Construction of **Sewage Network and Waste Water Treatment Plant (WWTP) in the Municipality of Berane**

Volume 4 – Schedules

Section 1-2 Schedule of Prices

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## Lot 2: Rehabilitation and Construction of the Sewerage Network in Berane

* + 1. **Preamble**

### Preamble



# Introduction

The objective of this Preamble is to explain the use of the Bill of Quantities (BoQ) for the works corresponding to Lot 2: Construction of the Sewerage Network in Berane Municipality.

The Works include rehabilitation and extension of sewerage network within Municipality Beranein accordance with the Conditions of Contract for Construction of Works Designed by the Employer (FIDIC Red book).

The Bill of Quantities must be read with all the other contract documents and the Contractor shall be deemed to have thoroughly acquainted himself with the detailed descriptions of the works to be done and the way in which they are to be carried out. All the works must be executed to the satisfaction of the Engineer.

The Bill of Quantities (BoQ) provided by the Employer shall be priced accordingly by the Contractor as payments shall be executed based on measurement of the executed works and the Contractor’s rates.

**All items shall be priced in EUR.**

Notwithstanding any limits which may be implied by the wording of individual items, the Contractor agrees that the prices entered in the Schedule of Prices include all costs to complete the works in every respect.

The Contractor shall be deemed to have taken full account of all requirements and obligations, whether expressed or implied, covered by all parts of this Contract and to have priced the items herein accordingly. Therefore, the lump sum price for this section shall include for all incidental and contingent expenses and risks of every kind necessary to construct, complete and maintain the whole of the works in accordance with the Contract.

As specified in the Form of Tender and the Appendix to Tender, prices shall be fixed and firm for the duration of the Contract.

Tender prices shall be quoted in the manner indicated and in the currency specified in the Instructions to Tenderers.

# Quantity of items

The quantities set forth against the items in the bill of quantities are an estimate of the quantity of each kind of the work likely to be carried out under the contract and are given to provide a common basis for bids. There is no guarantee to the Contractor that he will be required to carry out the quantities of work indicated under any one particular item in the bill of quantities or that the quantities will not differ in magnitude from those stated.

When pricing items, reference should be made to the conditions of contract, the specifications and relevant drawings for directions and descriptions of work and materials involved.

Any comments concerning the quantities must be made in the form of an attachment, following the system of itemisation, quoting the codes and brief descriptions, as in the present documents, including the rates and prices.

Unless the technical specifications or the bill of quantities specifically and expressly state otherwise, only permanent works are to be measured. Works will be measured net to the dimensions shown on the drawings or ordered in writing by the Engineer, save where described or prescribed elsewhere in the contract.

In adjusting extras or variations on the contract, works will be measured on the same basis as that on which the quantities were prepared.

Where, in the opinion of the Engineer, extra works cannot be properly measured or valued, the Contractor may, if so directed by the Engineer, carry out the work at the daywork rates shown in the schedule of daywork. All completed daywork sheets must be signed by the Engineer on or before the end of the week in which the works are executed.

No allowance will be made for loss of materials or volume thereof during transport or compaction.

# Units of measurement

The units of measurement used in the annexed technical documentation are those of the International System of Units (SI). No other units may be used for measurements, pricing, detail drawings etc. (Any units not mentioned in the technical documentation must also be expressed in terms of the SI.)

Abbreviations used in the bill of quantities are to be interpreted as follows:

mm means millimetre

m means metre

mm² means square millimetre

m² means square metre

m³ means cubic metre

kg means kilogram

ton means tonne (1000 kg)

pcs means pieces

h means hour

LS means lump sum

km means kilometre

l means litre

% means per cent

DN means nominal diameter

m/m means man-month

m/d means man-day

# Terms relating to payments

The method for measurement of completed works for payment must be in accordance with the Conditions (net measurement), unless Description of the items of the bill of quantities provides otherwise.

The provisional sums in the bill of quantities must be used in whole or in part at the discretion of the Engineer.

Each item in the bill of quantities for which payment is to be made in a lump sum, and for which no payment schedule is provided, must be paid after the work covered by the lump sum has been completed to the satisfaction of the Engineer.

# Pricing

The prices and rates inserted in the Bill of Quantities are to be the full inclusive values of the works described under the items, including all costs and expenses which may be required in and for the construction of the works described together with any temporary works and installations which may be necessary and all general risks, liabilities and obligations set forth or implied in the documents on which the tender is based. It will be assumed that establishment charges, profit and allowances for all obligations are spread evenly over all the unit rates.

The rates and prices tendered in the priced Bill of Quantities will be quoted at the rates current prior to the date of submission.

Rates and prices must be entered against each item in the bill of quantities. The rates will cover all tax, duty or other liabilities which are not stated separately in the bill of quantities and the tender.

# Taxes

The tender price shall not include any VAT, customs and import duties that are levied in accordance with the laws and regulations of the country of the Contracting Authority on the production, manufacture, sale and transport of the Contractor's plant, machinery, materials and supplies to be used on or furnished under the Contract.

# Completing the bill of quantities

In the Bill of Quantities, rates and prices shall be entered in the appropriate columns in euro.

Errors will be corrected as follows:

1. where there is a discrepancy between amounts in figures and in words, the amount in words will prevail; and
2. where there is a discrepancy between the unit rate and the total amount derived from the multiplication of the unit price and the quantity, the unit rate as quoted will prevail.

# Use of Bill of Quantities

This section explains the bases of methods of measurement for the Works. All the BoQs cells are locked for editing, and cannot be modified by the tenderers/contractor, except the Unit Prices.

It should be noted that a 10% retention applies to payments all in accordance with the General Conditions of Contract and the Appendix to Tender.

