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| **REFERENCE NUMBER:** | **ERDF.05.121 – Tender 017** | |
|  |  | |
| **Tender for the supply, delivery and installation of Heating and Cooling systems as part of ERDF Project ERDF.05.121 – Wildlife Rehabilitation Centre** | | |
| **Date Published:** | **Sunday 27th September 2020** |  |
| **Deadline for Submission:** | **Wednesday 21th October 2020** | **at 12:00am CET/CEST** |
| **Tender Opening:** | **Wednesday 21th October 2020** | **at 12:00am CET/CEST** |
|  | | |
| |  |  |  | | --- | --- | --- | |  | Operational Programme I – European Structural and Investment Funds 2014-2020  *“Fostering a competitive and sustainable economy to meet our challenges”*  Project part-financed by the European Regional Development Fund  Co-financing rate: 80% European Union; 20% National Funds |  | | | |
|  | | |
| **IMPORTANT** | | |
|  | | |
| **Nature Trust Malta**  Contact details (c/o Xrobb l-Għaġin Nature Park and Sustainable Development Centre, Triq Xrobb l-Għaġin, Marsaxlokk, Malta,  (+356) 21313150, info@naturetrustmalta.org) | | |

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# SECTION 1 – INSTRUCTIONS TO TENDERERS

|  |  |  |
| --- | --- | --- |
|  | 1. General Instructions | |
|  |  | |
| 1.1 | In submitting a tender, the tenderer accepts in full and in its entirety, the content of this tender document, including subsequent Clarifications issued by the Non Governmental Organisation (NGO), whatever the economic operator’s own corresponding conditions may be, which through the submission of the tender is waived. Tenderers are expected to examine carefully and comply with all instructions, forms, contract provisions and specifications contained in this tender document. These Instructions to Tenderers complement the General Rules Governing Tenders for NGOs.  No account can be taken of any reservation in the tender in respect of the procurement documents; any disagreement, contradiction, alteration or deviation shall lead to the tender offer not being considered any further.  **Prospective tenderers must submit their offer by depositing it in the tender box, located at *Xrobb l-Għaġin Nature Park and Sustainable Development Centre, Triq Xrobb l-Għaġin, Marsaxlokk, Malta*. Prospective tenders take full responsible to submit their offer by the set tender submission deadline.**  **Note:**  **Where in this tender document a standard is quoted, it is to be understood that the Contracting Authority will accept equivalent standards. However, it will be the responsibility of the respective bidders to prove that the standards they quoted are equivalent to the standards requested by the Contracting Authority.**  The Estimated Procurement Value for this Call for Tenders has been based on comprehensive research including appropriate financial analysis. In the context of this procurement, the Estimated Procurement Value, based on market research, is that of € 33,000 excluding VAT.  The purpose of this value shall be the guidance of prospective bidders when submitting their offer and is not to be considered as a binding capping price.  Therefore, the published Estimated Procurement Value is not restrictive and final on the Contracting Authority. Economic Operators are free to submit financial offers above or below the Estimated Procurement Value. However, the Contracting Authority reserves the right to accept or reject Financial Offers exceeding the Estimated Procurement Value | |
| 1.2 | The subject of this tender is the provision of the following supplies:   * Heating and Cooling System, composed of:   + Ventilation system   + Air Conditioning system   related to the Wildlife Rehabilitation Centre to be established at Xrobb l-Għaġin, as part of ERDF.05.121 – WILDLIFE REHABILITATION CENTRE | |
|  |  | |
| 1.3 | The place of acceptance of the services shall be **the still unrestored part of the ex-Deutsche Welle radio relay station at Xrobb l-Għaġin Natural Park**, the time-limits for the execution of the contract shall be **three years** **from last date of signature on contract**, and the INCOTERM2020 applicable shall be **Delivery Duty Paid (DDP).** | |
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| 1.4 | This is a unit-price contract. | |
|  |  | |
| 1.5 | This call for tenders is being issued under an open procedure. | |
|  |  | |
| 1.6 | The beneficiary of this tender is *Nature Trust – FEE Malta*. | |
| 1.7 | This tender is not a reserved contract. | |
|  | 2. Timetable | |
|  |  | |
| 2. | |  |  |  | | --- | --- | --- | |  | DATE | TIME | | Clarification Meeting (Refer to Clause 6.1) | Friday 2nd  October 2020 | 10:00 hrs | | Deadline for request for any additional information from the NGO  **Clarification requests should be addressed to: *info@naturetrustmalta.org*** | Thursday 8th October 2020 | 12:00 hrs  (noon) | | Last date on which additional information can be issued by the NGO | Tuesday 13th October 2020 | 12:00 hrs  (noon) | | Deadline for submission of tenders/Tender opening session  (unless otherwise modified in terms of Clause 10.1 of the  General Rules Governing Tendering for NGOs) | Wednesday 21st October 2020 | 12:00 hrs  (noon) | | \* All times Central European Time (CET) / Central European Summer Time (CEST) as applicable | | | | | |
|  |  | |
|  | 3. Lots | |
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| 3.1 | This tender is not divided into lots, and tenders must be for the whole of quantities indicated. Tenders will not be accepted for incomplete quantities. | |
|  |  | |
| 4.1 | 4. Variant Solutions  Variant solutions are not permissible. | |
|  | 5. Financing | |
| 5.1 | The project is *co-financed* by the European Union/Government of Malta, in accordance with the rules of European Regional Development Fund (ERDF) Operational Programme 1 - Co-financing rate: 80% European Union; 20% National Funds | |
| 5.2 | The Contracting Authority of this tender is *Nature Trust Malta* | |
|  |  | |
|  | 6. Clarification Meeting/Site Visit/Workshop | |
|  |  | |
| 6.1 | A clarification meeting/site visit will be held on the date and time indicated in Clause 2, at Xrobb l-Għaġin Nature Park to answer any questions on the tender document which have been forwarded in writing, or are raised during the same meeting. Minutes will be taken during the meeting, and these (together with any clarifications in response to written requests which are not addressed during the meeting) shall be posted online on the NGOs website as a clarification note as per Clause 6.1 of the General Rules Governing Tendering for NGOs.  Meetings between economic operators and the NGO, other than that provided in this clause during the tendering period are not permitted. | |
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|  | 7. Selection and Award Requirements | |
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|  | In order to be considered eligible for the award of the contract, economic operators must provide evidence that they meet or exceed certain minimum criteria described hereunder. | |
|  |  | |
|  | **(A) Eligibility Criteria** | |
|  | (i)  (ii) | No Bid Bond is required.(Note 1)  Declare agreement, conformity and compliance with the provisions of the Statement on Conditions of Employment by completing and submitting the form with title Statement on Conditions of Employment. |
|  | (iii)  (iv) | Power of Attorney (if applicable) (Note 2)  Information re Joint Venture/Consortium (Note 2) |
|  | (B) Exclusion (including Blacklisting) and Selection Criteria – information to be submitted through the completion of the following declaration forms: | |
|  | (i) | Declaration concerning exclusion grounds |
|  | (ii) | Declaration concerning *Selection Criteria* |
|  |  | |
|  | **(C) Technical Specifications** | |
|  | The bidder is to comply with the technical specifications as outlined under Section 4 (Terms of Reference) of this tender document and submit the following documentation: | |
|  | (i) | Tenderer’s Technical Offer in response to specifications – Bidders shall use the form provided. (Note 3) |
|  | (ii) | Key Experts Form(Note 2), the Statement of Exclusivity and Availability Form(Note 2), and, if applicable, Public Employees Declaration Form(Note 2), in respect of:   * Warranted Engineer * Skilled Installer |
|  | (iii) | Literature as per Form marked ‘Literature List’ to be submitted with the Technical offer at tendering stage. Alternatively, an Economic Operator can quote a reference number under which he/she has already supplied items so that there would be no need to submit literature. (Note 2) |
|  | (iv) | No Samples will be requested at evaluation stage to supplement the technical offer submitted. |
|  | **(D) Financial Offer** | |
|  |  | |
|  | (i)  (ii) | The Tender Form and Tenderer’s Declaration are to completed and submitted with the offer; a separate Tender Form is to be submitted for each option tendered, each form clearly marked ‘Option 1’, ‘Option 2’ etc.; (Note 3)  A financial offer is to be submitted by filling in Financial Bid Form, and is to be calculated on the basis of **Delivered Duty Paid (DDP)2020 (Grand Total)** for the works tendered.(Note 3) |
|  |  | |
|  | **Notes to Clause 7:**  *1. Tenderers will be requested to clarify/rectify, within five (5) working days from notification, the tender guarantee only in the following four circumstances: incorrect validity date, and/or incorrect value, and/or incorrect addressee and incorrect name of the bidder. Rectification in respect of the Tender Guarantee (Bid Bond) is free of charge.*  *2. A) Tenderers will be requested to either clarify/rectify any incorrect and/or incomplete documentation, and/or submit any missing documents within five (5) working days from notification.*  *3. No rectification shall be allowed. Only clarifications on the submitted information may be requested.*  ***Request for Clarification and / or rectifications concerning a previous request dealing with the same shortcoming shall not be entertained.*** | |
| 8.1 | **8. Tender Guarantee (Bid bond)**  No tender guarantee (bid bond) is required. | |
|  | 9. Criteria for Award | |
|  |  | |
| 9.1 | The sole award criterion will be the price. The contract will be awarded to the tenderer submitting the cheapest priced offer satisfying the administrative and technical criteria. | |
|  |  | |

