



Project:

Østfold Avfallssortering IKS - MRF

Title:

APPENDIX B2

PRICE SHEETS

C1		For Contract			
B2	03.10.22	Updated with 2.6	LIF	PT	ASE
B1	29.09.22	For Tender	LIF	PT	PT
A1	05.09.22	For Internal control	LIF	PT	LIF
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GENERAL

The price sheets are based on the proposed block diagram. Contractor shall add all necessary conveyors and/or equipment to each group, place them in the price list according to process flow and give each of them an AKS sequence number.

Enclosed Excel sheet to be filled in, modified with equipment according to Suppliers proposal, and enclosed the tender.

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Appendix B 2.1 Summary tender price

Waste Sorting Plant



2.1 Summary tender price

Linked cells, do not fill in

2.2.1 Group 100 - Infeed, Screening, Metal Separation	0 €
2.2.2 Group 200 - Polymer sorting	0 €
2.2.3 Group 400 - Bunkers and Balers	0 €
2.2.4 Compressor Plant incl. Piping system pressurised air	0 €
2.2.5 De-dusting System, ventilation	0 €
2.2.6 Structural Steel overall	0 €
2.2.7 Electrical Equipment and Control/Monitoring System	0 €
2.2.8 Engineering	0 €
2.2.9 Mechanical installation	0 €
2.2.10 Transportation	0 €
2.2.11 Commissioning and Trial Period	0 €

Options included in contract sum

2.5.2 Spare parts	0 €
2.5.2 Wear parts	0 €
<i>Other options to be decided later</i>	

Contract sum

0 €

2.3 Options

2.3.1 Operational assistance	0 €
2.3.2 Extended guarantee period	0 €
2.3.3 Single local operator panel	0 €
2.3.4 Option A - Paper sorting	0 €
2.3.5 Option B – Fines sorting	0 €
2.3.6 Option C – Baling of source separated paper	0 €
2.3.7 Option D – Odour reduction system	0 €

Appendix B 2.2 Price Breakdown

Waste Sorting Plant



2.2 Price breakdown

The prices as given in this price sheet must include all cost, no additional charges will be accepted. Prices are excluding of VAT, but including transport and unloading of equipment, installation, inspections, commissioning and the take-over proceedings according to the Contract documents.

Contract prices will be regulated in accordance with changes in price level as described in Enclosure 3 to Contract Agreement.

This price sheet is based on the proposed block diagram. The Contractor shall add all necessary conveyors and/or equipment to each group, place them in the price list according to process flow and give each of them an AKS sequence number.

Price cells and cells for el-consumption shall be filled in by Supplier.
Shaded cells/gray-colored cells shall not be changed.

2.2.1 Group 100 - Infeed, Screening, Metal Separation

0 €

AKS no	Equipment	Price
1xx	Infeed bunker with conveyor	0 €
1xx	Shredder with Discharge Conveyor	0 €
1xx	Drum screen 1	0 €
1xx	Drum screen 2	0 €
1xx	Fe Metal Separator 1 (fines)	0 €
1xx	NE Metal separator / Eddy Current 1 (fines)	0 €
1xx	Fe Metal Separator 2	0 €
1xx	Fe Metal Cleaner	0 €
1xx	NE Metal separator / Eddy Current 2	0 €
1xx	Conveyor from xx to xx	0 €
1xx	Conveyor from xx to xx	0 €
1xx	Conveyor from xx to xx	0 €
1xx	Conveyor from xx to xx	0 €
1xx	Conveyor from xx to xx	0 €
1xx	Conveyor from xx to xx	0 €
1xx	Conveyor from xx to xx	0 €
1xx	Conveyor from xx to xx	0 €
1xx	Conveyor from xx to xx	0 €
1xx	Conveyor from xx to xx	0 €
1xx	Conveyor from xx to xx	0 €
1xx	Conveyor from xx to xx	0 €
1xx	Conveyor from xx to xx	0 €
1xx	Conveyor from xx to xx	0 €

Appendix B 2.2 Price breakdown

Waste Sorting Plant



2.2.2 Group 200 - Polymer sorting

0 €

(for paper sorting, refer 2.3 Options)