### BREAKDOWN OF TENDER PRICE



Schedule 12-Lot 2 General Items

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Item Description** | **Unit** | **Quantity** | **Rate (€)** | **Amount (€)** |
|  |  |  |  |  |  |
|  | **Contractual requirements** |  |  |  |  |
| **A.1** | Performance Bond | sum | 1 |  |  |
|  |  |  |  |  |  |
| **A.2** | Insurance of the Works | sum | 1 |  |  |
|  |  |  |  |  |  |
| **A.3** | Third party insurance | sum | 1 |  |  |
|  |  |  |  |  |  |
|  | **Specified requirements** |  |  |  |  |
|  |  |  |  |  |  |
| **A.4** | Setting up of Contractor’s site offices, compound, temporary fencing, etc, maintenance during Contract period and dismantling of site offices at end of Contract, etc. | month | 18 |  |  |
|  |  |  |  |  |  |
| **A.5** | Testing of materials as specified in the Technical Specification | sum | 1 |  |  |
|  |  |  |  |  |  |
| **A.6** | Testing of the Works as detailed in the Technical Specification and not covered elsewhere in this Bill of Quantities | sum | 1 |  |  |
|  |  |  |  |  |  |
| **A.7** | Completion of surveys and setting out (topographical, geotechnical, public utilities services etc.) | sum | 1 |  |  |
|  |  |  |  |  |  |
|  | **Other Items** |  |  |  |  |
| **A.8** | Quality Assurance, Health, Safety and Environmental Protection Plans | sum | 1 |  |  |
|  |  |  |  |  |  |
| **A.9** | As-built drawings | sum | 1 |  |  |
|  |  |  |  |  |  |
| **A.10** | Operation and Maintenance Manuals in English and Montenegrin | sum | 1 |  |  |
|  |  |  |  |  |  |
| **A.11** | Commissioning, disinfection, mechanical and hydraulic Testing (civil, pipes, tanks,) | sum | 1 |  |  |
|  |  |  |  |  |  |
| **A.12** | Provision of signboards | sum | 1 |  |  |
|  |  |  |  |  |  |
| **A.13** | Attendance during defects notification period (expected frequency of attendance is once monthly, 5 days each moth of the DNP) | sum | 1 |  |  |
|  |  |  |  |  |  |
| **A.14** | Other general items (to be entered by the Tenderer) | sum | 1 |  |  |
|  |  |  |  |  |  |
|  | **TOTAL FOR Schedule 12-Lot 2 General Items- TO BE CARRIED FORWARD TO GRAND SUMMARY** |  |  |  |  |

Schedule 13-Lot 2 Bill of Quantities – Sewerage Network (Wastewater)