# SECTION 2 – EXTRACTS FROM THE PUBLIC PROCUREMENT REGULATIONS

Part **X** of the Public Procurement Regulations

270. Any tenderer or candidate concerned, or any person, having or having had an interest or who has been harmed or risks being harmed by an alleged infringement or by any decision taken including a proposed award in obtaining a contract, a rejection of a tender or a cancellation of a call for tender after the lapse of the publication period, may file an appeal by means of an objection before the Review Board, which shall contain in a very clear manner the reasons for their complaints.

271. The objection shall be filed within ten calendar days following the date on which the NGO has by fax or other electronic means sent its proposed award decision or the rejection of a tender or the cancellation of the call for tenders after the lapse of the publication period.

272. The communication to each tenderer or candidate concerned of the proposed award or of the cancellation of the call for tenders shall be accompanied by a summary of the relevant reasons relating to the rejection of the tender as set out in regulation 242 or the reasons why the call for tenders is being cancelled after the lapse of the publication period, and by a precise statement of the exact standstill period.

273. The objection shall only be valid if accompanied by a deposit equivalent to 0.50 per cent of the estimated value set by the NGO of the whole tender or if the tender is divided into lots according to the estimated value of the tender set by the NGO for each lot submitted by the tenderer, provided that in no case shall the deposit be less than four hundred euro (€400) or more than fifty thousand euro (€50,000) which may be refunded as the Public Contracts Review Board may decide in its decision.

274. The Secretary of the Review Board shall immediately notify the Director and/or the NGO as the case maybe that an objection had been filed with his authority thereby immediately suspending the award procedure.

275. The NGO involved, as the case may be, shall be precluded from concluding the contract during the period of ten calendar days allowed for the submission of appeals. The award process shall be completely suspended if an appeal is eventually submitted.

276. The procedure to be followed in submitting and determining appeals as well as the conditions under which such appeals may be filed shall be the following:

1. any decision by the General Contracts Committee or the Special Contracts Committee or by the NGO shall be made public by affixing it to the notice-board of the same NGO as the case may be or by uploading it on Government’s e-procurement platform prior to the award of the contract if the call for tenders is administered by the NGO;
2. the appeal of the complainant shall also be affixed to the notice-board of the Review Board and shall be communicated by fax or by other electronic means to all participating tenderers;
3. the NGO and any interested party may, within ten calendar days from the day on which the appeal is affixed to the notice-board of the NGO and uploaded if/where applicable on the Government’s e-procurement platform, file a written reply to the appeal. These replies shall also be affixed to the notice-board of the Review Board and where applicable it shall also be uploaded on the Government’s e-procurement platform;
4. within three working days of the publication of the replies, the Secretary of the Review Board shall prepare a report (the Analysis Report) analysing the appeal and any reply to it. This report shall be circulated to the persons who file an appeal and to all parties who submitted a reply to the appeal;
5. after the preparatory process is duly completed, the Director or the Head of the NGO shall forward to the Chairman of the Review Board all documentation pertaining to the call for tenders in question including files, tenders submitted, copies of deposit receipts and any motivated letter;
6. The secretary of the board shall inform all the participants of the call for tenders, the NGO of the date or dates as the case maybe when the appeal will be heard;

(g) When the oral hearing is concluded, the Public Contracts Review Board, if it does not deliver the decision on the same day, shall reserve decision for the earliest possible date to be fixed for the purpose, but not later than six weeks from the day of the oral hearing:

Provided that for serious and justified reasons expressed in writing by means of an order notified to all the parties, the Public Contracts Review board may postpone the judgment for a later period.

(h) The secretary of the board shall keep a record of the grounds of each adjournment and of everything done in each sitting;

(i) After evaluating all the evidence and after considering all submissions put forward by the parties, the Review Board shall decide whether to accede or reject the appeal.