AKS no	Equipment	Price
2xx	NIR 1 Mixed plastic	0 €
2xx	NIR 2 Mixed plastic	0 €
2xx	NIR 3 Mixed plastic	0 €
2xx	NIR 4 Mixed plastic recovery	0 €
2xx	NIR 5 Mixed plastic recovery	0 €
2xx	NIR 6 Mixed plastic recovery	0 €
2xx	NIR 7 Mixed plastic cleaner	0 €
2xx	NIR 8 Mixed plastic cleaner	0 €
2xx	NIR 9 Mixed plastic cleaner	0 €
2xx	Conveyor from xx to xx	0 €
2xx	Conveyor from xx to xx	0 €
2xx	Conveyor from xx to xx	0 €
2xx	Conveyor from xx to xx	0 €
2xx	Conveyor from xx to xx	0 €
2xx	Conveyor from xx to xx	0 €
2xx	Conveyor from xx to xx	0 €
2xx	Conveyor from xx to xx	0 €
2xx	Conveyor from xx to xx	0 €
2xx	Conveyor from xx to xx	0 €
2xx	Conveyor from xx to xx	0 €
2xx	Conveyor from xx to xx	0 €
2xx	Conveyor from xx to xx	0 €
2xx	Conveyor from xx to xx	0 €
2xx	Conveyor from xx to xx	0 €

Appendix B 2.2 Price breakdown

Waste Sorting Plant



2.2.3 Group 400 - Bunkers and Balers

0 €

AKS no	Equipment	Price
4xx	Complete bunker 1 Mixed Plastic	0 €
4xx	Complete compacting station	0 €
4xx	20 off compacting containers	0 €
4xx	Containerstation for FE Metal	0 €
4xx	Containerstation for NE Metal	0 €
4xx	Containerstation for Fines	0 €
4xx	Infeed conveyor to baler	0 €
4xx	Baler	0 €
4xx	Conveyor from xx to xx	0 €
4xx	Conveyor from xx to xx	0 €
4xx	Conveyor from xx to xx	0 €
4xx	Conveyor from xx to xx	0 €
4xx	Conveyor from xx to xx	0 €
4xx	Conveyor from xx to xx	0 €
4xx	Conveyor from xx to xx	0 €
4xx	Conveyor from xx to xx	0 €
4xx	Conveyor from xx to xx	0 €
4xx	Conveyor from xx to xx	0 €
4xx	Conveyor from xx to xx	0 €

2.2.4 Compressor Plant incl. Piping system pressurised air

total

0 €

Equipment	Price
<u>Air compressor</u>	
Compressor unit 1 *	0 €
Compressor unit 2 *	0 €
Compressor unit x *	0 €
Compressor unit x *	0 €
Compressor unit x *	0 €
<u>Compressed air conditioning / buffering</u>	
Air drying *	0 €
Air drying *	0 €
Air drying *	0 €
Air filters *	0 €
Air vessels *	0 €
<u>Cooling system compressors</u>	0 €
<u>Heat changer compressor plant for building</u>	0 €
* = contractor specify necessary number of units	
<u>Pressurized air pipes</u>	
Sorting line	0 €
Compressor room	0 €
<u>Ventilation system room compressor plant</u>	0 €
Engineering, installation, electrical equipment, commissioning, compressor plant	0 €

Appendix B 2.2 Price breakdown

Waste Sorting Plant



2.2.5 De-dusting System, ventilation 0 €

Equipment	Price
Ductwork fresh air in sorting hall (from battery limit heating/ventilation system building)	0 €
Ductwork sorting hall de-dusting to stack (air extraction)	0 €
Ventilators sorting hall	0 €
Filters sorting hall	0 €
Stack	0 €
Engineering, installation, electrical equipment, commissioning of de-dusting system	0 €

2.2.6 Structural Steel overall 0 €

Equipment	Price
Walkways, platforms and stairs for operation and maintenance	0 €
Structural steel complete	0 €

2.2.7 Electrical Equipment and Control/Monitoring System 0 €

Equipment	Price
MCC and control switchboards incl. local terminal boxes	0 €
Main PLC with remote I/O modules	0 €
Industrial Ethernet and Fieldbus Network (Profibus / Profinet) incl. Wi-Fi	0 €
Central operator station, engineering station, local operator panels and mobile panels	0 €
Assembly, installation, cabling and wiring incl. all cables, cable trays, ducts, etc.	0 €

