



**Jan De Nul**  
GROUP

Project file

0126 Beach replenishments Flemish Coast

REVISION 1.0



Document title:

## PROJECT FILE

Project:

### FRAMEWORK AGREEMENT BEACH REPLENISHMENTS FLEMISH COAST


### SPECIFICATIONS NO. 16EH/20/43 – CONTRACT ASSIGNMENT 1

### BEACH REPLENISHMENT MARIAKERKE – OSTEND

Document no.: JDN0126.CO2PL.0.0 project file H1.2022

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1.0	10/06/2022	Fine-tuned with calculations JDN Group	DEPM	RHA	BP	
0.0	04/04/2022	First draft	DEPM	RHA	BP	
Rev.	Date	Description of revision	Prepared	Checked	Approved	

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## 0 INTRODUCTION

On 26.05.2021, a general framework contract with a duration of 4 years was issued to potential tenderers. Five candidates were selected, with Jan De Nul being the tenderer with the highest total of points (99.5/100)

On the basis of this framework agreement, several individual contract assignments are 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 1<sup>st</sup> contract assignment awarded within the scope of the framework agreement.

Preparatory works started on 24 Jan 2022, with the first cargo of sand being reclaimed on the 15<sup>th</sup> of February.

### 0.1 PROJECT DETAILS

Name	Beach replenishment Raversijde-Mariakerke
Description	Executing beach replenishment works on Flemish beaches.
Specifications number	16EH/20/43 - <b>File no. 220.210/B1</b>
Client	Agentschap Maritieme Dienstverdeling & Kust (Maritime Services & Coast Agency)
Allocation decision	19 October 2021 (start of works in February 2022)
Execution period	24.01.2022 – 06.04.2022 (including mobilisation/demobilisation)

### 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 DEPLOYED EQUIPMENT AND PERIODS OF DEPLOYMENT

Equipment	Deployment period	Abbreviation
<i>Trailing suction hopper dredger Alexander von Humboldt</i>	01.02 – 05.04.2022	TSHD
<i>Multicat DN43</i>		FLAP
<i>2 draglines Hitachi</i>		LBP
<i>3 bulldozers Caterpillar</i>		

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1 wheel loader Caterpillar		
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# 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
Deployment of floating auxiliary equipment (Multicat)	1
Fuel consumption of beach equipment	1
Power consumption of construction site shed	2

List of excluded energy/emission flows:

Energy flow	Reason
Transport with cars (execution)	Is monitored at corporate level and included in common parts
Transport with cars (crew)	
Air miles (crew)	

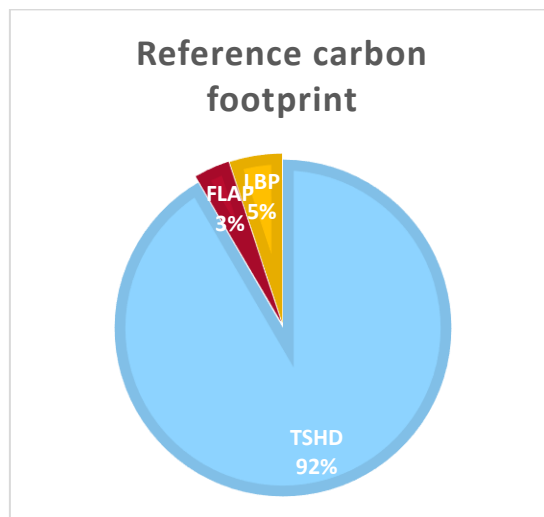
Totaal	Scope 1	781	ton CO2		
Totaal	Scope 1 & 2	781	ton CO2		
				Fractie Scope 1	Fractie Totaal Scope 1 & 2
<b>Scope 1</b>	Aardgas	0	ton CO2	0.0%	0.0%
	Brandstof schepen	664	ton CO2	85.0%	85.0%
	Brandstof firmawagens	op bedrijfsniveau	ton CO2	0.0%	0.0%
	Diesel (EUR) (LBP/intern Verkeer)	117	ton CO2	15.0%	15.0%
	Propaangas	0	ton CO2	0.0%	0.0%
	<b>Totaal</b>	<b>781</b>	<b>ton CO2</b>	<b>100.0%</b>	<b>100.0%</b>
				Fractie Scope 2	Fractie Totaal Scope 1 & 2
<b>Scope 2</b>	Airmiles	op bedrijfsniveau	ton CO2	0.0%	0.0%
	Brandstof privé-voertuigen		ton CO2	0.0%	0.0%
	Elektriciteit	0	ton CO2	100.0%	0.0%
	Warmterecuperatie		ton CO2	0.0%	0.0%
	<b>Totaal</b>	<b>0</b>	<b>ton CO2</b>	<b>100.0%</b>	<b>0.0%</b>

