: Redevelopment of former Eternit factory site into tailor-made SME units
66. **Izegem (Dac’art)**: Redevelopment of former animal feed production unit Dacar-Michiels and neighbouring plot into residential project Dac’art
67. **Knokke (Albertplein - renovation of the place ‘Matuvu’)**: Construction of 2 floor underground car park, renovation of existing utilities and sewerage, as well as the complete above-ground redevelopment of the public square, including a hospitality business
68. **Kortrijk (Park 1302)**: Redevelopment of former Barco production site into residential project ‘Park 1302’
69. **Liège (Coroneuse)**: Urban renewal project located at the confluence of Meuse and Albert Canal. Redevelopment of a 25 hectare district where the world exhibition took place in 1939 into a new eco-district
70. **Machelen (Sanimet)**
71. **Mechelen (Inofer)**: Redevelopment of former rubber plant site and metalworks into mixed use site
72. **Rijmenam (Meurop)**: Redevelopment of former cabinetmaking site Meurop into mixed use site
73. **Vilvoorde (Decor Oyenbrug)**: Redevelopment of former hangar into new-build business project
74. **Vilvoorde (4 Fonteinen)**: Monitoring and implementation of soil remediation works for brownfield and urban renewal project
75. **Vilvoorde (AIBV)**: Redevelopment of former car inspection site into ‘build to suit’ business real estate