2.2.8 Engineering 0 €

	Price
Basic- and Detail-Engineering	0 €
Documentation complete	0 €

2.2.9 Mechanical installation 0 €

	Price
Mechanical installation complete including lifting equipment, etc.	0 €

2.2.10 Transportation 0 €

	Price
Transportation of complete delivery to site.	0 €

2.2.11 Commissioning and Trial Period 0 €

	Price
Commissioning incl. training of personnel, refer Appendix A5	0 €
Trial period (3 month)	0 €

Appendix B 2.3 Options

Waste Sorting Plant



2.3 Options

Deadlines for declare the options

The Client shall have the right to declare the various options within the deadlines specified below:

2.3.1 1 month before end of trial period

2.3.2 Signing of contract

2.3.3 4 months after signing of contract

2.3.4 4 months after signing of contract

2.3.5 4 months after signing of contract

2.3.6 4 months after signing of contract

2.3.7 4 months after signing of contract

2.3.1 Operational assistance 0 €

Operational assistance for 3 months after trial periode 0 €

2.3.2 Extended guarantee period 0 €

Additional price for 3rd year guarantee for electromechanical deliveries.	Unit price	No off	
One price in € for one additional year.	0 €	1	0 €

2.3.3 Single local operator panel 0 €

Single local operator panel incl. Cabinet and equipment as decribed in A8, chapter 6.4	Unit price	No off	
	0 €	3	0 €

2.3.4 Option A - Paper sorting total 0 €

See Appendix A3 for description

AKS no Equipment	Price
2xx NIR 10 Mixed paper sorter	0 €
2xx NIR 11 Mixed paper sorter	0 €
2xx NIR 12 Mixed paper cleaner	0 €
2xx Conveyor from xx to xx	0 €
2xx Conveyor from xx to xx	0 €
2xx Conveyor from xx to xx	0 €
2xx Conveyor from xx to xx	0 €
2xx Conveyor from xx to xx	0 €
2xx Conveyor from xx to xx	0 €
4xx Complete bunker Mixed paper	0 €
Structural Steel overall	0 €
Electrical Equipment and Control/Monitoring System	0 €
Engineering	0 €
Mechanical installation	0 €
Transportation	0 €
Commissioning and Trial Period	0 €

Appendix B 2.3 Options

Waste Sorting Plant



2.3.5 Option B – Fines sorting

total 0 €

See Appendix A3 for description

AKS no Equipment	Price
3xx Flip-flop screen	0 €
3xx NIR 13 Mixed Plastic Sorter	0 €
3xx Conveyor from xx to xx	0 €
3xx Conveyor from xx to xx	0 €
3xx Conveyor from xx to xx	0 €
3xx Conveyor from xx to xx	0 €
Structural Steel overall	0 €
Electrical Equipment and Control/Monitoring System	0 €
Engineering	0 €
Mechanical installation	0 €
Transportation	0 €
Commissioning and Trial Period	0 €

2.3.6 Option C – Baling of source separated paper

total 0 €

See Appendix A3 for description

AKS no Equipment	Price
4xx Infeed bunker and feeding conveyor for source separated paper	0 €
Electrical Equipment and Control/Monitoring System	0 €
Engineering	0 €
Mechanical installation	0 €
Transportation	0 €
Commissioning and Trial Period	0 €

2.3.7 Option D – Odour reduction system

total 0 €

See Appendix A3 for description

AKS no Equipment	Price
5xx Odour reduction filter	0 €
5xx Ductwork	0 €
Electrical Equipment and Control/Monitoring System	0 €
Engineering	0 €
Mechanical installation	0 €
Transportation	0 €
Commissioning and Trial Period	0 €

Appendix B 2.4 Other cost elements

Waste Sorting Plant



2.4 Other cost elements

2.4.1 Additional work/change orders

The hourly rates will be used for addition work and change orders. Rates comprise all costs of the Contractor including travel, boarding expenses, necessary technical and personal equipment etc.

Hourly rates will be regulated in accordance with changes in price level as described in Enclosure 3 to Contract Agreement.