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## 1.2 CARBON FOOTPRINT AND TRENDS

### 1.2.1 REFERENCE CARBON FOOTPRINT

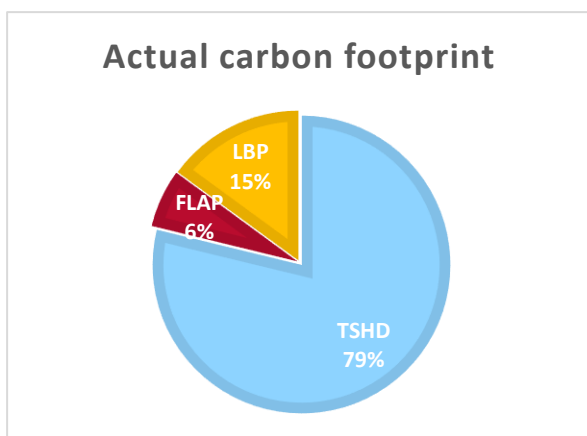
Based on the tender calculation, a reference carbon footprint was drawn up:



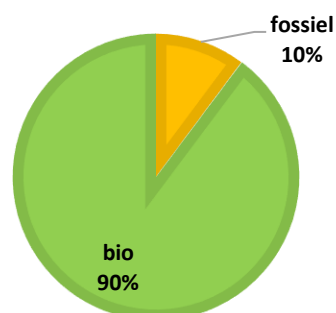
The total reference carbon footprint amounted to **3,290 tonnes of CO<sub>2</sub> equivalents**.

### 1.2.2 ACTUAL CO<sub>2</sub> FOOTPRINT OF PROJECT

Due to, amongst other things, the use of biofuels and operational optimisations, the total CO<sub>2</sub> emission amounted to a mere **781 tonnes of CO<sub>2</sub> equivalents**, which is **76% lower than the reference carbon footprint**.

