Document title:

PROJECT FILE

Project:

FRAMEWORK AGREEMENT BEACH REPLENISHMENTS FLEMISH COAST

SPECIFICATIONS NO. 16EH/19/01 – CONTRACT ASSIGNMENT 3

BEACH REPLENISHMENT RAVERSIJDE-MARIAKERKE

Document no.: JDN0101.CO2PL.1.0 project file H2.2020
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2.0	18/01/2020	Addition of reduction measures	DUY	RHA	BP	
1.0	13/08/2020	Review by head of department	BP	DUY	RHA	
0.0	13/08/2020	First draft	DUY	RHA	BP	
Rev.	Date	Description of revision	Prepared	Checked	Approved	

0 INTRODUCTION

On 26.09.2019, a general framework contract with a duration of 4 years was issued to potential tenderers.
5 candidates were selected, with Jan De Nul as the preferred contractor.

On the basis of this framework agreement, several individual contract assignments will be entrusted to the selected candidates.

For each individual assignment, the specific conditions are communicated: location, type of profile, extraction zone, execution term and minimum weekly production.

This assignment is the 3rd contract assignment awarded within the scope of the framework agreement and has the following specific conditions:

Parameter	Pre-set specifications
Sections	97 – 107 (+/- 3,443m)
Length of on-shore pipeline	3,443m
Profile	+7.5m TAW > 1/20 to +5.0m TAW > 1/45 up to connection
Extraction zone	4a
Execution term	08.02.2021 – 05.04.2021
Minimum weekly production	60,000m³/week

The start of the preparatory works is scheduled for the January 2021.

0.1 PROJECT DETAILS

Name	Beach replenishment Raversijde-Mariakerke
Description	Executing beach replenishment works on Flemish coasts
Specifications number	16EH/19/01 - File no. 219.000/B3
Client	Agentschap Maritieme Dienstverdeling & Kust (Maritime Services & Coast Agency)
Award date	28 July 2020 (Start of works in February 2021)
Execution period	08.02.2021 – 05.04.2021

0.2 PARTIES INVOLVED

Jan de Nul NV is the main contractor of this project and responsible for:

- Deployment of trailing suction hopper dredger ('TSHD');
- Deployment of floating auxiliary equipment ('FLAP');
- Deployment of beach equipment ('LBP'): excavators, bulldozers, wheel loaders;
- Project management and daily management.

No subcontractors have been engaged.

0.3 PLANNED EQUIPMENT AND PERIODS OF DEPLOYMENT

Equipment	Deployment period
TSHD Pedro Álvares Cabral	February 2021 – march 2021
Multicat DN43	January – March 2021
1 dragline Hitachi	January – March 2021
2 bulldozers Caterpillar	January – March 2021
1 wheel loader Caterpillar	January – March 2021

1 PROJECT DATA

1.1 IDENTIFICATION OF ENERGY AND EMISSION FLOWS [2A]

List of significant energy/emission flows:

Energy flow	Scope
Fuel consumption of trailing suction hopper dredger	1
Fuel consumption of multicat DN43	1
Fuel consumption of beach equipment	1
Fuel consumption of other floating equipment	1
Electricity consumption of construction site office container	2

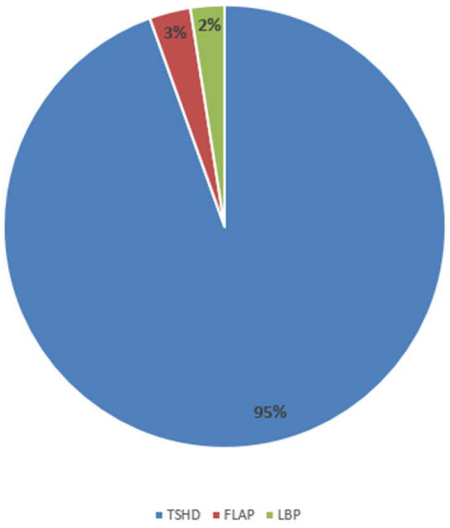
List of excluded energy/emission flows:

Energy flow	Reason
Transport with cars (execution)	Is monitored at corporate level
Transport with cars (crew)	Is monitored at corporate level
Air miles (crew)	Is monitored at corporate level

1.2 CO_2 FOOTPRINT AND TRENDS

1.2.1 REFERENCE CO_2 FOOTPRINT

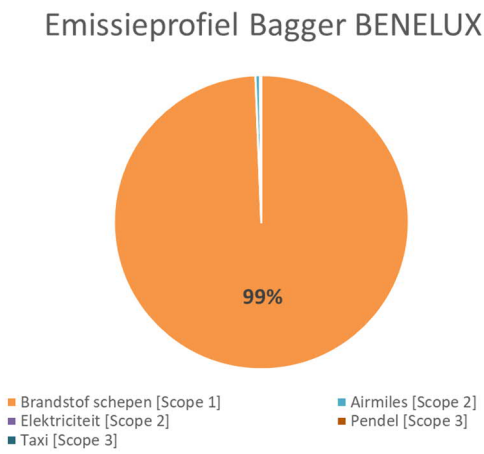
On the basis of the tender calculation, a reference CO_2 footprint was drawn up:



1.2.2 ACTUAL CO_2 FOOTPRINT OF PROJECT

The works have just been awarded and are expected to start in the February 2021. After completion of the works, the actual CO_2 footprint will be calculated.