SECTION 3 – SPECIAL CONDITIONS

|  |  |
| --- | --- |
|  | **These conditions amplify and supplement, if necessary, the General Conditions governing the contract. Unless the Special Conditions provide otherwise, those General Conditions remain fully applicable. The numbering of the Articles of the Special Conditions is not consecutive but follows the numbering of the Articles of the General Conditions. Other Special Conditions should be indicated afterwards.** |
|  | **For the purposes of contracts issued by NGOs, the term ‘approval from the Central Government Authority’ shall be substituted by the term ‘approval by the Head responsible for that NGO’; Furthermore, any references to the Contracting Authority throughout the General Conditions shall be deemed to be referring to the NGO responsible for that procurement.** |
|  | Article 2: Law Applicable |
|  |  |
| 2.1 | The laws of Malta shall apply in all matters not covered by the provisions of the contract. |
|  |  |
| 2.2 | The language used shall be English. |
|  | ***Article 3: Order of Precedence of Contract Documents*** |
| 3.1 | The contract is made up of the following documents, in order of precedence:  (a) the Contract;  (b) the Special Conditions;  (c) the General Conditions;  (d) the Contracting Authority’s technical specifications and design documentation;  (e) the Contractor’s technical offer, and the design documentation (drawings);  (f) the financial bid form (after arithmetical corrections)/breakdown;  (g) the tender declarations in the Tender Response Format;  (h) any other documents forming part of the contract.  Addenda have the order of precedence of the document they are modifying. |
|  | Article 4: Communications |
|  |  |
| 4.1 | Any communication shall be carried out with:  Nature Trust Malta,  c/o Xrobb l-Għaġin Nature Park and Sustainable Development Centre,  Triq Xrobb l-Għaġin, Marsaxlokk, Malta  Email: [info@naturetrustmalta.org](mailto:info@naturetrustmalta.org)  Communications shall preferably be carried out by email. |
|  |  |
|  | Article 7: Supply of Documents |
|  |  |
| 7.4 | 1. Prior to the commencement of works, the Contractor shall provide the Contacting Authority with:   * A report detailing the **Health and Safety Assessment, including risk mitigation measures to be adopted,** for the carrying out of the necessary works for the tender implementation up to commissioning. It shall outline all risks involved and measures to be taken to minimise or eliminate potential risks. The report is to be prepared and signed by a competent person and to be submitted **within three weeks** from last signature of Contract. * Method Statement as per Article 2.2.6 of the technical Specifications **within two week** from last signature of Contract. * Working drawings, diagrams, schedules of materials, etc., necessary, to be submitted to the Consultant Engineer for approval before proceeding with the works **within two week** from last signature of Contract.   2. At commissioning stage, or final installation, the Contractor shall provide:   * User Manual for equipment for use of ventilation and air conditioning systems * Full set of as fitted drawings.   These shall include 1 hard copy and a digital copy on 2 separate USBs. |
|  |  |
|  | Article 8: Assistance with Local Regulations |
| 8.3 | As per general conditions |
|  |  |
|  | Article 9: The Contractor’s Obligations |
|  |  |
| 9.6 | Without prejudice to the obligations arising from the specifications, and the General Conditions, the Contractor shall take the necessary measures to ensure the visibility of the European Union co-financing. These measures must comply with the rules laid down and published by the Commission on the visibility of external operations as well as the Visibility Guidelines as issued by the Managing Authority responsible for ERDF funds in Malta. |
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|  | Article 10: Origin |
| 10.1 | As per General Conditions |
|  |  |
|  | Article 11: Performance Guarantee |
|  |  |
| 11.1 | The Contractor shall, within 15 calendar days of receipt of the contract, sign and date the contract and return it together with a copy of the Performance Guarantee. The copy of the Performance Guarantee forwarded to the Central Government Authority is to be endorsed by the Contracting Authority prior to submission. The contract will not be endorsed by the Contracting Authority/Central Government Authority until the performance guarantee is submitted. The Contractor is therefore obliged to forward the original Performance Guarantee to the Contracting Authority. The amount of the guarantee shall be 4% where the amount of the total contract value is between €10,000 and €500,000 exclusive of VAT, and 10% where the amount of the total contract value is €500,000 or above.  Economic Operators have the possibility to provide the Contracting Authority with a Single Bond covering the performance guarantees for all the contracts with the same Contracting Authority. If an additional contract is awarded to a given contractor, which results in an economic operator’s current cumulative contracts value to go beyond the contract value range currently covered by the Single Bond, the contractor is to be requested to; either submit a separate Performance Guarantee for the additional contract; or else submit a new Single Bond to cover the new total contracts value or submit an amendment to the original Single Bond  specifying the new amount. If an Economic Operator chooses to make use of the Single Bond, he must submit a letter from the respective Contracting Authority specifying that the amount of the Single Bond covers the new Contract, otherwise the new Contract Agreement would not be signed. |
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| 11.3 | The performance guarantee shall be in the format given in Section 5 and shall be provided in the form of a bank guarantee. |
|  |  |
| 11.7 | The Performance Guarantee shall be released within 30 days from Provisional Acceptance. |
|  | Article 12: Insurance |
|  |  |
| 12.1 | As per General Conditions |
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|  | Article 13: Performance Programme (Timetable) |
|  |  |
| 13.1 | The bidder is required to present a detailed realistic programme of works (through a Gantt chart) describing the work plan, as part of its Technical Offer. The Contractor shall be expected to honour its commitments in terms of timeframes and deadlines, as expressed in its Technical Offer. |
| 13.2 | The heating and cooling system shall be commissioned within **five months** from the last signature of contract.  Without prejudice to the Generality of this clause, the Contracting Authority may request the Contractor to postpone delivery deadlines due to works related to the implementation of other Tenders/Contracts. |
|  |  |
|  | Article 14: Contractor’s Drawings/Diagrams |
|  |  |
| 14.1 | As per Article 7 of these Special Conditions |
|  |  |
| 14.7 | As per Article 7 of these Special Conditions |
|  |  |
|  | Article 15: Tender Prices |
|  |  |
| 15.1 | As per General Conditions |
|  |  |
|  | Article 16: Tax and Customs Arrangements |
|  |  |
| 16.1 | As per General Conditions |
| 16.2 | As per General Conditions |
|  |  |
|  | Article 17: Patents and Licences |
|  |  |
| 17.1 | As per General Conditions |
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|  | Article 18: Commencement Order |
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| 18.1 | The date for the Commencement of the performance of the contract shall be construed to read the date of last Signature of Contract |
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|  | Article 19: Period of Execution of Tasks |
|  |  |
| 19.1 | As per Article 13.2 of the Present Special Conditions |
|  |  |
|  | Article 21: Delays in Execution |
|  |  |
|  | As per General Conditions. |
|  |  |
|  | Article 22: Modification to the Contract |
| 22.1 | *No Modifications to the Contact shall be allowed.* |
|  |  |
|  | ***Article 24: Quality of Supplies*** |
| 24.2 | As per General Conditions |
|  |  |
|  | Article 25: Inspection and Testing |
|  |  |
| 25.2 | Further to what is stated in the General Conditions Inspection and Testing shall be carried out at Xrobb l-Għaġin Nature Park |
|  |  |
|  | Article 26: Methods of Payment |
|  |  |
| 26.1 | Payments will be made in Euro.  Payments shall be authorized by the Contracting Authority, and paid by the Treasury Department. |
| 26.3 | As per General Conditions. |
|  |  |
| 26.5 | *As per* General Conditions, payments shall be made as follows:  a) 60% of the contract value after the signing of the contract, against provision of the Pre- financing Guarantee as a security guaranteeing repayment in full of this pre-financing;  b) the remaining balance of the contract price following provisional acceptance of the supplies.  Accordingly, the Contractor must request a pre-financing for operations, in line with point a above, connected with the execution of the Contract, as a lump sum advance enabling it to meet expenditure resulting from the commencement of the contract.  The Contractor shall provide the Contracting Authority with a pre-financing guarantee for the value of the said pre-financing, within 30 days from the last signature of contract. Such a guarantee shall be issued by a bank as per template provided by the Contracting Authority.  The pre-financing guarantee shall be released as per General Conditions. |
|  |  |
| 26.7 | All supplies are covered by a warranty of two years |
| 26.9 | Not applicable |
|  |  |
|  | Article 28: Delayed Payments |
|  |  |
| 28.1 | The Contracting Authority shall pay the contractor sums due within 60 days of the date on which an admissible payment is registered, in accordance with Article 26 of these Special Conditions. This period shall begin to run from the approval of these documents by the competent department referred to in Article 26.1 of these Special Conditions. These documents shall be approved either expressly or tacitly, in the absence of any written reaction in the 30 days following their receipt accompanied by the requisite documents. |
|  |  |
| 28.2 | Once the deadline laid down in Article 28.1 has expired, the Contractor may, within two (2) months of late payment, claim late-payment interest:   1. meaning simple interest for late payment at a rate which is equal to the sum of the reference rate and at least eight percent (8%); 2. on the first day of the month in which the deadline expired.   The late-payment interest shall apply to the time which elapses between the date of the payment deadline (exclusive) and the date on which the Contracting Authority's account is debited (inclusive). |
|  | Article 29: Delivery |
|  |  |
| 29.1 | Further to the provisions of the General Conditions, the Contractor shall bear all risks relating to the supplies until provisional acceptance at destination. The supplies shall be packaged so as to prevent their damage or deterioration in transit to their destination. |
|  |  |
| 29.2 | As per General Conditions |
|  |  |
| 29.3 | The packaging shall remain the property of the Contractor subject to respect for the environment. |
|  |  |
| 29.5 | A delivery note clearly outlining in detail the items supplied, any serial number of the relevant equipment and the date of delivery. |
| 29.6 | As per relevant regulations |
|  |  |
|  | Article 31: Provisional Acceptance |
|  | Without prejudice to the General Conditions, a Provisional Certificate of Acceptance shall be issued by the Contracting Authority once it is fully satisfied that the Contractor has successfully Commissioned the relevant supplies and provided the relevant documentation requested under these Special Conditions in connection with such supplies. |
|  |  |
|  | Article 32: Warranty |
|  |  |
| 32.1 | This warranty shall remain valid for two (2) years after provisional acceptance. |
| 32.7 | Such warranty shall be provided to guarantee quality and longevity of the supplies and shall be inclusive of BOTH parts and labour. |
|  |  |
|  | Article 33: After-Sales Service |
|  |  |
| 33.1 | Not Applicable |
|  |  |
|  | Article 35: Breach of Contract |
|  |  |
| 35.3 | Without prejudice to the Government’s right to dissolve ‘ipso jure’ the contract in the case of infringement of any condition thereunder and apart from the deduction established for delay in delivery, any such infringement shall render the contractor, in each case, liable to a deduction by way of damages of 5 per cent of the value of the contract, unless the Government elects, with regard to each particular infringement, but not necessarily with regard to all infringements, to claim actual damages incurred. |
|  |  |
|  | Article 37: Termination by the Contractor |
| 37.1 (a) | The deadline in respect of Article 37.1 (a) of the General Conditions shall read as six (6) months from the date of issue of Certificate of Partial or Provisional Acceptance by the Contracting Authority or designated representatives. |
|  |  |
|  | Article 41: Dispute Settlement by Litigation |
|  | If no settlement is reached within 120 days of the start of the amicable dispute-settlement procedure, each Party may seek:   1. either a ruling from a national court, or 2. an arbitration ruling, in the case where the parties i.e. the contracting Authority and the Contractor, by agreement decide to refer the matter to arbitration. |
|  |  |