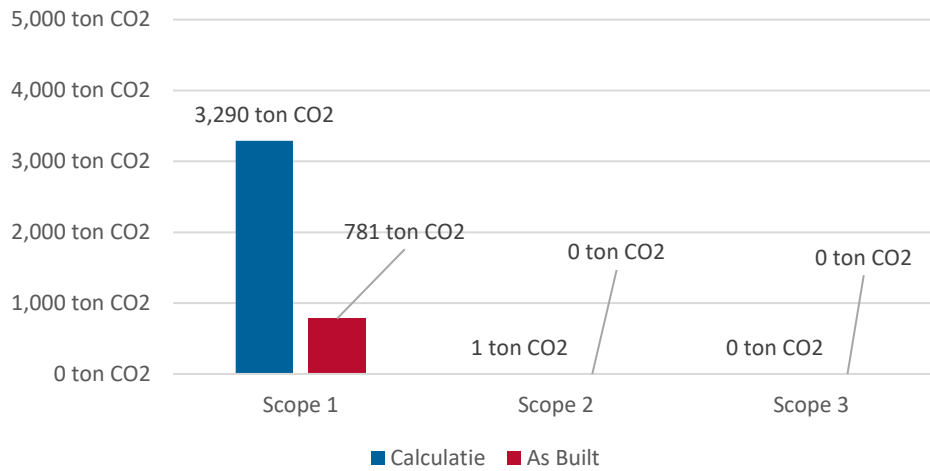


#### Ratio biofuel/fossil fuel

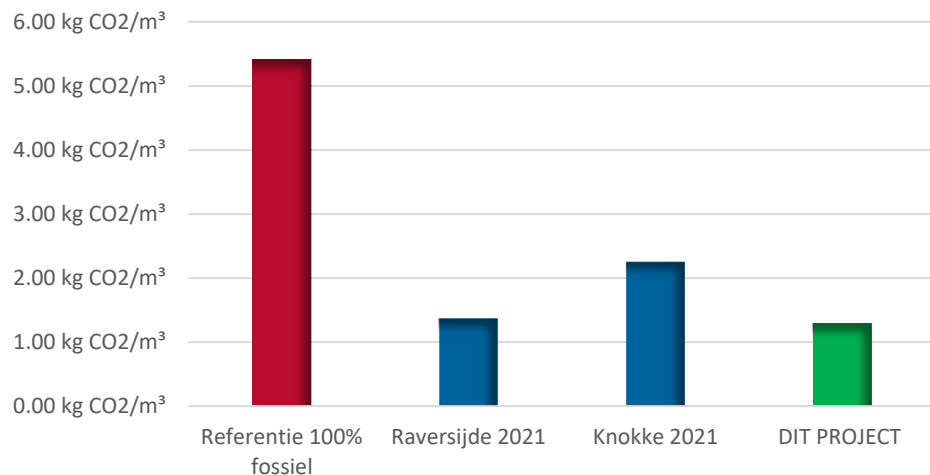




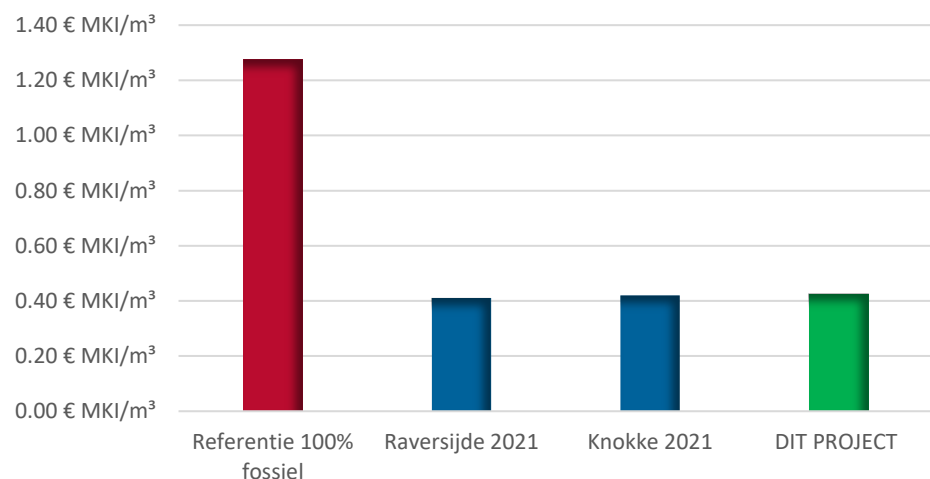
### Project emissions




### Actual CO<sub>2</sub> emission



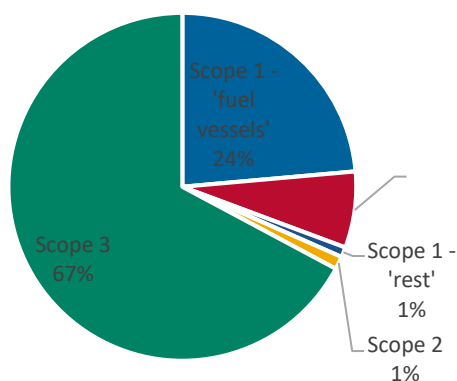
### Actual MKI (environmental cost indicator)