| **Item No.** | **Item description** | **Unit** | **Quantity** | **Rate (€)** | **Amount (€)** |
| --- | --- | --- | --- | --- | --- |
| **A - PREPARATORY WORKS** | | | | | |
| **A.1** | Marking of the sewer route, control of trench and sewer elevations during construction works and all necessary geodetic survey for preparation of as-built design. Route marking and control of elevations to be realized in accordance with the detailed design. All geodetic survey to be performed by using instruments with adequate accuracy for this kind of works. Unit rate covers all necessary work and equipment in accordance with technical regulations. Measurement per m of sewer route. | m | 20,678 |  |  |
| **A** | **PREPARATORY WORKS - SUB-TOTAL –**  **To be carried forward to the Summary** |  |  |  |  |
|  |  |  |  |  |  |
| **B EARTHWORKS** | | | | | |
| **B.1** | Machine and manual excavation of trench in all categories of soil (provisional assessment of soil is category III and IV). Contractor is obliged to inspect the site characteristics before commencement of the works . Unit rate for excavation comprises all necessary works and materials and in particular measures to avoid damages of the existing underground utilities en route. Before excavation works and then continuously, the Contractor is obliged to determine and monitor the actual site conditions, relevant soil characteristics/category and undertake all necessary excavation protection measures (shoring, sheeting, dewatering, and other measures) which is included in the unit rate for excavation works. Measurement of quantities is per m3 of excavated virgin soil also including loading, transportation and disposal to the approved landfill, up to 10km far from the site. Excavation shall be carried out **in asphalted roads** and here is possibility of wastewater presence in some sections. |  |  |  |  |
|  |  |  |  |  |  |
| **B.1.1** | Excavation at depths up to 2m. |  |  |  |  |
|  |  |  |  |  |  |
| **B.1.1.1** | Sewers | m3 | 35,713 |  |  |
| **B.1.1.2** | Service connections | m3 | 5,669 |  |  |
|  |  |  |  |  |  |
| **B.1.2** | Ditto, excavation at depths 2 to 4m. |  |  |  |  |
|  |  |  |  |  |  |
| **B.1.2.1** | Sewers | m3 | 11,316 |  |  |
| **B.1.2.2** | Service connections | m3 | 931 |  |  |
|  |  |  |  |  |  |
| **B.1.3** | Ditto, excavation at depths 4 to 6m. |  |  |  |  |
|  |  |  |  |  |  |
| **B.1.3.1** | Sewers | m3 | 417 |  |  |
|  |  |  |  |  |  |
| **B.2** | Machine and manual excavation of trench in all categories of soil (provisional assessment of soil is category III and IV). Contractor is obliged to inspect the site characteristics before submitting the tender. Unit rate for excavation covers all necessary works and materials and in particular measures to avoid damages of the existing underground utilities en route. Before excavation works and then continuously, the Contractor is obliged to determine and monitor the actual site conditions, relevant soil characteristics/category and undertake all necessary excavation protection measures (shoring, sheeting, dewatering, and other measures) which is included in the unit rate for excavation works. Measurement of quantities is per m3 of excavated virgin soil also including loading, transportation and disposal to the approved landfill, up to 10km far from the site. Excavation shall be carried out **in earthen roads which are not asphalted** and there is possibility of wastewater presence in some sections. |  |  |  |  |
|  |  |  |  |  |  |
| **B.2.1** | Trench excavation at depths up to 2m |  |  |  |  |
|  |  |  |  |  |  |
| **B.2.1.1** | Sewer D0 | m3 | 1,609 |  |  |
| **B.2.1.2** | Sewer L1 | m3 | 396 |  |  |
| **B.2.1.3** | Sewer L1.1 | m3 | 336 |  |  |
| **B.2.1.4** | Sewer L1.3.3 | m3 | 585 |  |  |
|  |  |  |  |  |  |
| **B.2.2** | Ditto, trench excavation at depths 2-4m |  |  |  |  |
|  |  |  |  |  |  |
| **B.2.2.1** | Sewer D0 | m3 | 537 |  |  |
| **B.2.2.2** | Sewer L1 | m3 | 111 |  |  |
| **B.2.2.3** | Sewer L1.1 | m3 | 25 |  |  |
| **B.2.2.4** | Sewer L1.3.3 | m3 | 131 |  |  |
|  |  |  |  |  |  |
| **B.2.2** | Ditto, trench excavation at depths >4m |  |  |  |  |
|  |  |  |  |  |  |
| **B.2.2.1** | Sewer D0 | m3 | 100 |  |  |
|  |  |  |  |  |  |
| **B.3** | Additional excavation for inspection manholes after trench excavation. Unit rate includes all necessary work and materials, measures to prevent damages to the existing underground utilities, all necessary protection measures (shoring, sheeting, dewatering, and other measures). There is a possibility of wastewater presence in some locations. Measurement of quantities is per m3 of excavated virgin soil also including loading, transportation and disposal to a landfill, up to 10km far from the site. |  |  |  |  |
|  |  |  |  |  |  |
| **B.3.1** | Sewers | m3 | 7,791 |  |  |
|  |  |  |  |  |  |
| **B.4** | Manual excavation in all categories of soil, in the zones of inter-sections of the sewerage network with other underground utilities. Measurement of excavated quantities per m3 of virgin soil, including all necessary work, protection measures, loading, transport and disposal of excavated material to the approved landfill, up to 10km far from the construction site. | m3 | 100 |  |  |
|  |  |  |  |  |  |
| **B.5** | Manual finishing and planning of the trench bottom after machine excavation. Trench finishing is to be carried out with carefully selected material from excavation, with accuracy +/-3 cm regarding designed profile. Finished trench bottom shall serve as a base for placing of bedding material. Measurement per m2 of finished trench bottom. |  |  |  |  |
|  |  |  |  |  |  |
| **B.5.1** | Sewers | m2 | 14,146 |  |  |
| **B.5.2** | Service connections | m2 | 2,396 |  |  |
|  |  |  |  |  |  |
| **B.6** | Procurement, transportation and placing of pipe bedding material, minimum 10cm below sewer, around it across the whole trench width and minimum 30cm above the sewer top. Pipe bedding shall be of sand, clean of organic matter and other impurities. Measurement per m3 of properly compacted bedding material. |  |  |  |  |
|  |  |  |  |  |  |
| **B.6.1** | Sewers | m3 | 6,364 |  |  |
| **B.6.2** | Service connections | m3 | 879 |  |  |
|  |  |  |  |  |  |
| **B.7** | Supply, transport and installation (manually and mechanically) with proper compaction of imported backfilling material (gravel/crushed stone) on top of the pipe bedding and surround layer (item B.6) up to the planned bottom elevation of the road base layer. Backfilling shall be done with careful compaction up to 50MPa (or to the same compaction as required for the road base, whichever is more stringent), in layers of 20-30cm. Maximum grain size of the material shall be 50mm. Unit rate includes all related works, unloading, temporary storage on site, etc. First layer above the sewer is to be backfilled manually. Mechanisation must not directly cross over the trench with installed sewers. Measurements per m3 of compacted backfilled material. |  |  |  |  |
|  |  |  |  |  |  |
| **B.7.1** | Sewers | m3 | 40,319 |  |  |
| **B.7.2** | Service connections | m3 | 5,607 |  |  |
|  |  |  |  |  |  |
| **B.8** | Trench backfilling with selected excavated material, after pipeline installation and placing of pipe bedding and surround. First layer of backfilling to be carried out manually. Further backfilling to be carried out mechanically, however mechanisation must not directly cross the trench with installed sewers This backfilling material must be compacted in layers not higher than 30cm. Measurement m3 of placed and compacted backfilling material. |  |  |  |  |
|  |  |  |  |  |  |
| **B.8.1** | Sewers | m3 | 3,033 |  |  |
|  |  |  |  |  |  |
| **B.9** | Loading, transportation, unloading and spreading of excavated surplus material to the approved landfill site, up to 10km far from the construction site. Measurement per m3. |  |  |  |  |