1.2.3 COMPARISON EMISSION PROFILE ORGANISATION – PROJECT



Emission profile Dredging Benelux

Fuel of vessels (Scope 1) Air miles (Scope 2)
Electricity (Scope 2) Commuting (Scope 3)
Cabs (Scope 3)

The energy/emission profile of this project will be compared with the emission profile at corporate level for the dredging department Benelux.

2 REDUCTION

2.1 LIST OF REDUCTION MEASURES FOR THIS PROJECT

ID	Title	Reduction measure	Implementation of reduction measures on project
	Alternative fuels	Replacing fossil fuels with renewable second generation biofuels can lead to emission reductions of up to 90%. The condition is developed supply chain (mainly available in EU, less / not ROW).	Trailing suction hopper dredger Pedro Alvarez Cabral will carry out this project using 100% second-generation biofuels. This reduces the ship's CO_2 emissions by 80% to 90%.
0101-1	Choice of vessel	Considering an alternative vessel selection at the start of the works >> the best vessel for the project must be selected on the basis of emission and €.	Chosen for TSHD with larger hopper volume and use of longer sinker pipe (instead of smaller hopper volume and shorter sinker pipe).
0101-2	Optimisation of shipping route extraction zone – beach	Optimisation of shipping route extraction zone – beach/dump: all technically feasible shipping routes must be mapped, with additional surveys where necessary to ensure the shortest possible shipping route in all circumstances (weather, tide, daylight) ==> lowest emission. Dredging away shallows.	
0101-3	Reduced navigation and anchoring speed	Reduced navigation and anchoring speed: particularly for BE replenishments with 1 voyage/tide: no need to navigate full speed and then anchor, maintaining the most economical speed is recommended	
0101-4	Deploying anchors in case of strong currents	Deploying anchors in case of strong currents: only do so if necessary, otherwise not: reduction in CO_2 due to positioning near anchor will quickly eliminate possible reductions because of extra manoeuvring of the vessel	
0101-5	Heavy equipment	Heavy equipment is only used during pressing works; beyond that, they should be switched off as much as possible to the extent feasible for the work. Saving CO_2 emissions by hiring workmanship and outsourcing	

		works to subcontractors instead of renting equipment.	
	Green energy	Purchase of green electricity and/or guaranties of origine.	Office containers are supplied with green electricity.
	Heavy equipment	Monitoring individual equipment on fuel consumption and number of operating hours.	
	Heavy equipment	Purchase more efficient and less polluting equipment.	All beach heavy equipment meet Tier IV of European emission legislation.
	Heavy equipment	Start-stop system on heavy equipment. Start-stop system used for> 75% of the number of mobile machines (cranes, excavators, etc.).	Machines automatically stop after 15 minutes.
	Energy reducing office container	All office containers used meet the requirements of the 2012 Building Decree for temporary buildings.	Office containers used for executive personnel are energy-efficient containers.

Source: List of measures Jan De Nul

2.2 OTHER MEASURES ONLY APPLICABLE TO THIS SPECIFIC PROJECT

- Reduction of CO_2 emissions by at least 15% compared to tender;

The reduction measures that have so far only been specific to this project will be added to the cross-departmental list of measures for Jan De Nul. In this way, they will be considered for all upcoming projects (with award advantage).

3 TRANSPARENCY

For the communication on our CO_2 performance for the entire Benelux, we refer to the cross-departmental communication plan << CO_2PL-Jan De Nul-3C2 – Communication plan >>.

Specifically for this project, we will also communicate on the CO_2 performance, both internally and externally. The form of communication, stakeholders, parties responsible and frequencies are summarised in the tables below.

3.1 INTERNALLY:

Form of communication	Stakeholders	Party responsible	Frequency
Project introduction	Name & personnel	Employee performing the task	At the start of the works
Toolbox meetings	Name & personnel	Employee performing the task	Monthly
Monthly report	On-site project team	Employee performing the task	Monthly
BNL project meeting	Project team BNL	Employee performing the task	Half-yearly
Feedback in steering committee	Steering group BNL BAGGER	Head of department	Monthly

3.2 EXTERNALLY:

Form of communication	Stakeholders	Party responsible	Frequency
Project reporting	Client	Project Manager	Upon delivery
Publication of this project report on the JDN website	Interested stakeholders	Energy & Emissions QHSSE Advisor	Half-yearly
Posting by means of banners & Heras information panels on the project beach	Interested stakeholders	Employee performing the task	Continuously
Social media: Linkedin, Instagram, Facebook **	Interested stakeholders	Head of department	ca. 2x / project duration
Experience center	Interested stakeholders	Operational superintendent	Continuously

Press release “First 100% sustainable beach nourishments are a first for Belgium”	Interested stakeholders	Head of department	21 january 2021

* Note: Half-yearly frequency is maintained as long as activities can be reported on. If no activities take place in a semester, no reporting will be done.