# SECTION 4 –SPECIFICATIONS/TERMS OF REFERENCE (Note 3)

**Terms of Reference**

|  |
| --- |
| **Note:**  **Where in this tender document a standard is quoted, it is to be understood that the NGO will accept equivalent standards. However, it will be the responsibility of the respective bidders to prove that the standards they quoted are equivalent to the standards requested by the NGO.** |

# 1.0 Background Information

**The information in this section is being provided by way of background, and for the information of potential bidders.**

The aim of the ERDF PROJECT ERDF.05.121 – WILDLIFE REHABILITATION CENTRE is primarily to set up a Wildlife Rehabilitation Centre to provide ex-situ rehabilitation of wildlife from across Malta and surrounding seas: marine (turtles and cetaceans), terrestrial (such as hedgehogs, shrews, lizards, snakes and bats) and avian fauna. Following rehabilitation, if possible, they will be released into their natural habitat. It should be a unique, all year round visitor attraction visitors with the opportunity to interact with the rehabilitating wildlife.

The Contracting Authority, in partnership with the Ministry for the Environment, Climate Change and Planning was successful in its submission for ERDF funds to fund the setting-up of this Centre. In this regard, any work on the project has to be carried out within the parameters defined by the Grant Agreement entered into by NTM and the Managing Authority for ERDF funds. The Planning and Priorities Coordination Division (PPCD) within the Parliamentary Secretariat for EU Funds within the Ministry of Foreign and European Affairs. is the designated Managing Authority (MA) responsible for the overall coordination and management of the European Regional Development Fund (ERDF) and the Cohesion Fund (CF) under Operational Programme I (2014-2020). The MA issues calls for proposals for ERDF and CF at different intervals of the Programme’s lifetime. The project was successful under one such call.