|  |  |  |  |  |  |
| **B.9.1** | Sewer L1.3.3 | m3 | 141 |  |  |
|  |  |  |  |  |  |
| **B.10** | Upgrade/elevation of the existing and construction of the additional embankment along the right bank of the Lim River, along the section of D0 sewer. Gravel is to be compacted and the embankment shall be formed in accordance with the details presented in the design. Unit rate includes excavation, loading, transportation up to 5km, unloading and installation of gravel deposited along the river. Measurement per m3 of placed material. | m3 | 9,290 |  |  |
|  |  |  |  |  |  |
| **B.11** | Machine excavation of foundation trench for the protective river bank embankment. The protective river bank embankment shall be constructed of crushed stones. Excavated material to be used for embankment. Measurement per m3 of excavated material. | m3 | 306 |  |  |
|  |  |  |  |  |  |
| **B.12** | Procurement of stones, including transportation and forming one-layer protection of the embankment with stones of the following minimal sizes: 70x50x40cm, along sections endangered by floods and erosion. Stone placing shall be carried out manually and by using adequate mechanisation along formed embankment in accordance with designed slopes, alignment and design details. Stone placing shall be done with due care in order to ensure stability of the riverbank and protection from high waters. Measurement per m3 of placed stones. | m3 | 1,190 |  |  |
| **B** | **EARTHWORKS - SUB-TOTAL –**  **To be carried forward to the Summary** |  |  |  |  |
|  |  |  |  |  |  |
| **C - CONCRETE WORKS** | | | | | |
| **C.1** | Procurement and erection of inspection manhole concrete base with half round channel of concrete grade MB30. Simultaneously with erection of manhole base, GRP sewer pipe joints of adequate diameter with integrated gaskets of NBR quality should be fixed, so as to prevent possible infiltration of groundwater. Unit rate includes all appurtenant works and materials. Measurement per m3 of pre-cast concrete. | m3 | 846 |  |  |
|  |  |  |  |  |  |
| **C.2** | Procurement and erection of pre-cast upper slab with support ring for manholes (of reinforced concrete, grade MB30). The slab shall be 20cm thick erected in accordance with the details in the design. Unit rate includes all necessary works and materials. Measurement per m3 of pre-cast concrete. | m3 | 457 |  |  |
|  |  |  |  |  |  |
| **C.3** | Procurement, transport and installation of pre-cast reinforced concrete rings for manhole of diameter 1000mm and 1m long, with integrated gaskets of NRB quality. Rings should be placed starting from the manhole base. Unit rate includes all necessary work and materials, including preparation for installation of step irons, and provision of manhole water-tightness. Measurement per piece of installed RC rings. | pcs | 1,503 |  |  |
|  |  |  |  |  |  |
| **C.4** | Construction of transversal reinforced concrete (MB30 RC) bench for protection of the D0 sewer crossing under the Lim River. The bench shall be 60m long, with cross section size of 70x70cm. It is anticipated that there shall be a minimum of 18kg of Q424 reinforcement per m of length of the bench. Unit rate comprises all necessary works and materials, formwork, earthworks, construction of cofferdam, etc. Works shall be carried out in accordance with the regulations for this kind of works and design details. Measurement per m3 of placed concrete. | m3 | 29 |  |  |
|  |  |  |  |  |  |
| **C.5** | Construction of the riverbed stabilisation bench downstream of the D0 sewer crossing under the Lim River. The bench shall be of the following sizes: L=60m, W=15m and H=0.6m. The bench shall be made of MB25 concrete and crushed stones D>100mm. Composition of the structure shall be app. 40% and app. 60% stones. Stones must be cleaned before placement. Unit rate includes all necessary works and materials, formwork, earthworks, construction of cofferdam, etc. Works shall be carried out in accordance with the regulations for this type of works and design. Measurement per m3 of placed material. | m3 | 450 |  |  |
|  |  |  |  |  |  |
| **C.6** | Construction of pre-cast (or cast in situ) reinforced concrete MB30 channel for protection of the D0 (DN400) sewer crossing under the Lim River. The channel shall be 95m long with internal dimensions W=0.90m and H=0.65m. The sewer pipe shall be placed in gravel/send bedding and surround d=16-32mm which shall be placed up to the cover slabs of the channel. The channel shall be closed by pre-cast concrete slabs (1.1 x 1.0 x 0.15m). Cross section of the channel is shown on the detailed design drawings. It is anticipated that there shall be 0.89m3 of concrete and 54kg of Q424 reinforcement per m of the channel. Unit rate includes all necessary works and materials, formwork, earthworks, bedding and surround, construction of cofferdam, etc. Works shall be carried out in accordance with the regulations for this type of works and design. Measurement per m of the channel. | m | 90 |  |  |
|  |  |  |  |  |  |
| **C.7** | Construction of pre-cast (or cast in situ) reinforced concrete MB30 channel for protection of the L1.1 (DN250) sewer crossing under the Makva River. The channel shall be 7m long with internal dimensions W=0.45m and H=0.45m. The sewer pipe shall be placed in gravel/send bedding and surround d=16-32mm which shall be placed up to the cover slabs of the channel. The channel shall be closed by pre-cast concrete slabs (0.65 x 1.0 x 0.15m). Cross section of the channel is shown on the detailed design drawings. It is anticipated that there shall be 0.48m3 of concrete and 43kg of Q424 reinforcement per m of the channel. Unit rate includes all necessary works and materials, formwork, earthworks, bedding and surround, construction of cofferdam, etc. Works shall be carried out in accordance with the regulations for this type of works and design. Measurement per m of the channel. | m | 7.0 |  |  |
| **C** | **CONCRETE WORKS - SUB-TOTAL –**  **To be carried forward to the Summary** |  |  |  |  |
|  |  |  |  |  |  |
| **D** | **REINFORCEMENT WORKS** |  |  |  |  |
|  |  |  |  |  |  |
| **D.1** | Procurement, transport, cutting, bending and placement of high-yield steel re-bars (reinforcement). For detail specifications refer to corresponding detailed design drawings. | kg | 94,845 |  |  |
| **D** | **REINFORCEMENT WORKS - SUB-TOTAL –**  **To be carried forward to the Summary** |  |  |  |  |
|  |  |  |  |  |  |
| **E** | **INSTALLATION WORKS** |  |  |  |  |
|  |  |  |  |  |  |
| **E.1** | Procurement, transport and installation of sewerage pipes of glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP), in accordance with the standard BS EN14364, of stiffness class SN5000, including all necessary couplings and joining material. Gaskets shall be of NBR, EPDM or equivalent quality. Pipes are to be installed on prepared pipe bedding. Unit rate comprises all necessary works and materials for proper pipe installation, in accordance with regulations for this kind of works. Measurement per m of installed and approved pipe. |  |  |  |  |
|  |  |  |  |  |  |
| **E.1.1** | DN500; outside diameter 509.6mm, internal diameter 530mm | m | 1,858 |  |  |
| **E.1.2** | DN400; outside diameter 427mm, internal diameter 410mm | m | 213 |  |  |
| **E.1.3** | DN300; outside diameter 324mm, internal diameter 310.4mm | m | 4,606 |  |  |
| **E.1.4** | DN250; outside diameter 272mm, internal diameter 260.2mm | m | 11,005 |  |  |
|  |  |  |  |  |  |