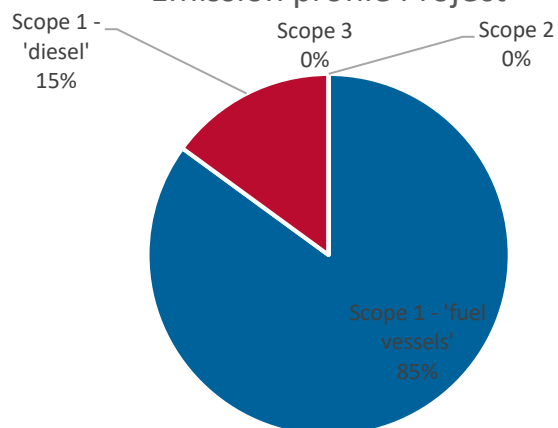
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### 1.2.3 COMPARISON EMISSION PROFILE ORGANISATION – PROJECT

Emission profile Jan De Nul




Emission profile Project



Significant deviations:


- No scope 3 emissions on project

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## 2 REDUCTION

### 2.1 LIST OF REDUCTION MEASURES FOR THIS PROJECT

ID	Title	Concrete optimisation	Method of implementation of the measure during project
0126-1	Alternative fuels	Replacing fossil fuels by renewable second-generation biofuels can lead to emission reductions of up to 90%.	Trailing suction hopper dredger Alexander von Humboldt executes the projects on 100% second-generation biofuels.
0126-2	Optimisation of shipping route extraction zone – beach	All technically feasible shipping routes are continuously mapped, with additional surveys where necessary to ensure the shortest possible shipping route in all circumstances (weather, tide, daylight). Deepening existing shallows (through dredging).	In early February, the shallowest point of the shipping route was surveyed and deepened by dredging, which enables optimising the vessel load.
0126-3	Reduced navigation and anchoring speed	Reduced navigation and anchoring speed: there is no need to navigate full speed and then anchor, maintaining the most economical speed is recommended	Weekly assessment of fuel consumption by activity included in weekly report of TSHD.
0126-4	Dumping machines	Dumping machines are only used when sand is pumped ashore; beyond that, they are switched off as much as possible to the extent feasible for the works.	Breaks are taken in construction site sheds - not in idling machines.
0126-5	Sustainable energy	Purchase of green electricity and/or electricity with a Guarantee of Origin (GVO)	Ecological construction site shed were powered by green electricity.
0126-6	Equipment	Monitoring of fuel consumption and number of running hours of individual mobile machines.	Daily reporting of consumption and running hours per individual machine. Conclusions included in end-of-work report and shared with technical department.
0126-7	Equipment	Deployment of more economical and less polluting machines.	Operational set of machines met Tier IV f standard.

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0126-8	Equipment	Start-stop system on mobile equipment.	Machines are switched off automatically after 15 minutes.
0126-10	Reduction of energy consumption in construction site shed	All construction site sheds meet the requirements of the 2012 Building Decree for temporary buildings.	All construction site sheds used for operational personnel were energy-efficient construction site sheds.

Source: List of measures Jan De Nul


## 2.2 OTHER MEASURES THAT ARE ONLY APPLICABLE TO THIS SPECIFIC PROJECT

- **15% reduction of CO<sub>2</sub> emissions during realisation**
- **Deployment of dry earth-moving machines with maximum emission of**
  - **Nitrogen (NO<sub>x</sub>) 0.4 g/kWh**
  - **Fine dust (PM) 0.025 g/kWh**
  - **Hydrocarbon (HC) 0.19 g/kWh**

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).



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### 3 TRANSPARENCY

For the communication on our CO<sub>2</sub> performance, we refer to the cross-departmental communication plan << CO<sub>2</sub>PL-Jan De Nul-3C2 – Communication plan >>.

Specifically for this project, we will also communicate on the CO<sub>2</sub> 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	Person 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	Ass. Area Manager	Monthly

On 12/02/2021, the PR and communications department came to film and interview for the "Focus" newsletter and for making a project film.

#### 3.2 EXTERNALLY

Form of communication	Stakeholders	Person 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	Ass. Area Manager	About 2x / project duration

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Press release "Beach replenishment works along Flemish coast also in 2022 maximally sustainable with minimal nuisance"	Interested stakeholders	Ass. Area Manager	Thursday, 27 January 2022
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\* 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.