The present infrastructure for ex-situ conservation in Malta is, to say the least, quite limited and to date the rehabilitation of such species has been carried out in a piecemeal manner, mainly by NTM, through its Wildlife Rescue Team which provides rescue services for both marine and terrestrial fauna on a 24/7 basis. The team is composed of a group of volunteers, made up of divers, biologists and marine mammal medics who are covered by permits from the Environment and Resource Authority (ERA) to respond to calls for the handling of local protected wildlife. Injured turtles and cetaceans are taken to San Lucjan’s Rehabilitation Centre and/or a veterinarian’s clinic where they are treated by or under the supervision of a qualified veterinarian. Other animals (including hedgehogs, lizards, chameleons, shrews, bats, wild rabbits, and weasels), after being examined by a veterinarian, are taken, under ERA permit to the volunteer’s homes where they are treated, medicated and taken care of until they may be released once more into the wild. Turtles are released during dedicated events in the presence of the media and distinguished guests, amongst others, as part of an effort to raise awareness about risks to biodiversity and rehabilitation efforts. Other species are released by the volunteers at the place of rescue or in a nearby protected area.

The project will also cater for CITES animals which are presently hosted at the Small Animal Quarantine facilities in Luqa, which is managed by the Ministry for Sustainable Development, Environment and Climate Change. The site was designed to host small animals and pets (dogs, cats and ferrets) who do not meet all the requirements for entry into Malta under the Pet Passport scheme, for a short period of time in quarantine to minimise the risk of disease being brought into the islands. However, CITES species that are found in Malta illegally, are also kept there until their position is regularised and/or they may be returned to their country of origin or released into the wild.

The Wildlife Rehabilitation Centre will be hosted in part of the ex-Deutsche Welle radio relay station at Xrobb l-Għaġin Natural Park. It will compliment a first project in the area carried out between 2007 and 2011 through a grant from Iceland, Liechtenstein and Norway though the EEA financial mechanism and the Norwegian financial mechanism, which project saw the rehabilitation of a hitherto degraded area and some of the derelict buildings in the area into a natural park and a Sustainable Development Centre. That project had left some buildings unutilised, and thus still in a derelict state. The present project is proposing the rehabilitation of those buildings and their use as parts of the proposed Wildlife Rehabilitation Centre.

# 2.0 Specifications

The following installations shall be suitable for a saline environment. Hence, all installations shall be of polycarbonate construction or stainless steel 316L construction, installations using equipment with aluminium construction shall not be acceptable.

# 2.1 Preamble to the Specification

# 2.1.1 Scope of work

The work covers the installation and connecting up, testing and commissioning of HVAC services and includes for the supply and installation of all equipment, piping and accessories.

The contractor shall:

* Execute work in a diligent and competent manner.
* Complete the work in its entirety, to the Engineer's satisfaction and in accordance with the design and instructions of the responsible Engineer.

# 2.1.2 Discrepancies

Special attention has been given such that as far as possible, the drawings, specification and schedule of items, detail the whole of the requirements for this work. The tenderer shall however satisfy himself that these documents cover the complete systems, as regards materials, equipment and accessories, for the correct and proper operation of the installation as a whole.

# 2.1.3 Extent of Works

This part of the works includes for:

* Ventilation System
* Air Conditioning System

All major pipelines and service type shall be identified according to BS 1710: 2014.

# 2.1.4 Complete System

The system shall be complete and working in all respects, and shall include all necessary accessories, fittings, ancillary equipment, pipes, vents, strainers, spigots, dampers, valves, controlling equipment, insulation, drains etc., and all items not specifically mentioned according to the scope and spirit of this description.

# 2.1.5 Protection of works

The Contractor shall protect all equipment, material and works until taken over by the Contracting Authority and shall remain his sole responsibility until official handing over.

# 2.1.6 Quantities / Variations

The consultants may supply any additional drawings or directions as may be necessary for the proper execution of the work. If the work shown on any such drawings or directions is, in the opinion of the contractor, extra to that comprised in the specifications and Bills of Quantities, he shall give notice in writing to this effect before proceeding with such work; if this condition is not adhered to, the Contractor shall have no right for any additional claim at a later stage.

# 2.1.7 Working Drawings

The Contractor shall be responsible for the preparation of all-working drawings, diagrams, schedules of materials, etc., necessary, to be submitted to the Engineer for approval before proceeding with the works.

# 2.1.8 Alternatives

The tenderer is NOT ALLOWED TO CHANGE ANY OF THE DESIGN PARAMETERS, PIPE SIZES, and SIZES OF DUCTS ETC.

IN THIS EVENT THE TENDER SHALL NOT BE CONSIDERED AND THE TENDERER SHALL BE DISQUALIFIED.

# 2.1.9 Working Drawings and Records

The contractor shall prepare working drawings and such installation diagrams, wiring drawings and schematics as may be necessary in the Engineer's opinion. These shall be submitted to the engineer for approval before execution of the work.

The contractor shall keep such records as necessary, in order to be able to complete the as-fitted drawings upon completion of the works.

# 2.1.10 Submittals

The contractor is to submit technical literature covering all key components of the system being proposed.

# 2.2 WORKMANSHIP

# 2.2.1 Regulations

All work shall be carried out in accordance with the relevant safety regulations, British Standard Code of Practices including, BS 8313 and normal trade practice and to the entire satisfaction of the Consulting Engineer.

# 2.2.2 General Conditions

All work is to be executed according to the general workmanship specification found elsewhere, unless otherwise specified to the contrary hereunder.

All equipment is to be suitably rated for the marine environment.

# 2.2.3 Piping Installation

Main supply pipes for the various installations shall be as follows

|  |  |
| --- | --- |
| Refrigeration pipe work | DX Systems: Copper tubes shall conform to BS EN 12735 or equivalent. The pipe work and brazing material shall be suitable for R410A refrigerant (VRF Units) and R32 Refrigerant (Split Units). |
| Condensate drain system: | UPVC PN 6 |
|  |  |

All pipe/duct sizes shown shall be internal diameters.

Any pipes, brackets, hangers, steelwork and the like, shall be protected by galvanizing (pre-galvanised type). Pipes shall be finished with two-finish coats enamel paint in an approved colour so as to be colour coded. Flow direction shall be stencilled clearly on the pipe itself.

Expansion bellows/joints shall be used where long runs of pipework are required or where there are any expansion joints for the building. This shall depend on the expansion coefficient of the pipework material and shall be used as frequently as required and to manufacturer’s recommendations.

Horizontal pipes shall be supported at spacing of not more than two meters for galvanised pipes / copper pipes and 0.75m for polyethylene/polybutylene/polypropylene pipes and at all changes in direction.

Hangers and supports shall be secured with neat purposely made wrap around bolted brackets. The method and location of supports shall be as indicated by the Engineer.

Where threading is used, this shall be carried out for the total length of the joint or accessory with a good threading machine.

Any threads exposed after jointing shall be painted with a suitable rust preventor.

PTFE tape or flax fibres (for sealing metal threaded connections) with a good threading compound shall be used throughout on all threaded joints.

All distribution pipe work shall be thoroughly cleaned before any tests are carried out. Pressure test shall be applied to the piping only excluding any parts of the equipment. The test pressure shall be one and a half times the operating pressure and shall be applied for a duration of at least four hours. The tests shall be applied before any insulation is installed or pipes concealed.

Sizing of pipes shall be as indicated on drawings.

All pipe ends shall be blanked off during the works to prevent the ingress of dirt and other obstructions, which may cause blockages etc. The contractor shall take all precautions to comply with this measure. Drainpipes of rigid PVC shall be properly jointed in accordance with the manufacturer's recommendations. Adequate blank Tees shall be inserted in all drain pipework to ensure easy cleaning and rodding in case of blockages in the future.

Pipe joints shall under no circumstances be allowed in the thickness of walls, floors, etc. Pipework shall be placed in chase within walls, only where specifically instructed by the Engineer.

Sleeves shall be provided wherever pipes cross-floors or walls in the structure. When these are required to cross Reinforced Concrete members, instructions are to be sought from the Architect as to the correct placement, and size of the holes, as also to the method of procedure in drilling. PVC sleeves shall be cemented into the wall thickness and the space between the pipe and the sleeve shall be caulked with approved flexible mastic etc.

Pipework shall be fixed at approved levels after co-ordination with the Engineer as to False Ceiling heights etc. They shall be properly hung using adequate brackets, hangers, support frames etc. Provision of loops, expansion bellows, or the use of changes in direction, shall be necessary to allow for pipe movement and expansion.

Quantities of pipework and valves are as accurate as possible, but the contractor is enjoined to check the runs for himself and satisfy himself as to their correctness.

Steel pipes, which are welded, shall have flanged joints where there are change in direction or when a straight run exceeds twelve meters.

# 2.2.4 Drains

The Drains shall be in accordance with EN1329 and EN1401. Piping shall be installed inside buildings according to EN12056 and outside buildings according to EN752.

Drains for air-conditioning units shall have a minimum size of 28 mm depending on the size of the A/C unit. All A/C drains are to be furnished with water traps and connected to drains as indicated in the drawings.

All drains are to be given adequate gradient and supported at a spacing not exceeding 1 m. Inspection Tees shall be used to facilitate cleaning and clearing of blockages. Drains shall connect the respective sanitary fitting to the nearest gulley trap. All vertical main drain pipes are to be air vented. All drains for the air conditioning systems to be adequately lagged in order to inhibit the formation of condensation

# 2.2.5 Testing and Commissioning

All testing and commissioning shall be in accordance with IHVE and BS guides for test procedures, and to the satisfaction of the Engineer.

Although testing of individual sections is allowed, in the interest of speed, the testing shall be considered carried out only when the COMPLETE installation is tested and commissioned. The contractor shall remain responsible for individually tested sections and will cover them at his own risk.

The contractor shall provide all test points, equipment and facilities to carry out the tests, both on site and at remote locations. All manufacturers' items performance data and characteristics shall be collated together with test results, for future reference and maintenance.

All equipment shall be adequately labelled and marked. Schematic pathway and riser "as built" Drawings etc., shall be prepared by the contractor and presented to the Engineer on completion.

The following tests are to be carried out during or before commissioning:

* Pipework testing - All pipework runs shall be tested, including bellows, joints, flexibles etc., and a test schedule shall be prepared by the contractor, for approval and used to clarify the tests carried out. This schedule shall be approved by the Engineer before adoption for use.
* Hydraulic testing of pipe runs - This shall be to 1.5 times working pressure for FOUR hours duration, and shall exhibit no loss of pressure, and no visible leakages on inspection. Any parts or instrumentation not designed for such pressure shall be temporarily excluded from the test.

# 2.2.6 Method statement

The contractor shall furnish the Contracting Authority / Engineer with a detailed description of the method statement to be employed in the installation of the various services. This applies both for the internal installations as well as in the supply and installation of the main plant. This method statement is to be approved by the Contracting Authority / Engineer prior to the works being taken in hand.

# 2.3 MATERIALS SPECIFICATION - Ventilation equipment

# 2.3.1 Uniformity

All materials used under this contract shall be of uniform design throughout, similar parts being interchangeable.

# 2.3.2 Electrical Equipment

All electrical equipment forming part of the mechanical services shall be suitable for 230V/400V 50Hz electrical supply. All motors above 750W shall meet the IE3 standard (circuit breakers must cater for high in-rush currents in this case) or shall meet the IE2 standard and be equipped with a variable speed controller.

# 2.3.3 In-line fan – General Ventilation

This unit shall be supplied complete with all necessary brackets etc. and detachable mounting foot for simplified mounting and removal, external mounted louver and extractor grilles. The fan shall be complete with spigots at both ends for ease of connection of ducts. Mounting brackets are to be supplied fixed to the sides of the casing. Castings are to be lined with 25mm high density, non-toxic, flame retardant acoustic lining in compliance with BS EN 476 Parts 6 and 7. Access to the fan and motor is to be via an easily removable panel sealed using non-hygroscopic neoprene. All fixings shall not be susceptible to rusting and shall be treated against corrosion.

Other characteristics shall be as follows:

|  |  |
| --- | --- |
| Type | Directly driven fan for lower noise operation |
| Speed | 900 Rev./min. |
| Power Supply | 230V 50 Hz |
| Starter | Variable speed controlled |
| Air displacement | as indicated on the drawings |
| Resistance | as indicated on the drawings |
| Max. Sound Pressure Level | 45 dBA at 1 meter |

The fans shall be supplied complete with starter and thermal overload protection.

The rotor shall be statically and dynamically balanced at the factory according to ISO 1940

The motor shall have an IP 65 rating to BS EN60529.

The fans shall be of the low noise type and shall be such that they shall be complete with sound attenuating shroud. The fans shall be supplied c/w a silencer both upstream and downstream of the flow to minimise noise levels as well as a variable speed controller so as to adjust the speed of the fan accordingly.

# 2.3.4 Ventilation Fan Control Panel

This will comprise of a wall mounted, IP65, GRP enclosure, situated adjacent to the respective distribution boards to control the ventilation fans as indicated in the Drawings. Power to the respective ventilation fans shall be through this ventilation control panel. The control panel shall include a starter suitable for Variable Speed Controls of fans.

Each fan shall include:

* Suitably rated thermal / magnetic motor circuit breaker.
* Power contactor or contactor set. Electronic contactors are acceptable.
* Start / stop push buttons, run / trip indication.
* Fire alarm interface
* Individual timer within the VCP

Each fan is to have AUTO / MANUAL / TIMER SELECTOR. When in the auto mode, the fan shall be controlled by the timer.

Each fan shall have a variable speed controller installed adjacent to the VCP.

The cost of the VCP is to be inclusive of all power and control cables.

# 2.3.5 Duct

The duct is to be manufactured from polyurethane insulating material, lightweight, having a maximum thermal conductance of 0.022 W/m K at 10°C. It shall have internal and external coverings with aluminium foil of thickness 80 micrometres. All joints are to be airtight.