| **E.2** | Procurement, transport and installation of sewerage pipes of glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP), in accordance with the standard BS EN14364, of stiffness class SN5000, including all necessary couplings and joining material. Gaskets shall be of NBR, EPDM or equivalent quality. Pipes are to be installed on prepared pipe bedding. Pipes shall be 6m long each, with coupling suitable for concreting on one end, while the other end shall have coupling for GRP/PVC joint. The latter shall have a PVC protection plug. Unit rate comprises all necessary works and materials for proper pipe installation, in accordance with regulations for this kind of works. Measurement per piece of installed and approved pipe. |  |  |  |  |
|  |  |  |  |  |  |
| **E.2.1** | DN200; outside diameter 220mm, internal diameter 210mm | pcs | 500 |  |  |
|  |  |  |  |  |  |
| **E.3** | Procurement, transport and placement of manhole access covers with frame (of ductile iron in accordance with EN124). Covers shall be coated with non-toxic black paint, per BS3416. Covers shall be circular, with clear opening of 60cm diameter and of loading class D 400 kN (class D400). The manhole cover shall be hinged, with elastic sealing or conical fit. Unit rate includes all necessary work and materials for installation of covers, in accordance with design details, drilling holes and anchoring of the frame into RC slab, etc. | pcs | 661 |  |  |
|  |  |  |  |  |  |
| **E.4** | Procurement and fixing manhole step irons in accordance with DIN1212. Rate includes all works and materials necessary for installation | pcs | 1,706 |  |  |
|  |  |  |  |  |  |
| **E.5** | Reconstruction of the existing water supply pipeline along the sewer D1.2 route. The existing pipeline is of asbestos-cement pipes - type C, of dia.100mm. The pipeline shall be replaced with HDPE PE100, PN10, DN110 pipes. Unit rate includes procurement and installation of pipes, necessary fittings and joints, including reconnection of all existing service connections, as well as necessary earthworks, concrete works and other works for replacement of the pipeline. Exact position of the pipeline shall be defined by the Contractor by means of geodetic survey and equipment for detection of underground utilities. The Contractor shall also produce a detail technical proposal for the pipeline replacement which must be reviewed and approved by the Supervisor and local water company. Measurement per m of replaced pipeline. | m | 350 |  |  |
| **E** | **INSTALLATION WORKS - SUB-TOTAL –**  **To be carried forward to the Summary** |  |  |  |  |
|  |  |  |  |  |  |
| **F MISCALANEOUS WORKS** | | | | | |
| **F.1** | Testing of sewers fully in accordance with BS EN1610. Measurement per m of tested sewers. | m | 20,678 |  |  |
|  |  |  |  |  |  |
| **F.2** | Reinstatement of all secondary water distribution pipelines which are not registered in the cadastre of underground utilities. Pipe connections are threaded or by welding, HDPE, up to DN90. Unit rate includes additional manual excavation, manual backfilling after reinstatement, as well as other necessary work and materials. The works must be approved by the Supervisor and local water company. | pcs | 50 |  |  |
|  |  |  |  |  |  |
| **F.3** | Reinstatement of power supply lines that are not recorded in the cadastre of underground utilities. Unit rate includes additional manual excavation, manual backfilling after reinstatement and all necessary works and materials | pcs | 5 |  |  |
|  |  |  |  |  |  |
| **F.4** | Reinstatement of TT lines that are not recorded in the cadastre of underground utilities. Unit rate includes additional manual excavation, manual backfilling after reinstatement and all necessary works and materials | pcs | 10 |  |  |
|  |  |  |  |  |  |
| **F.5** | Cutting and breaking asphalted road surface, loading, transportation and disposal at the approved disposal site up to 10km from the construction site. Asphalt shall be cut straight, along both sides of the trench, at a distance of 40cm. It is estimated that app. 2m2 of asphalted surface shall be removed along 1m of sewer route. Thickness of asphalt layer varies from 6 to 16cm (6+6+4). Quantity of works has been estimated based on the detail site inspection while detail breakdown of quantities is presented in the detailed design. Unit rate includes cutting, breaking, removal of asphalt, as well as full reinstatement of **asphalt bearing layer of BNS-22 quality.** | ton | 8,732 |  |  |
|  |  |  |  |  |  |
| **F.6** | Cutting and breaking asphalted road surface, loading, transportation and disposal at the approved disposal site up to 10km from the construction site.Asphalt shall be cut straight, along both sides of the trench, at a distance of 40cm. It is estimated that app. 2m2 of asphalted surface shall be removed along 1m of sewer route. Thickness of asphalt layer varies from 6 to 16cm (6+6+4). Quantity of works has been estimated based on the detail site inspection while detail breakdown of quantities is presented in the detailed design. Unit rate includes cutting, breaking, removal of asphalt, as well as full reinstatement of **asphalt wearing layer of ABS-11 quality.** | ton | 1,673 |  |  |
|  |  |  |  |  |  |
| **F.7** | Geodetic survey and preparation of as-built documentation of constructed sewers and other elements including producing of the cadastre of underground utilities. Works to be performed in accordance with the Law and Regulations on preparation of the cadastre of underground utilities. Data should be processed in DWG format and GIS platform used by the local water company. | m | 20,677 |  |  |
|  |  |  |  |  |  |
| **F.8** | Cutting and breaking of concrete pavement along sewer routes, loading, transportation and disposal at the approved disposal site up to 10km from the construction site. Cutting width is 1.60m. Unit rate also includes full reinstatement of damaged pavement with MB30 concrete. Reinstated pavement shall be of the same thickness as the original pavement. | m2 | 500 |  |  |
|  |  |  |  |  |  |
| **F.9** | Dismantling of the existing concrete curbs, temporary storage and reinstatement of curbs after sewer installation and backfilling. Curbs shall be placed on a base of MB15 concrete (app. 0.05m3 of concrete per 1m of curb). Unit rate includes all necessary works and proper placement of curbs (earthworks, concrete works, transport, etc). Measurement per m of reinstated curb. | m | 300 |  |  |
|  |  |  |  |  |  |
| **F.10** | Dismantling of the existing metal fences and gates, temporary storage and installation upon installation and backfilling of sewer. Unit rate includes all necessary works, breaking of the existing concrete and stone walls, loading, transportation and disposal of surplus materials to the approved landfill up to 10km from the site, earthworks, carpentry, locksmith and concrete works, as well as procurement and placement of necessary materials to reinstate fence or gate into the original state. Measurement per m of reinstated fence. | m | 200 |  |  |
|  |  |  |  |  |  |
| **F.11** | Breaking of the existing RC supporting walls and fences with loading, transportation and disposal at the approved landfill site up to 10km from the site. Estimated width of walls is 20-50cm. Unit rate includes procurement and placing of reinforced concrete grade MB30, with reinforcement (app. 100kg per 1m3 of concrete), formwork, as well as earthworks and other works. Walls shall be fully reinstated to their original state. Measurement per m3 of placed concrete. | m3 | 50 |  |  |
| **F** | **MISCALENEOUS WORKS - SUB-TOTAL –**  **To be carried forward to the Summary** |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SUMMARY Schedule 13-Lot 2 Bill of Quantities – Sewerage Network (Wastewater)** | | | | | |
| **No.** | **TYPE OF WORKS** |  |  |  | **AMMOUNT (€)** |
| **A** | **PREPARATORY WORKS** |  |  |  |  |
| **B** | **EARTHWORKS** |  |  |  |  |
| **C** | **CONCRETE WORKS** |  |  |  |  |
| **D** | **REINFORCEMENT WORKS** |  |  |  |  |
| **E** | **INSTALLATION WORKS** |  |  |  |  |
| **F** | **MISCALANEOUS WORKS** |  |  |  |  |
|  | **TOTAL**  **To be carried forward**  **to the GRAND SUMMARY - Lot 2** |  |  |  |  |