- During the works, regional news channel Focus WTV and national news channel VTM came to report on the works and their sustainable character.
  - Focus WTV: <https://www.focus-wtv.be/nieuws/145-miljoen-kubieke-meter-extra-zand-voor-veiliger-strand>
  - VTM : <https://www.hln.be/oostende/liefst-7-5-miljoen-kruiwagens-zand-verhogen-en-verbreden-het-oostendse-strand~a1349786/>
- Press release from JDN regarding "100% Sustainable beach nourishment":  
<https://www.jandenul.com/nl/nieuws/strandsuppleties-aan-de-vlaamse-kust-ook-2022-maximaal-duurzaam-met-minimale-hinder>

## JAN DE NUL OVERTUIGT VLAAMSE OVERHEID MET CONCRETE MILIEUEISEN VOOR UITVOERING STRANDSUPPLETIES

We klaar zijn voor de toekomst en op een duurzame manier kunnen baggeren en suppleren. Als we ons op lange termijn tegen de zeespiegelstijging willen wapenen, dan moeten we nu handelen. De reductie van emissies kan gewoon niet meer vrijblijvend zijn.

Bart Peeters | Milieugezond | Baggerwerken Benelux bij Jan De Nul Group

- Setting up an "experience centre" on the beach



### LEER MEER IN HET BELEVINGSCENTRUM IN OOSTENDE

Nieuwsgierige passanten krijgen de kans om meer te leren over de werken en de ambitieuze doelstellingen van de Vlaamse overheid in het daartoe speciaal opgerichte belevingscentrum op de zeedijk in Oostende ter hoogte van de Kapucijnestraat. Vanop het panoramische dak krijgen ze een uniek overzicht op de werken op het strand en de havengeul.

- Press release from the ministry awarding the works on "Working sustainably":  
<https://www.lydiapeeters.be/nieuws/onderhoud-vlaamse-stranden-zorgt-voor-een-veilige-kust/>

open  lydia peeters

LYDIA PEETERS | NIEUWS | CONTACT

26 januari 2022  
Onderhoud Vlaamse stranden zorgt voor een veilige kust

Deel:   




#### Duurzaam werken

In de opdrachten die het agentschap lanceert, gaat bijzondere aandacht uit naar milieucriteria. Het maakt daarvoor gebruik van de CO2 prestatieladder. Kandidaten moeten aangeven wat hun ambitieniveau is dat ze voor de opdracht nastreven. Het aangekoorde niveau is één van de gunningscriteria die meeweegt in de totale beoordeling.

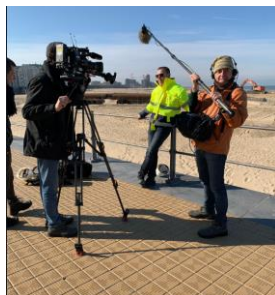
"MDK heeft hiermee een pilootproject binnen het beleidsdomein Mobiliteit en Openbare Werken door de integratie van de CO2-prestatieladder in opdrachtdocumenten," vertelt minister van Mobiliteit en Openbare Werken Lydia Peeters. "We willen op alle mogelijke manieren inzetten op het beperken van de klimaatimpact. Onder andere het gebruik van groene brandstof of zelfs een duurzame inrichting van de werf kunnen hieraan bijdragen. Dat leidt vandaag al tot concrete CO2-reducties waardoor we kunnen stellen dat de bagger- en suppletiewerken op basis van verschillende initiatieven milieuvriendelijker uitgevoerd worden."

- Newspaper article 'Nieuwsblad': [https://www.nieuwsblad.be/cnt/dmf20220226\\_96239865](https://www.nieuwsblad.be/cnt/dmf20220226_96239865)
- Publication on website dredgingtoday:  
<https://www.dredgingtoday.com/2022/03/09/sustainable-beach-replenishment-in-ostend-by->

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[jan-de-nul/?utm\\_source=rss&utm\\_medium=email&utm\\_campaign=newsletter\\_2022-03-10](https://jan-de-nul/?utm_source=rss&utm_medium=email&utm_campaign=newsletter_2022-03-10)

- RTBF report on 11.03.2022 - 'Investigations' programme (broadcast Sep 2022) entirely dedicated to sustainable coastal maintenance by Jan De Nul



- Various posts on social media from client (MDK) and contractor (JDN)