All prices to be excluding VAT

Category	€/hour to be filled inn by Supplier	Estimated no off hours	Sum
Engineering	0,00 €/h	300	0 €
Supervisory services (installation, commissioning)	0,00 €/h	100	0 €
Foreman	0,00 €/h	100	0 €
Welder	0,00 €/h	50	0 €
Fitter	0,00 €/h	200	0 €
Painter	0,00 €/h	50	0 €
Insulation work	0,00 €/h	20	0 €
I&C specialist	0,00 €/h	200	0 €
Helper	0,00 €/h	100	0 €
Total estimated sum additional hours (for evaluation only)			0 €

2.4.2 Change orders, %-age add-on on purchased items

In case of change orders where fixed price is not agreed upon before placing the change order, the Client shall pay an additional percentage on purchased items to cover contractor's total indirect cost for handling of the purchase, risk and profit.

Percentage to cover contractor's total indirect cost for handling of the purchase, risk and profit (total mark-up on documented purchase price)

12 %

Appendix B 2.5 Summary Cost of Wear and Spare Parts (option)

Waste Sorting Plant



Basis: Scope to be based on 1 shift operation (1900 h/y) for the first 2 years of operation
 List of recommended spares and consumption of wear parts to be enclosed the tender.
 The list shall specify spare and wear parts prices for the specified machinery/equipment.

In case a component not listed as a wear part needs to be changed within the defect notification period, this will be handled as a defect and shall be rectified by the contractor.

Deadlines for declare the option

The Client shall have the right to declare the option within the deadline, 1 month before end of trial period.

Summary	Price Spare Parts <i>to be filled inn by Supplier</i>	Price Wear Parts <i>to be filled inn by Supplier</i>	Summary Price	Comments
Shredder	0 €	0 €	0 €	
Ferrous metal sep.	0 €	0 €	0 €	
Non-Ferrous metal sep./Eddy Current	0 €	0 €	0 €	
Drum screen	0 €	0 €	0 €	
Screen	0 €	0 €	0 €	
NIR-machines	0 €	0 €	0 €	
Baler	0 €	0 €	0 €	
Conveyors total	0 €	0 €	0 €	
<u>Others (specify)</u>				
-	0 €	0 €	0 €	
-	0 €	0 €	0 €	
-	0 €	0 €	0 €	
-	0 €	0 €	0 €	
-	0 €	0 €	0 €	
<u>De-dusting System, ventilation</u>	0 €	0 €	0 €	
<u>Compressor Plant incl. Piping system</u>	0 €	0 €	0 €	
<u>Electrical Equipment</u>	0 €	0 €	0 €	
<u>Control and Monitoring System</u>	0 €	0 €	0 €	
13 coils of wire for baling machine	-	0 €	0 €	Total weight: [Specify].
	€ -	€ -	€ -	

Appendix B 2.6 EI, personnel, area

Waste Sorting Plant



2.6.1 Annual electrical consumption

	kWh/h	h/year	€/kWh	Sum/year
The Supplier shall inform the electrical consumption per hour of full operation of the plant. EI-consumption is without options	<i>to be filled inn by Supplier</i>			
Electrical consumption (for evaluation only)		1500	0,20	0 €

2.6.2 Personnel

	No off	€/year	Sum/year
The Supplier shall inform number of persons (full-time og part time) required to operate and maintain the plant with one shift operation. Manning to be without options. Refer also personnel specified in Appendix E	<i>to be filled inn by Supplier</i>		
Control room operator		70 000	0 €
Loader		70 000	0 €
Other (runner etc)		70 000	0 €
Cleaning		70 000	0 €
Electrical maintenance		70 000	0 €
Automation maintenance		70 000	0 €
Mechanical maintenance		70 000	0 €
Total personnel cost (for evaluation only)			0 €

2.6.3 Area requirements

Need for area (m²) for process equipment in waste reception hall, process hall and storage hall shall be specified

The relative difference in area required will be evaluated based on cost of 2.000 €/m²

	Required area [m ²]
Reception hall	0 m ²
Sorting hall	0 m ²
Storage area	0 m ²
Additional areal requirement (for evaluation only)	0 m²