Schedule 14-Lot 2 Bill of Quantities – Sewerage Network (Stormwater Drainage)

| **Item No.** | **Item description** | **Unit** | **Quantity** | **Rate (€)** | **Amount (€)** |
| --- | --- | --- | --- | --- | --- |
| **A - PREPARATORY WORKS** | | | | | |
| **A.1** | Marking of the sewer route, control of trench and sewer elevations during construction works and all necessary geodetic survey for preparation of as-built design. Route marking and control of elevations to be realized in accordance with the detailed design. All geodetic survey to be performed by using instruments with adequate accuracy for this kind of works. Unit rate covers all necessary work and equipment in accordance with technical regulations. Measurement per m of sewer route. | m | 1,400 |  |  |
| **A** | **PREPARATORY WORKS - SUB-TOTAL -**  **To be carried forward to the Summary** |  |  |  |  |
|  |  |  |  |  |  |
| **B EARTHWORKS** | | | | | |
| **B.1** | Machine and manual excavation of trench in all categories of soil (provisional assessment of soil is category III and IV). Contractor is obliged to inspect the site characteristics before submitting the tender. Unit rate for excavation comprises all necessary works and materials and in particular measures to avoid damages of the existing underground utilities en route. Before excavation works and then continuously, the Contractor is obliged to determine and monitor the actual site conditions, relevant soil characteristics/category and undertake all necessary excavation protection measures (shoring, sheeting, dewatering, and other measures) which is included in the unit rate for excavation works. Measurement of quantities is per m3 of excavated virgin soil also including loading, transportation and disposal to the approved landfill, up to 10km far from the site. Excavation shall be carried out **in asphalted roads** and there is possibility of wastewater presence in some sections. |  |  |  |  |
|  |  |  |  |  |  |
| **B.1.1** | Excavation at depths up to 2m. |  |  |  |  |
|  |  |  |  |  |  |
| **B.1.1.1** | Sewers | m3 | 3,334 |  |  |
|  |  |  |  |  |  |
| **B.1.2** | Ditto, excavation at depths 2 to 4m. |  |  |  |  |
|  |  |  |  |  |  |
| **B.1.2.1** | Sewers | m3 | 397 |  |  |
|  |  |  |  |  |  |
| **B.2** | Machine and manual excavation of trench in all categories of soil (provisional assessment of soil is category III and IV). Contractor is obliged to inspect the site characteristics before submitting the tender. Unit rate for excavation covers all necessary works and materials and in particular measures to avoid damages of the existing underground utilities en route. Before excavation works and then continuously, the Contractor is obliged to determine and monitor the actual site conditions, relevant soil characteristics/category and undertake all necessary excavation protection measures (shoring, sheeting, dewatering, and other measures) which is included in the unit rate for excavation works. Measurement of quantities is per m3 of excavated virgin soil also including loading, transportation and disposal to the approved landfill, up to 10km far from the site. Excavation shall be carried out **in earthen roads which are not asphalted** and there is possibility of wastewater presence in some sections. |  |  |  |  |
|  |  |  |  |  |  |
| **B.2.1** | Trench excavation at depths up to 2m |  |  |  |  |
|  |  |  |  |  |  |
| **B.2.1.1** | Sewers | m3 | 232 |  |  |
|  |  |  |  |  |  |
| **B.3** | Additional excavation for inspection manholes after trench excavation. Unit rate includesall necessary work and materials, measures to prevent damages to the existing underground utilities, all necessary protection measures (shoring, sheeting, dewatering, and other measures). There is a possibility of wastewater presence in some locations. Measurement of quantities is per m3 of excavated virgin soil also including loading, transportation and disposal to a landfill, up to 10km far from the site. |  |  |  |  |
|  |  |  |  |  |  |
| **B.3.1** | Sewers and separator | m3 | 111 |  |  |
|  |  |  |  |  |  |
| **B.4** | Manual excavation in all categories of soil, in the zones of inter-sections of the sewerage network with other underground utilities. Measurement of excavated quantities per m3 of virgin soil, including all necessary work, protection measures, loading, transport and disposal of excavated material to the approved landfill, up to 10km far from the construction site. | m3 | 10 |  |  |
|  |  |  |  |  |  |
| **B.5** | Manual finishing and planning of the trench bottom after machine excavation. Trench finishing is to be carried out with carefully selected material from excavation, with accuracy +/-3 cm regarding designed profile. Finished trench bottom shall serve as a base for placing of bedding material. Measurement per m2 of finished trench bottom. |  |  |  |  |
|  |  |  |  |  |  |
| **B.5.1** | Sewers | m2 | 1,400 |  |  |
|  |  |  |  |  |  |
| **B.6** | Procurement, transportation and placing of pipe bedding material, 10cm below sewer, around it across the whole trench width and minimum 30cm above sewer top. Pipe bedding shall be of sand, clean of organic matter and other impurities. Measurement per m3 of properly compacted bedding material. |  |  |  |  |
|  |  |  |  |  |  |
| **B.6.1** | Sewers | m3 | 1,160 |  |  |
|  |  |  |  |  |  |
| **B.7** | Supply, transport and installation (manually and mechanically) with proper compaction of imported backfilling material (gravel/crushed stone) on top of the pipe bedding and surround layer (item B.6) up to the planned bottom elevation of the road base layer. Backfilling shall be done with careful compaction up to 50MPa (or to the same compaction as required for the road base, whichever is more stringent), in layers of 20-30cm. Maximum grain size of the material shall be 50mm. Unit rate includes all related works, unloading, temporary storage on site, etc. First layer above the sewer is to be backfilled manually. Mechanisation must not directly cross over the trench with installed sewers. Measurements per m3 of compacted backfilled material. |  |  |  |  |
|  |  |  |  |  |  |
| **B.7.1** | Sewers | m3 | 2,076 |  |  |
|  |  |  |  |  |  |
| **B.8** | Procurement, transportation and placing of sandy-gravel material d=16-32mm around separator. Measurement per m3 of placed material. | m3 | 35 |  |  |
|  |  |  |  |  |  |
| **B.9** | Trench backfilling with selected excavated material, after pipeline installation and placing of pipe bedding and surround. First layer is to be placed manually. Further backfilling to be carried out mechanically, however mechanisation must not directly cross the trench with installed sewers This backfilling material must be compacted in layers not higher than 30cm. Measurement m3 of placed and compacted backfilling material. |  |  |  |  |
|  |  |  |  |  |  |
| **B.9.1** | Sewers | m3 | 62 |  |  |
|  |  |  |  |  |  |
| **B** | **EARTHWORKS - SUB-TOTAL –**  **To be carried forward to the Summary** |  |  |  |  |
|  |  |  |  |  |  |
| **C - CONCRETE WORKS** | | | | | |
| **C.1** | Procurement and erection of base for manholes with half round channel and for rainwater inlets of concrete grade MB30. Unit rate includes all appurtenant works and materials. Measurement per m3 of pre-cast concrete. | m3 | 61 |  |  |
|  |  |  |  |  |  |
| **C.2** | Procurement and erection of pre-cast upper slab with support ring for manholes (of reinforced concrete, grade MB30) and for rainwater inlets. The slab shall be 20cm thick erected in accordance with the details in the design. Unit rate includes all necessary works and materials. Measurement per m3 of pre-cast concrete. | m3 | 117 |  |  |
|  |  |  |  |  |  |
| **C.3** | Procurement, transport and installation of pre-cast reinforced concrete rings for manhole of diameter 1000mm and 1m long, with integrated gaskets of NRB quality. Rings should be placed starting from the manhole base. Unit rate includes all necessary work and materials, including preparation for installation of step irons, and provision of manhole water-tightness. Measurement per piece of installed RC rings. | pcs | 25 |  |  |
|  |  |  |  |  |  |
| **C.4** | Construction of outfall structures of reinforced concrete grade MB30. Unit rate comprises all works and materials including earthworks, formwork, reinforcement, grating, etc. The works are to be carried out in accordance with the detailed design. Measurement is per m3 of placed concrete. | m3 | 8 |  |  |
|  |  |  |  |  |  |
| **C** | **CONCRETE WORKS - SUB-TOTAL –**  **To be carried forward to the Summary** |  |  |  |  |
|  |  |  |  |  |  |
| **D** | **REINFORCEMENT WORKS** |  |  |  |  |
|  |  |  |  |  |  |
| **D.1** | Procurement, transport, cutting, bending and placement of high-yield steel re-bars (reinforcement). For detail specifications refer to corresponding detailed design drawings. | kg | 18,350 |  |  |