Fresh air and extraction ductwork in the garage shall be in fire rated galvanised sheet steel complying with BS EN 10346. Where acting as smoke venting equipment the metal ducts and fixings shall be fire rated with a minimum melting point of 800 deg C as required by local and international regulations.

# 2.3.6 Diffusers / grills

The air supply diffusers shall be complete with opposed blade damper and mounted frame. They shall be of galvanised steel construction with a powder coated finish of a colour as instructed by Contracting Authority. The size and type of the diffusers / grills shall be as indicated on the drawing.

# 2.4 MATERIAL SPECIFICATIONS - Air-conditioning System

The following installations that shall be carried out at roof level of Block A and Block B respectively. Any installations shall be suitable for a saline environment. Hence, all installations shall be protected against corrosion, installations using equipment with aluminium construction shall not be acceptable.

# 2.4.1 Preamble to Air-Conditioning Specifications

# 2.4.1.1 F-Gas Regulation Contractor Obligations

* Installation, servicing, maintenance, repair or decommissioning of any refrigerating equipment falling under the scope of this project and listed in Article 4(2) of Regulation 517/2014 must be carried out using certified personnel, and, precautionary measures must be taken to ensure the prevention of emissions of fluorinated greenhouse gases.
* Copies of the records referred to in Article 6(1) of Regulation 517/2014 must be kept for a minimum of five years.
* Where alterations or dismantling of existing equipment is relevant to the scope of the project, the contractor must make all the necessary arrangement for the recovery of any residual gases, ensuring its recyclability, reclamation or destruction.
* The contractor shall present relevant certificates in accordance with Article 10.
* The contractor shall present certificates showing the competence of personnel under his employment to handle these gases as per Article 10 (2) and Article 10 (5).
* All products and equipment used on site shall be labelled according to Article 12.
* Respecting the regulations related to the import of these gases and respecting the annual maximum import quotas shall fall under the contractor’s responsibilities.

# 2.4.2 Air-conditioning piping installation

The pipe work and brazing material shall be suitable for R410A/R32 refrigerant. All pipe work used shall be clearly marked that it is suitable for R410A/R32 refrigerant.

The tube shall be of the phosphorous deoxidised seamless pipe. Foreign materials inside the pipe including oils for fabrication shall be less than 30mg/10m. The pipe shall have an operating pressure of 3.8MPa but shall be suitable for a pressure test of 4.5Mpa. All pipe sizes shown shall be internal diameters.

The pipes shall be insulated using closed cell type insulation having minimum thickness of 16mm with a heat transfer coefficient of 0.032 W/m deg C at a temperature of 25 deg C. It shall be suitable for use over an operating temperature range of between 0 and 80 deg C and shall have incombustible properties. Its specification should declare it, not subject to rot, deterioration from dampness, non-corrosive and vermin inhibiting. The insulation shall have an external weatherproof polyisobutylene cover.

Brazing material shall be of the type that requires no flux (e.g. Phosphor copper brazing filler - BCuP). During brazing the pipe is to be continually purged with dry nitrogen to ensure that there shall be no build-up of carbon films or scale on the internal surface of the pipe. All ends, are to be kept sealed off at all times.

All installation tools shall be exclusively used for R410A refrigerant and are not to have been used on other refrigerant type installations.

The vacuum pump use is to have a non-return valve and shall be such that oil does not flow into the system while the pump is not working. The pump shall be suitable to evacuate to -100.7kPa

Upon completion of installation the pipes shall be pressure tested at 4.5Mpa for a minimum of 4 hours. After the pressure test is complete the pipe work shall be filled with dry nitrogen at a pressure of 0.25MPa and sealed off.

Horizontal pipes shall be supported at spacing of not more than two meters apart and at all changes in direction.

Hangers and supports shall be secured with neat purposely-made pre-fabricated and galvanised proper pipe 2 semi-circular type bolted brackets. The method and location of supports shall be as indicated by the Engineer. All brackets used shall be of the factory galvanised pre-fabrication type. No welded and painted brackets shall be acceptable.

All pipe work shall be thoroughly cleaned before any tests are carried out. Pressure test shall be applied to the piping only excluding any parts of the equipment. The tests shall be applied before any insulation is installed or pipes concealed.

No pipe work is to pass from underneath floor tiles except where specifically approved.

Pipe joints shall under no circumstances be allowed in the thickness of walls, floors, etc. Pipework shall be placed in chase within walls, only where specifically instructed by the Engineer.

Sleeves shall be provided wherever pipes cross-floors or walls in the structure. When these are required to cross Reinforced Concrete members, instructions are to be sought from the Architect as to the correct placement, and size of the holes, as also to the method of procedure in drilling. PVC sleeves shall be cemented into the wall thickness and the space between the pipe and the sleeve shall be caulked with approved flexible mastic or fire retardant expanded foam etc.

Pipework shall be fixed at approved levels after co-ordination with the Engineer as to False Ceiling heights etc. They shall be properly hung using adequate brackets, hangers, support frames etc

Quantities of pipework and valves are as accurate as possible but the contractor is enjoined to check the runs for himself and satisfy himself as to their correctness.

Oil traps shall be installed in all vertical pipe work exceeding 5m in height.

Pipes for single copper runs shall be installed in pipe brackets. Multiple parallel copper runs shall be installed on cable trays. Pipes (including drains) hung with galvanised strips shall not be acceptable.

# 2.4.3 Drains

Drainpipes of rigid PVC shall be used for all A/C units, and shall be properly jointed in accordance with the manufacturer's recommendations. Adequate blank Tees shall be inserted in all drain Pipe work to facilitate cleaning and clearing of blockages.

The size of the drains shall be a minimum of 28 mm diameter for all the units.

Drains installed above false ceiling are to have adequate closed cell type insulation minimum thickness 9mm.

All drains for the A/C units installed above false ceilings / below raised flooring are to be complete with closed cell type insulation. All A/C drains are to be furnished with water traps and connected to gulleys in shafts.

# 2.4.4 Insulation

All piping and accessories shall be properly insulated and finished in a smooth, clean workmanlike manner with all joints tightly finished.

The insulation is to be so applied as to eliminate air pockets between the pipe walls and the insulation material itself, otherwise condensation will result.

Insulation shall pre-formed sectional wool passed down with aluminium foil adhesive tape or rubber-type moulded section conforming to pipe diameters and having a density of 96 Kg/m3 min and a Max. K. Factor of 0.032 W/m deg C at a temperature of 25 deg C. It shall be suitable for use over an operating temperature range of between 5 and 80 deg C and shall have incombustible properties. Its specification should declare it, not subject to rot, deterioration from dampness, non-corrosive and vermin inhibiting.

The insulation shall have on overall fire classification of B-s2 d0 as defined in BS EN 13501-1.

The thickness range of the insulation shall vary by copper piping diameter as follows:

15 mm to 50 mm pipe 16 mm insulation thickness

65 mm to 100 mm pipe 25 mm insulation thickness

All externally placed insulated pipe works shall be adequately protected from the elements by a high molecular weight polyisobutylene (HMWPIB) sheathing, self-extinguishing. The weather proofing shall be guaranteed for a period of 5 years.

# 2.4.5 Duct

The duct is to be manufactured from polyurethane insulating material, lightweight, having a maximum thermal conductance of 0.022 W/m K at 10°C. It shall have internal and external coverings with aluminium foil of thickness 80 micrometres. All joints are to be airtight.

# 2.4.6 Diffusers / grills

The air supply diffusers shall be complete with opposed blade damper and mounted frame. They shall be of aluminium with an aluminium paint finish of a colour as instructed by Contracting Authority. The size and type of the diffusers / grills shall be as indicated on the drawing. All 600mm dimensions for grills in the offices or other areas fitted with tiled false ceilings shall imply that the grill shall be suitable to fit in a 600mm x 600mm soffit tile. In all other cases the dimension shown is the neck size of the diffuser.

# 2.4.7 Return Air Grill

The return air grill shall be complete with washable filter of the hinged type for easy removal of filter. The size shall be as indicated on the drawing. The filters shall be composed of a pre filter as well as main filter.

# 2.4.8 VRF Air-conditioning system

**General**

The VRF Units catering for Block A and Block B respectively, shall be of the cooling or heating only type.

The VRF Units shall be mounted on factory Pre-Galvanized Support Structures. Each corner shall be adjusted in height such that the Unit can be levelled. Where these shall be installed on a surface with exposed floor waterproofing, additional waterproofing sheeting shall be inserted beneath the structure.

The contractor is also to allow in the costs for one thermostat per unit as well as for monitoring and control software.

**Condenser**

The condensers shall be constructed of copper fins bonded to seamless copper tubing. These shall be suitable for outdoor installation and shall be complete with weatherproof treatment. Alternative proposals with weatherproof coatings shall be considered provided full technical literature is submitted during tendering stage. The condensers shall also be suitable to be installed in a saline/marine environment and shall be protected against corrosion.

The condenser fans shall be directly driven propeller bladed with vertical discharge for low power consumption and quiet operation with approved wire guard.

The condensing units shall be equipped with head pressure control to be able to operate down to a temperature of 5°C ambient.

Mounting shall be resilient to avoid vibration transmission to the structure. The condensing units shall also incorporate the compressor. The sound pressure level shall not be higher than 55dBA at 1 meter.

**Compressor**

The compressor shall be externally mounted on anti-vibration mountings. It shall be of the inverter driven, scroll type equipped with a thermal protection device. The outdoor unit shall be suitable for three-phase 50Hz operation. The outdoor units shall have electrical power factor rating of at least 0.95.

**Indoor units**

The evaporator shall be constructed of aluminium fins bonded to seamless copper tubing.

The unit shall have a three speed permanent split-capacitor motor with built-in overload cut-out, totally enclosed and tropicalised fitted with seals for life, maintenance free sleeve type bearings, suitable for single Phase 50 Hz operation. Motors are to be resiliently mounted to ensure quiet vibration free operation. The forward curved centrifugal aluminium impeller fan(s) shall be statically and dynamically balanced at the factory.

Housing box is to be in 18 gauge (1.2 mm) continuous galvanized steel, complete with thermal treatment to prevent formation of condensation. All outside panels are to have a baked epoxy lacquer finish. Drain pan and auxiliary pans, thermally insulated against condensation, and treated anticorrosion, are to extend below the valves. They are to be fitted with a minimum of 25 mm drain outlet. A self-priming high water head condensate pump to remove any condensate water from the drain pan shall be installed where necessary. All indoor units shall have an attractive white fascia.

**Controls**

A wall mounted control fixture with temperature settings, summer / winter switch and three-speed and off selector switch, surface mounted, complete with control wiring is to be provided for each indoor unit.

A REMOTE CONTROL panel for the outdoor units of each system shall be provided at the position shown by the Engineer on site, to enable remote starts and control of the outdoor units. The control panel shall have an ON/OFF switch, timer / manual switch and a 24 hour timer for each unit, a summer/winter switch as well as a running and stop light. It shall also have a visual and audible alarm if any one of the units fails during operation. The contractor shall include for all cabling etc between the units and the control panel.

The units shall be complete with all necessary thermally protected contactors for all motors, high and low pressure switches and gauges, oil pressure switch and gauge, antifreeze thermostat, two-stage cooling thermostat, indicator lamps and start/stop buttons.

Conduits are to be installed between A/C Unit and thermostat. Loose cable above false ceiling shall not be acceptable.

**Characteristics**

The VRF Units shall have Eurovent certification. The nominal cooling capacities shall be rated at the following conditions:

|  |  |
| --- | --- |
| Cooling capacity | As per drawings at medium speed |
| External temperature | Tdb 35°C; 60% RH |
| Air in | Tdb 23°C; 50% RH |
| Refrigerant | R410A |

Sound operation level not to exceed 42 dBA at 1.0 mt. from the indoor unit at maximum speed.

**Refrigerant Circuit**

Each refrigerant circuit shall include a liquid receiver, thermostatic expansion valve and filter dryers. The system shall be factory charged with R410A refrigerant and refrigerant oil, but will also include a charging valve.

**Performance**

The tendering contractor shall supply all operation and performance data for the unit offered at different operating conditions including COP’s and EER’s applicable to the conditions of this site.

# SECTION 5 – SUPPLEMENTARY DOCUMENTATION

## 5.1 – Draft Contract Form

## 5.2 – Glossary

## 5.3 – Specimen Performance Guarantee

## 5.4 – Specimen Tender Guarantee

## 5.5 – General Conditions of Contract

The full set of General Conditions for Works Contracts, for Supplies Contracts and for Services Contracts (latest version as applicable on the date of the publication of this tender) can be viewed/downloaded from the ‘Resources Section’ at:

[www.etenders.gov.mt](http://www.etenders.gov.mt)

It is hereby construed that the tenderers have availed themselves of these general conditions, and have read and accepted in full and without reservation the conditions outlined therein, and are therefore waiving any standard terms and conditions which they may have.

These general conditions will form an integral part of the contract that will be signed with the successful tenderer/s.

## 5.6 – General Rules Governing Tendering for NGOs

The contents of this procurement document complement the latest version of the General Rules Governing Tenders applicable on the date of the publication of this tender, the Terms of Use and the Manual for Economic Operators applicable to Government’s e-Procurement Platform (available from the Resources section of [www.etenders.gov.mt](http://www.etenders.gov.mt)).