| **D** | **REINFORCEMENT WORKS –**  **SUB-TOTAL**  **To be carried forward to the Summary** |  |  |  |  |
|  |  |  |  |  |  |
| **E** | **INSTALLATION WORKS** |  |  |  |  |
|  |  |  |  |  |  |
| **E.1** | Procurement, transport and installation of corrugated sewerage pipes of HDPE PE100 in accordance with DIN16961, of stiffness class SN4, with socket joints and gaskets of NBR quality. Internal pipe wall should be suitable for cleaning with high-pressure jet (up to 120 bar at the nozzle), minimal pipe wall thickness in accordance with EN13476. Delivery and installation shall be in accordance with DIN EN1610 and manufacturer's instructions. Unit rate comprises all necessary works and materials for proper pipe installation, in accordance with regulations for this kind of works. Measurement per m of installed and approved pipe. |  |  |  |  |
|  |  |  |  |  |  |
| **E.1.1** | DN1.000; outside diameter 1.000mm, internal diameter 851mm | m | 543 |  |  |
| **E.1.2** | DN800; outside diameter 800mm, internal diameter 678mm | m | 312 |  |  |
| **E.1.3** | DN630; outside diameter 630mm, internal diameter 535mm | m | 197 |  |  |
| **E.1.4** | DN300; outside diameter 315mm, internal diameter 271mm | m | 267 |  |  |
| **E.1.4** | DN250; outside diameter 250mm, internal diameter 216mm | m | 83 |  |  |
|  |  |  |  |  |  |
| **E.2** | Procurement, transport and installation of ductile iron rainwater inlet gratings, per EN124. Grating shall be coated with black, non-toxic coating per BS3416. Grating is square-shaped, with clear opening 65 x 65 cm, for loading class D400 (400 kN). Unit rate comprises all necessary work an materials for grating installation in accordance with the design. | pcs | 52 |  |  |
|  |  |  |  |  |  |
| **E.3** | Procurement, transport and placement of manhole access covers with frame (of ductile iron in accordance with EN124). Covers shall be coated with non-toxic black paint, per BS3416. Covers shall be circular, with clear opening of 60cm diameter and of loading class D 400 kN (class D400). The manhole cover shall be hinged, with elastic sealing or conical fit. Unit rate includes all necessary work and materials for installation of covers, in accordance with design details, drilling holes and anchoring of the frame into RC slab, etc. | pcs | 2 |  |  |
|  |  |  |  |  |  |
| **E.4** | Procurement, transport and placement of manhole access covers with frame (of ductile iron in accordance with EN124). Covers shall be coated with non-toxic black paint, per BS3416. Covers shall be circular, with clear opening of 60cm diameter and of loading class B 125 kN (class B125). The manhole cover shall be hinged, with elastic sealing or conical fit. Unit rate includes all necessary work and materials for installation of covers, in accordance with design details, drilling holes and anchoring of the frame into RC slab, etc. | pcs | 5 |  |  |
|  |  |  |  |  |  |
| **E.4** | Procurement and fixing manhole step irons in accordance with DIN1212. Rate includes all works and materials necessary for installation | pcs | 192 |  |  |
|  |  |  |  |  |  |
| **E.5** | Purchase, transportation and installation of oil separator with a by-pass. The separator shall be either of polyethylene or polyester. The separator shall be fixed to the RC foundation slab. Unit rate includes all other necessary works and materials, as detailed in the design. The oils separator operational capacity shall be Q=1250/125 l/s | pcs | 1 |  |  |
| **E** | **INSTALLATION WORKS - SUB-TOTAL –**  **To be carried forward to the Summary** |  |  |  |  |
|  |  |  |  |  |  |
| **F MISCALANEOUS WORKS** | | | | | |
| **F.1** | Testing of sewers fully in accordance with BS EN1610. Measurement per m of tested sewers. | m | 1,400 |  |  |
|  |  |  |  |  |  |
| **F.2** | Reinstatement of all secondary water distribution pipelines which are not registered in the cadastre of underground utilities. Pipe connections are threaded or by welding, HDPE, up to DN90. Unit rate includes additional manual excavation, manual backfilling after reinstatement, as well as other necessary work and materials. The works must be approved by the Supervisor and local water company. | pcs | 5 |  |  |
|  |  |  |  |  |  |
| **F.3** | Reinstatement of power supply lines that are not recorded in the cadastre of underground utilities. Unit rate includes additional manual excavation, manual backfilling after reinstatement and all necessary works and materials | pcs | 1 |  |  |
|  |  |  |  |  |  |
| **F.4** | Reinstatement of TT lines that are not recorded in the cadastre of underground utilities. Unit rate includes additional manual excavation, manual backfilling after reinstatement and all necessary works and materials | pcs | 1 |  |  |
|  |  |  |  |  |  |
| **F.5** | Cutting and breaking asphalted road surface, loading, transportation and disposal at the approved disposal site up to 10km from the construction site. Asphalt shall be cut straight, along both sides of the trench, at a distance of 40cm. It is estimated that app. 2m2 of asphalted surface shall be removed along 1m of sewer route. Thickness of asphalt layer varies from 6 to 16cm (6+6+4). Quantity of works has been estimated based on the detail site inspection while detail breakdown of quantities is presented in the detailed design. Unit rate includes cutting, breaking, removal of asphalt, as well as full reinstatement of **asphalt bearing layer of BNS-22 quality.** | ton | 650 |  |  |
|  |  |  |  |  |  |
| **F.6** | Cutting and breaking asphalted road surface, loading, transportation and disposal at the approved disposal site up to 10km from the construction site. Asphalt shall be cut straight, along both sides of the trench, at a distance of 40cm. It is estimated that app. 2m2 of asphalted surface shall be removed along 1m of sewer route. Thickness of asphalt layer varies from 6 to 16cm (6+6+4). Quantity of works has been estimated based on the detail site inspection while detail breakdown of quantities is presented in the detailed design. Unit rate includes cutting, breaking, removal of asphalt, as well as full reinstatement of **asphalt wearing layer of ABS-11 quality.** | ton | 350 |  |  |
|  |  |  |  |  |  |
| **F.7** | Geodetic survey and preparation of as-built documentation of constructed sewers and other elements including producing of the cadastre of underground utilities. Works to be performed in accordance with the Law and Regulations on preparation of the cadastre of underground utilities. Data should be processed in DWG format and GIS platform used by the local water company. | m | 1,400 |  |  |
|  |  |  |  |  |  |
| **F.8** | Procurement of material and erection of longitudinal rainwater inlet gratings with concrete channels at the end of sections A1 and A.1.1. The rainwater inlets are to be erected in accordance with the detailed design (0.50m3 of concrete and 20kg of Q424 reinforcement required per m of the inlet). Measurement per m constructed inlet. | m | 10 |  |  |
|  |  |  |  |  |  |
| **F.9** | Dismantling of the existing concrete curbs, temporary storage and reinstatement of curbs after sewer installation and backfilling. Curbs shall be placed on a base of MB15 concrete (app. 0.05m3 of concrete per 1m of curb). Unit rate includes all necessary works and proper placement of curbs (earthworks, concrete works, transport, etc.). Measurement per m of reinstated curb. | m | 40 |  |  |
|  |  |  |  |  |  |
| **F.10** | Procurement of material and making of line inlet grates with concrete channels at the end of collector A1 and A1.1.  Line inlet grate to be made in accordance with project details, whereas for 1m of grate is necessary:  - 0.50m3 of concrete  - 20.00kg concrete iron Q424  - formwork 1.00m2  - 1m' of grate  - excavation with transport 1.00m3  Calculation per m'. | m | 10 |  |  |
|  |  |  |  |  |  |
| **F. 11** | Flushing and cleaning of the existing stormwater drainage pipes of dia. 300 to 1.000mm. | m | 1,000 |  |  |
|  |  |  |  |  |  |
| **F.12** | Demolition and removal of the existing rainwater inlets (concrete parts), transportation and disposal to the approved landfill site, up to 10km far from the construction site. Gratings and frames to be handed over to the PUC Vodovod Berane. | pcs | 10 |  |  |
| **F** | **MISCALENEOUS WORKS - SUB-TOTAL**  **To be carried forward to the Summary** |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SUMMARY – Schedule 14-Lot 2 Bill of Quantities – Sewerage Network (Stormwater Drainage)** | | | | | |
| **No.** | **TYPE OF WORKS** |  |  |  | **AMMOUNT (€)** |
| **A** | **PREPARATORY WORKS** |  |  |  |  |
| **B** | **EARTHWORKS** |  |  |  |  |
| **C** | **CONCRETE WORKS** |  |  |  |  |
| **D** | **REINFORCEMENT WORKS** |  |  |  |  |
| **E** | **INSTALLATION WORKS** |  |  |  |  |
| **F** | **MISCALANEOUS WORKS** |  |  |  |  |
|  | **TOTAL be carried forward to the**  **Main Summary – Lot 2** |  |  |  |  |

Schedule15-Lot 2: Dayworks

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item** | **Description** | **Unit** | **Quantity (provisional)** | **Rate**  **per hour/Unit EUR** | **Amount**  **EUR** |
| H.1 | **Labour** |  |  |  |  |
| H.1.1 | Mechanical Engineer | hours | 100 |  |  |
| H.1.2 | Civil Engineer | hours | 100 |  |  |
| H.1.3 | Electrical Engineer | hours | 100 |  |  |
| H.1.4 | Site Engineer | hours | 100 |  |  |
| H.1.5 | Surveyor | hours | 100 |  |  |
| H.1.6 | Technician | hours | 200 |  |  |
| H.1.7 | Working ganger | hours | 400 |  |  |
| H.1.8 | Equipment operator | hours | 400 |  |  |
| H.1.9 | Mechanical fitter | hours | 400 |  |  |
| H.1.10 | Electrician | hours | 400 |  |  |
| H.1.11 | Other Skilled Workers | hours | 400 |  |  |
| H.1.12 | Labourer | hours | 600 |  |  |
| H.1.13 | Driver | hours | 300 |  |  |
| H.1.14 | CAD-operator | hours | 100 |  |  |
|  | Sub-total amount of Labour (H.1.1-H.1.14) (7.1.1+…+7.1.16) | |  |  |  |
| H.2 | **Equipment (with operator)** |  |  |  |  |
| H.2.1 | Mobile crane | hours | 100 |  |  |
| H.2.2 | Tower crane | hours | 100 |  |  |
| H.2.3 | Dump truck 15 tonne | hours | 200 |  |  |
| H.2.4 | Van / pick-up truck, 2 tonne | hours | 200 |  |  |
| H.2.5 | Front-end loader | hours | 200 |  |  |
| H.2.6 | Excavator | hours | 300 |  |  |
| H.2.7 | Compressor with standard tools, 10 cu.m /min | hours | 200 |  |  |
| H.2.8 | Pump, 75 mm suction hose | hours | 150 |  |  |
| H.2.9 | Generator set, 15 kVA | hours | 100 |  |  |
|  | Sub-total amount of Equipment (H.2.1-H.2.9) (7.2.1+…+7.2.9) | |  |  |  |
| H.3 | **Materials** |  |  |  |  |
| H.3.1 | Sand | m3 | 300 |  |  |
| H.3.2 | Crushed gravel | m3 | 300 |  |  |
| H.3.3 | Natural gravel | m3 | 300 |  |  |
| H.3.4 | Portland Cement | kg | 1,500 |  |  |
| H.3.5 | Crushed stone for base | m3 | 300 |  |  |
| H.3.6 | 20 mm singles | m3 | 300 |  |  |
| H.3.7 | Reinforcement steel | kg | 1,500 |  |  |
| H.3.8 | Bitumen, 80/200 pen | kg | 1,500 |  |  |
| H.3.9 | Bitumen, MC30 | l  l | 300 |  |  |
| H.3.10 | Bitumen, emulsion, 50% | l | 300 |  |  |
| H.3.11 | Drainage sand | m3 | 300 |  |  |
|  | Sub-total amount of Materials (H.3.1+H.3.11) | |  |  |  |
| **Total-**Schedule15-Lot 2: Dayworks **- to be carried forward to the Main Summary** | | | | |  |

### LOT 2 - GRAND SUMMARY

|  |  |  |
| --- | --- | --- |
| **Schedule No** | **Description** | **Amount (€)** |
| **12** | General Items |  |
| **13** | Sewerage Network (Wastewater) |  |
| **14** | Sewerage Network (Stormwater Drainage) |  |
|  | **THE PRICE FOR CONSTRUCTION WORKS (excluding Contingencies) (items 12-14):** |  |
| **15** | **Contingencies (10% of The Price for Construction Works)** |  |
| **16** | **Dayworks** |  |
| **TOTAL PRICE OF TENDER-Lot 2**(\*) (12- 16 )  **The Price for Construction Works + Contingencies** | |  |

\*To be carried forward to Tender Form (please refer to Volume 1 Section 2 / Tender Form)

# Tenderer’s Declaration

The Tenderer declares herewith that the information provided in the above price schedule is correct and complete.

Name and first name: […………………………………………………………………]

Duly authorised to sign on behalf of:

[………………………………………………………………………………………...…]

Place and date: […………………………………………………………….………….]

Stamp of the firm/company: