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| MINISTRY FOR THE ENVIRONMENT, CLIMATE CHANGE AND PLANNING  |
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| **REFERENCE NUMBER:** | **ERDF.05.121 – Tender 007** |
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| **Tender for the Laying of Foundations and Two Concrete Pilasters for the New Boundary Wall at Xrobb L-Għaġin Natural Park as part of ERDF Project ERDF.05.121 – Wildlife Rehabilitation Centre** |
| **Date Published:**  | **Friday 19th June 2020** |  |
| **Deadline for Submission:** | **Friday 10th July 2020** | **at 12:00am CET/CEST** |
| **Tender Opening:** | **Friday 10th July 2020** | **at 12:00am CET/CEST** |
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|  | 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 FundCo-financing rate: 80% European Union; 20% National Funds |  |

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| **IMPORTANT** |
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| **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

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|  | 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 Version 1.0.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.** |
| 1.2 | The subject of this tender is the provision of the following works:* The laying of foundations for the construction of the new boundary wall and two pilasters
* The construction of two concrete pilasters [the external skin for x2 pilasters including stone coping at the top is to be carried out under another tender]

related to the Wildlife Rehabilitation Centre to be established at Xrobb l-Għaġin, as part of ERDF.05.121 – WILDLIFE REHABILITATION CENTRE**NB: The actual construction of the boundary wall is the subject of a separate tender, which has already been adjudicated.** |
|  |  |
| 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 INCOTERM2010 applicable shall be **Delivery Duty Paid (DDP).** |
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| 1.4 | This is a unit-price contract. |
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| 1.5 | This call for tenders is being issued under an open procedure. |
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| 1.6 | The beneficiary of this tender is *Nature Trust – FEE Malta*. |
| 1.7 | This tender is not a reserved contract. |
|  | 2. Timetable |
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| 2. |

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|  | DATE | TIME |
| Clarification Meeting/Site Visit (Refer to Clause 6.1) | Wednesday 24th June 2020 | 13:00 hrs |
| Deadline for request for any additional information from the NGO**Clarification requests should be addressed to: *info@naturetrustmalta.org*** | Thursday 2nd July 2020 | 12:00 hrs(noon) |
| Last date on which additional information can be issued by the NGO | Monday 6th July 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) | Friday 10th July | 12:00 hrs(noon) |
| \* All times Central European Time (CET) / Central European Summer Time (CEST) as applicable |

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|  | 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 SolutionsVariant 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* |
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|  | 6. Clarification Meeting/Site Visit/Workshop |
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| 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 (version 1.0). 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. |
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|  | **(A) Eligibility Criteria** |
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|  | (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 2A)Information re Joint Venture/Consortium (Note 2A) |
|  | (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 – This shall include a method statement about how the bidder intends to carry out the works. An indicative template is provided for ease of submission, though bidders may opt to use own format provided they provide all the requested information. (Note 3) |
|  | (ii)  | Key Experts Form, the Statement of Exclusivity and Availability Form |
|  | (iii) | Literature as per Form marked ‘Literature List’ to be submitted with the Technical offer at tendering stage. No changes to the information provided in the Literature submitted will be allowed. Literature submitted shall be rectifiable only in respect of any missing documents. (Note 2B) |
|  | (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)2010 (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.*  *B) Tenderers will be requested to rectify/submit only missing documents within five (5) working days from notification.* **No changes to the information provided in the Literature submitted will be allowed. Literature submitted shall be rectifiable only in respect of any missing information.** *All Rectifications are free of charge.**3. No rectification shall be allowed. Only clarifications on the submitted information may be requested.* |
| 8.1 | **8. Tender Guarantee (Bid bond)**No tender guarantee (bid bond) is required. |
|  | 9. Criteria for Award |
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| 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. |
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# 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 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

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| **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 and language of the Contract |
| The Laws of Malta shall apply in all matters not covered by the provisions of the contract. |
| The language used shall be English. |
| Article 3: Order of Precedence of Contract Documents |
| 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 bill of quantities/financial bid (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 |
| 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.orgCommunications shall preferably be carried out by email.Any requests for clarifications and the relevant reply shall be posted online on the website [www.naturetrustmalta.org](http://www.naturetrustmalta.org) in an anonymised form. |
| Article 5: Supervisor and Supervisor's Representative |
| As per General conditions |
| Article 8: Supply of Documents |
| The Contractor shall provide the Contracting Authority with documentation concerning the following:1. **Documentation relating to concrete**
	1. Before placing orders for cement, the Contractor shall hand to the Architect and Civil Engineer in charge (Vide Section 4, Article 4.8):
		1. The name of the proposed supplier.
		2. Cement manufacturer's certificates stating the Declaration of Conformity
	2. The Contractor shall keep, and upon request hand to the Architect and Civil Engineer in charge
		1. For each consignment of cement, a certificate showing the place of manufacture and the results of standard tests carried out on each day's production, included in the consignment, these to include physical and chemical tests (Vide Section 4, Article 4.7).
		2. Accurate records shall be kept by the Contractor to identify the dates of delivery of cements. (Vide Section 4, Sub/Section 4.2.2, Spec/4 Article 4.7).
		3. Concrete mix delivery chits as per BS EN 206-01, clause 7.1, 7.2 and 7.3. (Vide Section 4, Article 4.23).
		4. Documentation related to production control system, at least, the measures indicated in BS EN 206-1, clause 9 with particular reference to the recorded data and other documentation (See Tables 20, 21, 22, 23, 24) data and other documentation (Vide Section 4, Sub/Section 4.2.2, Spec/4 Article 4.23).
		5. the cast data-log to be presented with the concrete fresh and hardened properties test report. (Vide Section 4, Article 4.32).
	3. In the eventuality of **Defective Concrete**, including defective concrete finishes, the Contractor shall provide, for approval by the Architect and Civil Engineer in charge, a proposed remedial treatment to concrete surfaces (vide Section 4, Article 5.12).
2. **Other Documentation supporting certifications provided**
	1. Certification of testing carried out on the fresh concrete in accordance with BS EN 206, BS 8500 and BS EN 12350 plus supporting documentation as follows (Vide Section 4, Sub/Section 4.2.2, Spec/4 Article 4.43).
		1. Concrete designation;
		2. Sampling, site tests, and identification numbers of specimens tested in the laboratory;
		3. Location of the parts of the structure represented by each sample;
		4. Location in the structure of the batch from which each sample is taken.
	2. Seven-day test report (to be submitted within one day from availability) and 28-day test reports (to be submitted within one day from availability) (Vide Section 4, Article 4.43).
	3. Certification re Steel bars for the reinforcement of concrete as per Section 4, 6.2-4.
3. **Other Documentation** - The Contractor shall keep, and upon request hand to the Architect and Civil Engineer in charge:
	1. Certificationthat all **delivery trucks** are certified as complying with BS EN 206-1, clause 9.6.2.3 and registered as suitable for their purpose in a data schedule. This shall include the calibration data in respect of water gauges. (Vide Section 4, Article 4.28).
 |
| Article 10: Assistance with Local Regulations |
| As per General Conditions. |
|  |
| Article 11: The Contractor’s Obligations |
| Without prejudice to the General Conditions, the Contractor shall be bound with the following obligations: * The contractor binds himself to adhere to the conditions imposed in the Planning Permit, that is, the approved drawings, document and conditions imposed in Planning Permit PA NO/1659/17 and PA No / 1660/17 as approved by the Planning Authority.
* The Programme of Works identified as part of Article 11.9 of the General Conditions shall be construed to be the Programme of Works submitted by the bidder at Tendering Stage together with the Tender document.
* With regards to Article 11.11 of the General Conditions, during tender implementation, the Contractor shall not be required to submit any drawings whatsoever.
* Any correspondence related to the contract shall be delivered to the address specified by the Contractor in the tender Form. The Contractor is bound to notify the Contracting Authority immediately of any change to the said address. If the Address is established in any other Eu country, the Contractor shall designate an agent based in Malta, and provide the address of such an agent. Mutatis mutandis, any change of address shall be notified immediately to the Contracting Authority.
* During the execution of the contract, any communication, including any documents and/or drawings shall be submitted to the Supervisor by email. The Supervisor shall review the relevant communication internally and reply in writing.
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| Article 13: Performance Guarantee |
| 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 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. |
|  |
| The performance guarantee shall be in the format given in Section 5 and shall be provided in the form of a bank guarantee. It shall be issued by a bank in accordance with the eligibility criteria applicable for the award of the contract. |
| The performance guarantee shall be released as per Article 13.9 of the General Conditions. |
| Article 14: Insurance |
| As per general conditions |
|  |
| Article 15: Performance Programme (Timetable) |
| The Contractor shall complete the relevant work as follows: |
| Deliverable | From commencement date |
| Laying of Concrete works  | Eight week (8) weeks |
| Article 17: Contractor’s Drawings/Diagrams |
| N/A |
| Article 18: Tender Prices |
| As per General Conditions |
|  |
| Article 22: Interference With Traffic |
| N/A |
|  |
| Article 25: Demolished Materials |
| As per General Conditions |
|  |
| Article 26: Discoveries |
| As per General Conditions  |
| Article 28: Soil Studies |
| N/A |
|  |
| Article 30: Patents and Licences |
|  |
| As per General Conditions |
|  |
| Article 31: Commencement Date |
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| The commencement date for the performance of the contract shall be construed to read as the date of last signature on the contract. |
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| Article 32: Period of Execution of Tasks |
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| Works shall be carried out within eight weeks from signature of contract. |
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| Article 34: Delays in Execution |
| A daily penalty of 1/1000 of the contract price per day’s delay up to a limit of 20% of the total contract price. |
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| Article 35: Modification to the Contract |
| As per general Conditions |
|  |
| Article 37: Work Register |
| As per general Conditions |
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| Without prejudice to the General conditions, statements shall be drawn in a timely manner and not later than 24 hours after the occurrence of an event/activity/work. |
| Article 38: Origin |
|  |
| As per general conditions |
|  |
| Article 39: Quality of Works and Materials |
|  |
| As per Section IV of the Tender Document |
|  |
| Article 40: Inspection and Testing |
|  |
| As per Section IV of the Tender Document |
|  |
| Article 42: Ownership of Plants and Materials |
|  |
| As per General Conditions |
|  |
| Article 43: Payments: General Principles |
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| Payments will be made in Euro.  |
|  |
| Payments shall be authorized by the Contracting Authority, and paid by the Treasury Department on the basis of work carried out, and certified as such by the Supervisor. |
|  |
| As per General Conditions. |
| Article 44: Pre-financing |
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| The Contractor must request a pre-financing for operations connected with the execution of the works, as a lump sum advance enabling him to meet expenditure resulting from the commencement of the contract. Such pre-financing shall be established at 20% of the contract award. 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. |
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| Article 45: Retention Monies |
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| N/A |
|  |
| Article 46: Price Revision |
|  |
| No price revision is possible. |
|  |
| Article 47: Measurement |
|  |
| Without Prejudice to the general conditions, the Supervisor shall measure the works in the presence of the Contractor or his representative. The measurement of works shall be carried out on a date agreed to by the Contractor and the Supervisor using Standard measuring equipment. The unit shall be as specified in the Financial Bid Form/Bill of Quantities. |
|  |
| Article 48: Interim Payments |
|  |
| As per general conditions.  |
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| Article 50: Delayed Payments |
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| 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 43 of these Special Conditions. This period shall begin to run from the approval of these documents by the competent department referred to in Article 43.1 of these Special Conditions. These documents shall be approved either expressly or tacitly, in the absence if any written reaction in the 30 days following their receipt accompanied by the requisite documents. |
|  |
| Once the deadline laid down in Article 50.1 has expired, the Contractor may, within two months of late payment, claim late-payment interest: |
| * at the rediscount rate applied by the issuing institution of the country of the Contracting Authority;
* on the first day of the month in which the deadline expired, plus two percentage points (2%). 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).
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| Article 53: End Date |
|  |
| The Project ERDF 05.121 WILDLIFE REHABILITATION CENTRE is scheduled to be completed by on 31 March 2021.Without prejudice, the Contractor is bound by the timeframes established in as per Article 15 of these Special Conditions. |
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| Article 56: Partial Acceptance |
| N/A |
|  |
| Article 57: Provisional Acceptance |
|  |
| N/A  |
|  |
| Article 58: Maintenance Obligations |
|  |
| The Contractor shall make good for any issues which may arise to the boundary wall and fencing during a period of twelve months from final acceptance of works which are attributable to bad workmanship or use of lower quality materials.  |
|  |
| Article 66: 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:a) either a ruling from a national court, orb) 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. |
|  |
| Article 70: Further Additional Clauses |
| Not Applicable |

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

**Terms of Reference**

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| **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.** |

## Background Information

* 1. The information in this section is being provided by way of background, and for the information of potential bidders.
	2. 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.
	3. The Contracting Authority, in partnership with the Ministry for the Environment, Sustainable Development and Climate Change 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 the Parliamentary Secretary for EU Funds and Social Dialogue, within the Ministry for European Affairs and Equality 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.
	4. 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.
	5. 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.
	6. 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.

## General

* 1. The tender refers to the deconstruction of the existing perimeter wall at the Xrobb l-Għaġin Nature Park, l/o Xrobb l-Għaġin Malta. The tender also refers to the construction of a new Perimeter wall covering the entire park as per requirements of Planning Application PA 01659/17 – and PA 01659/17 Drawing Ref. 86h (refer to Drawing presented with this Tender Document).
	2. A tender for the deconstruction and reconstruction of the original boundary wall was published in December 2019 and adjudicated in March 2020. However, Following the commencement of such works, an unexpected finding was made, namely that underlying the foundations of the existing perimeter wall on the site were a number of, seemingly extensive, pockets of soil some of which relatively deep. Accordingly, it was decided to issue a new tender for the laying of the relevant foundations.
	3. **It follows that when submitting their bid, bidders are to take into consideration that the present wall will be deconstructed by a separate contractor, and that the construction of the new wall over the foundations will be the responsibility of another contractor. During Contract implementation, the Contractor shall strive to ensure a good working relationship with the other Contractor/s working on the boundary wall and ensure that the work is carried out in sync.**
	4. Without prejudice to the quantities and measurements indicated in the Bill of Quantities forming part of the Financial Bid Form, the nature of the work means that actual measurements may differ. Payment will be effected based on actual measurements as per Article 47 of the Special Conditions.
	5. Any costs relating to the carrying out of the said works, including any drilling, excavation, clearing of material and quality tests shall be included in the prices quoted by the bidder. Without prejudice, the Contracting Authority may require the Contractor to carry out, at no additional cost, quality testing on any of the materials used. Such tests shall be carried out by an independent body approved by the Contracting Authority.
	6. The Contractor shall ensure that any equipment used whilst carrying out any works associated with the implementation of this tender is duly certified in line with the applicable health and safety and any other legislation, and that all employees working on the completion of the project are competent and adequately trained. The contractor shall also ensure that it has assessed any occupational health and safety risks and taken any necessary precautions, including with regards to third parties. The contractor shall assume full liability in this regard.
	7. 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.
	8. A Technical Offer is to be provided by the Economic Operator in response to Technical Specifications. An indicative template is provided for ease of submission, though bidders may opt to use own format provided they provide all the requested information. Irrespective of which format bidders opt for, the submission shall be in a structured form and is to be in the same sequence as provided for ease of reference and evaluation.

## Laying of foundations and ancillary concrete works.

* 1. The laying of the said foundations and ancillary **concrete works** shall be regulated by the following:
		1. The works shall be directed by the Architect in charge of works or his representative
		2. The concrete foundations shall include:
			1. A 100 mm concrete C25 Concrete Cube strength-levelling base including A252 mesh reinforcement on uneven ground. In such cases, the width of foundation under each wall shall be of c. 30 cm.
			2. A 100mm C20 Concrete Cube strength including C503 Mesh reinforcement along specific stretches without rock base. In such cases, the width of foundation under each wall shall be of c. 50 cm
			3. The foundations for two (2) Pilasters, including Reinforced Concrete Base: C25 Cube strength concrete, 200mm thick, 1m x 1m plan base with A503 mesh reinforcement and 4 No x H20mm L Bars.
		3. These tender covers the concrete works relative to the construction of two (2), 650 x 650 pilasters at the entrance of the Xrobb l-Għaġin Nature Park, c. 4m high. Specifically, the Contractor shall create the reinforced concrete column core and reinforced concrete base. Construction includes the following: Including Reinforced Concrete column core 300 x 300mm: C25 cube strength concrete, with 4 No. x H20 mm diameter bars and H10mm stirrups at 150mm cc. The Contractor shall NOT be responsible for the external skin for x2 pilasters including stone coping at the top.
		4. Total **estimated lengths** of different types of foundations, will be as follows:

|  |  |  |
| --- | --- | --- |
| Foundations are to be located on surface rock (Foundation in 3.1.2 A) | 105m  | m |
| Foundations are to be located on soil (Foundation in 3.1.2 B) | 850m | m |
| Total | 955m | m |

## Concrete

* 1. **General**
		1. The performance and production of concrete shall generally comply with BS EN 206-1: Concrete. Specification, Performance, Production and Conformity.
	2. **Classification - Consistency**
		1. The classification of consistency shall be as indicated in Table 3 – Slump Classes. The consistence suitable for different uses of in-situ concrete is indicated in BS 8500-1:2015+A2:2019: Complementary British Standard to BS EN 206-01, Method of Specifying and Guidance for the Specifier, Table A.19.
		2. Any addition of water and admixture at delivery is forbidden unless under the direct responsibility of the producer. Any additions at delivery are subject to the condition that any limiting values incorporated in the specification are not exceeded. All additions shall be recorded on the delivery chits.
	3. **Classification – Compressive Strength**
		1. In general, the concrete strength shall be grade C25 cube compressive strength.
	4. **Limiting Values**
		1. The recommended limiting values for the composition and properties of concrete shall be as indicated in BS EN 206-01, Table F.1
	5. **Site Mixed Concrete**
		1. The production of site-mixed concrete shall be limited to non-structural use and in quantities smaller than 2m3.
	6. **Cement**
		1. Cement for use in concrete shall comply with EU Regulation No. 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonized conditions for the marketing of construction products and repealing Council Directive 89/106/EEC.
		2. Technical characteristics shall comply with BS EN 197-1: Cement. Composition, Specifications and Conformity Criteria for Common Cements. The cement shall be Portland Cement, Type CEM1 or CEM IIA, strength class 42.5N. CE marking is mandatory for all cement supplied for use in the concrete mix.
	7. **Cement Temperature**
		1. The temperature of the cement shall not exceed 65 Degrees Celsius at the time of incorporation into a concrete mix.
		2. The cement shall be used as soon as possible after delivery, each consignment being used in correct rotation so as to prevent cement lying for long periods in storage. Accurate records shall be kept by the Contractor to identify the dates of delivery of cements.
		3. Each consignment of cement delivered to the batching plant shall be accompanied by a certificate showing the place of manufacture and the results of standard tests carried out on each day's production, included in the consignment, these to include physical and chemical tests.
	8. **Cement - Supplier**
		1. Before placing orders for cement, the Contractor shall submit :
1. The Name of the proposed supplier.
2. Cement manufacturer's certificates stating the Declaration of Conformity
	1. **Cement – Minimum Content in Mix**
		1. The minimum cement for the specified maximum water cement (w/c) ratio and maximum aggregate size shall be as indicated in BS 8500-1:2015+A2:2019: Complementary British Standard to BS EN 206-01, Method of Specifying and Guidance for the Specifier, Table A.18.
	2. **Aggregate**
		1. Aggregate for use in concrete shall comply with EU Regulation No. 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonized conditions for the marketing of construction products and repealing Council Directive 89/106/EEC.
		2. Technical characteristics shall comply with BS EN 12620, Aggregates for Concrete.
	3. **Aggregate – Test methods**
		1. Test methods for aggregates shall comply with EN 933, EN 1744 and EN 13179, EN 1367 and EN 1097.
		2. Differing sizes of aggregate shall be stored on site in separate bins constructed in such a manner as to avoid cross-contamination of the individual aggregates.

Bins should have concrete floors to prevent ground contamination of aggregates. Adequate provision for drainage shall be made and all aggregates are to be stored and handled so as to avoid segregation.

* + 1. During hot weather the aggregates should be covered or shaded in order to reduce the mixing temperature. A water sprinkler system shall be installed to wet the aggregates in the storage bins.
		2. A sufficient separate stockpile of the tested and approved aggregates shall be maintained on site to ensure that no delays occur during construction.
		3. The maximum nominal upper aggregate size shall be 20mm unless indicated otherwise.
		4. Aggregate recovered from wash water or fresh concrete may be used as aggregate for concrete.
		5. Aggregate recovered from hardened concrete may be used if the material is not contaminated and complies with the requirements of BS 8500-1:2015+A2:2019:
		6. Complementary British Standard to BS EN 206-01, Method of Specifying and Guidance for the Specifier, Table 2. The limitations in Table 3 shall apply.
		7. The Los Angeles Coefficient of the combined coarse aggregate shall not exceed LA40.
	1. **Marine Sand - Prohibition**
		1. The use of marine and beach sand is prohibited.
	2. **Mixing Water**
		1. Mixing water for concrete shall comply with EU Regulation No. 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonized conditions for the marketing of construction products and repealing Council Directive 89/106/EEC. The technical characteristics shall comply with BS EN 1008 - Specification for Sampling, Testing and Assessing the suitability of Water, including Water recovered from processes in the concrete industry, as Mixing Water for Concrete.
		2. Only drinking quality water free from slats and harmful substances shall be used for concrete, including concrete curing. Water with impurities including salts, sea water or any other impurities shall not be used at any stage including the production or curing of concrete.
	3. **Admixtures**
		1. Admixtures shall not be used without the written approval of the Architect and Civil Engineer in Charge of Works.
		2. Admixtures for incorporation in concrete shall comply with EU Regulation No. 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonized conditions for the marketing of construction products and repealing Council Directive 89/106/EEC. The technical characteristics shall comply with BS EN 934-6: Admixtures for concrete, Mortar and Grout, Sampling, conformity control and evaluation of conformity. Test methods shall be as indicated in BS EN 480, Parts 1 to 14
		3. The total amount of admixtures, if any, shall not exceed the maximum dosage recommended by the admixture producer subject to a maximum dose not exceeding 50g of admixture per kg of cement. Admixtures used in quantities of less than 2g/kg of cement are only permitted if they are dispersed in part of the mixing water. If the total quantity of liquid admixtures exceeds 3 l/m3 of concrete, its water content shall be taken into account when calculating the water/cement ratio.
		4. Where more than one admixture is proposed for incorporation in the concrete mix, the compatibility shall be certified.
		5. Calcium chloride and chloride based admixtures shall not be added to concrete containing steel reinforcement, prestressing steel reinforcement or other embedded metal.
	4. **Additions**
		1. Additions (filler, pigments, fly ash, silica fume) shall not be used without the written approval of the Architect and Civil Engineer in Charge of Works.
	5. **Chloride Content**
		1. The chloride content of a concrete, expressed as a percentage of chloride ions by mass of cement, shall not exceed the values given in BS EN 206-1, Table 10.
	6. **Designed Concrete**
		1. Concrete for structural use shall be designed concrete.
	7. **Designed Concrete - Trial Mixes**
		1. Designed concrete shall conform to the requirements specified in BS 8500-1:2015+A2:2019:Complementary British Standard to BS EN 206-01, Method of Specifying and Guidance for the Specifier, Table 9.
		2. Initial trial mixes shall be carried out on all mix designs prior to their use in the works. Trial mixes shall be produced using the plant and transport intended for use in the works, unless otherwise agreed by the Architect and Civil Engineer in Charge of Works.
		3. The mandatory trial mixes of each concrete grade shall be executed as per D.O.E (UK) method or approved equivalent.
		4. The trail mixes shall be sampled and tested according to the requirements of BS EN 12350 and BS EN 12390. Accelerated curing techniques that predict 28 day cube crushing strengths with acceptable accuracy may be used.
	8. **Production Control**
		1. All concrete shall be subject to a production control system under the direct responsibility of the producer. The production control system shall cover, at least, the measures indicated in BS EN 206-1, clause 9 with particular reference to the recorded data and other documentation (See Tables 20, 21, 22, 23, 24).
	9. **Conformity Control and Conformity Criteria**
		1. The producer is responsible for evaluation of conformity. The tasks to be carried out by the producer shall be as indicated in BS EN 206-1, clause 10 with particular reference to Annex A.
	10. **Evaluation of Conformity**
		1. All concrete shall be subject to a conformity control system under the direct responsibility of the producer. The control system shall cover, at least, the measures indicated in BS EN 206-1, clause 8 with particular reference to clause 8.2.1.2 (Sampling and Testing Plan) and Tables 13, 14, 15, 17, 18, 19a, 19b).
	11. **Action in Event of non-compliance**
		1. In the event of non-conformity with the specified standards, the producer shall take the actions prescribed in BS EN 206-1, clause 8. The Contractor shall remove concrete elements made out of non-compliant concrete already placed which is rejected by the Architect and Civil Engineer in charge.
		2. The Architect and Civil Engineer in Charge of Works may order further tests to be carried out on the hardened concrete which may include cored samples and non-destructive testing. The cost of such action and testing shall be at the Contractor’s expense.
	12. **Concrete Mix – Information from the Producer and Delivery Chits.**
		1. The information from the Contractor to the producer shall be as indicated in BS EN 206-01, clause 7.1.
		2. The information from the producer to the user shall be as indicated in BS EN 206-01, clause 7.2.
		3. The delivery chits shall contain the minimum information contained in BS EN 206-01, clause 7.3.
	13. **Notification of Concrete Pours**
		1. The Contractor shall give the Architect and Civil Engineer in Charge of Works 24 hours written notice of any intended concrete pour. The Contractor must submit a 'Notification of Concrete Pour' form for any intended concrete pour.
	14. **Concrete Pumps (Where Applicable)**
		1. Should the Contractor opt for the use of Concrete Pumps in placing operations the agreement of the Architect and Civil Engineer in Charge of Works shall be sought.
	15. **Placing**
		1. Concrete shall not be placed unless the Architect and Civil Engineer in Charge of Works or his representative is present and has previously examined and approved the positioning, fixing and condition of reinforcement, any other embedded items and the cleanliness, alignment and suitability of the formwork or other containing surfaces.

Concrete shall be deposited as early as possible in its final position and shall be placed in such a manner as to avoid segregation of the materials and displacement of formwork, reinforcement and other embedded items. The manner of placing shall be to the approval of the Architect and Civil Engineer in Charge of Works.

* + 1. Placing shall be continuous between specified or approved construction joints. The concrete shall be compacted and in its final position within two hours of the introduction of cement in the mix. Fresh concrete shall not be placed adjacent to concrete that has been already placed and compacted in excess of 45 minutes.

If, for any reason, the placing of concrete is discontinued, the Contractor shall
immediately inform the Project Manager's representative. All works involved in any
remedial measures shall be carried out at the Contractor's expense.

Concrete shall not be placed in running water and any water standing on areas to receive concrete shall be removed before concrete is deposited.

* 1. **Batching of Concrete**
		1. Batching of constituent materials shall be as provided in BS EN 206-1, clause 9.7.
	2. **Delivery Trucks and Cleaning**
		1. All delivery trucks shall be certified as complying with BS EN 206-1, clause 9.6.2.3 and registered as suitable for their purpose in a data schedule. This shall include the calibration data in respect of water gauges. Arrangements will be made to designate an area where all concrete delivery trucks can wash out. This area will be situated well away from any concreting activities.
	3. **Workability**
		1. The workability of the concrete being placed shall be checked by means of the slump test with every concrete truck delivery. When the measured slump is outside the specified limits, the concrete shall not be used in the works.
	4. **Execution - General**
		1. The execution concreting operations shall generally follow the provisions and requirements of BS 8110, Part 1:1997: Structural use of Concrete and ENV 13670-1: Execution of concrete structures.
	5. **Protection against rainfall**
		1. The Contractor shall provide adequate cover as necessary to protect concrete pours in progress against damage from rainfall.
	6. **Placing in High Temperature**
		1. Freshly placed concrete is to be given adequate protection to resist the combined evaporative effect of direct sunlight, air temperature, relative humidity and drying winds on the surface of the placed concrete, particularly for concrete placed in horizontal areas.

The Contractor shall take measures to control the maximum concrete temperature after placing and the temperature gradient within any concrete pour. The maximum concrete temperature after placing should not exceed 65 Degrees Celsius.

* + 1. The Contractor shall supply suitable maximum/ minimum thermometers and record the shade and ambient temperatures at locations where concrete is being placed. The temperature is recorded every hour. The shade and ambient temperature together with the temperature of the concrete, shall be reported in the cast data-log to be presented with the concrete fresh and hardened properties test report. The report shall include also the cast location reference and delivery note details.
	1. **Compaction**
		1. The concrete shall be fully compacted throughout the full extent of the layer. It shall be thoroughly worked against formwork and around reinforcement or embedded items without displacing them. Compaction is to be in such a way that it does not promote a) segregation; b) formwork and reinforcement displacement.
		2. Successive layers of the same lift shall be thoroughly worked together.
		3. Care shall be taken to prevent the formation of air bubbles against vertical or sloping formwork.
		4. Unless otherwise directed by the Architect and Civil Engineer in Charge of Works, approved power-driven vibrators shall be used to ensure that the concrete is satisfactorily and uniformly compacted.
		5. Surface vibrators of approved type, capacity and frequency shall be used to compact thin slabs, pavements and road slabs as directed by the Architect and Civil Engineer in Charge of Works.
		6. The position and arrangements of construction joints will be as shown on the Drawings or as approved by the Architect and Civil Engineer in Charge of Works.
		7. The surface of concrete already cast which is to receive further concrete is to have the laitance removed either when green by compressed air and/or water jetting or, if hardened, by micro hacking with light air picks. Care shall be taken not to crack concrete or loosen the aggregate. Before placing fresh concrete, the surface shall be clean, having no loose or foreign materials, and shall be wetted thoroughly.
	2. **Construction Joints**
		1. Fresh concrete after deposition shall be thoroughly compacted against all joint surfaces. Particular care shall be taken to prevent the leakage of grout at joints by use of adequate seals such as a foamed plastic strip compressed between the inner face of the formwork and the previously placed concrete.
	3. **Curing and Protection - General Requirements**
		1. The Contractor shall ensure that curing is carried out in such a way that thermal and plastic cracking of the concrete does not occur.
		2. For a minimum period of 7 days after placing the concrete, it shall be kept protected against loss of moisture, rapid temperature change, rain and flowing water, mechanical injury, contamination by airborne dust and sand, drying winds and surface heating by the sun's rays. This period may be increased on the instructions of the Architect and Civil Engineer in Charge of Works.
		3. Following the completion of the above period a further period of controlled drying out will be required as directed by the Architect and Civil Engineer in Charge of Works. This may require that covers, sand layers and the like be kept in place for longer than the 7 day minimum curing period otherwise specified.
		4. The Contractor's attention is particularly drawn to the importance of starting curing as early as possible after placing concrete and maintaining full curing procedures throughout, as specified and directed herein.
		5. Any concrete which exhibits plastic settlement, or plastic early thermal contraction, or early drying shrinkage cracking, or which has not been properly cured, shall be rejected by the Architect and Civil Engineer in Charge of Works.
	4. **Curing of Concrete - Procedure**
		1. Curing of concrete shall proceed as follows:-
1. Flat Surfaces with Starter Bars
	1. Shade the whole area from sunshine before concreting commences, leaving enough room for personnel/placing access, and ensuring that no gaps are left in the sides/ends which would allow wind-tunnel effects.
	2. As soon as concreting is complete, cover the top surface with damp hessian (which is to be kept continuously damp for 7 days) and a layer of polythene.
	3. Maintain cover-only curing from the 7th to the 14th day.
2. Vertical Surfaces
	1. Leave formwork in place for at least 24 hours and keep continuously wet and then, after removing the forms, immediately wet the surface and cover the sides by damp hessian (which is to be kept continuously damp for 7 days) covered by white polythene.

ii) Maintain cover-only curing from the 7th to the 14th day.

* + 1. Any necessary repairs or finishing processes shall be carried out as soon and as quickly as possible, only exposing small areas at any one time.
	1. **Use of Covers**
		1. Polythene sheeting shall be continuous without tears or holes and shall be white, opaque and reflective.
	2. **Curing of Repairs**
		1. All concrete repairs shall be cured in accordance with the above provisions.
	3. **Damaged Concrete**
		1. Any concrete found to have been damaged by weather effects shall be cut out and replaced with concrete as specified in this Specification, by the Contractor at his own expense.
	4. **Mass Concrete**
		1. The requirements for quality control, placing, compacting, testing and compliance for reinforced concrete shall apply equally to mass concrete.
	5. **Blinding Concrete**
		1. Wherever structural reinforcement is shown on the Drawings and is in contact with the Ground (and is to be constructed 'in the dry'), a layer of concrete shall be provided.
	6. **Early Loading**
		1. At no time will concrete be subjected to any loading, including its own weight, which will induce a compressive strength in it exceeding 0.4 of its compressive strength at the time of loading, nor shall the induced stress exceed 0.33 of the specified characteristic strength.
		2. For the purpose of this clause, the assessment of the strength of concrete and stresses produced by the loading shall be subject to the agreement of the Architect and Civil Engineer in Charge of Works.
	7. **Quality Control Testing**
		1. The contractor shall carry out testing of the fresh concrete in accordance wth BS EN 206, BS 8500 and BS EN 12350.
		2. The sampling rate of fresh concrete testing shall be 1 (one) sample per truck load delivered on site. Every element cast is to have a concrete test referenced to its poured location. The Engineer in charge shall request any other specific testing as is required for any particular critical elements.
		3. The contractor is to maintain complete correlated records including:
* Concrete designation;
* Sampling, site tests, and identification numbers of specimens tested in the laboratory;
* Location of the parts of the structure represented by each sample;
* Location in the structure of the batch from which each sample is taken.
	+ 1. The sampling shall consist of a minimum of 4 cubes per sample, with 2 cubes each tested at 7 and 28 days from date of casting.
		2. The Contractor shall submit the test reports not later than one day from completion of each test.
		3. In the event of non-conformity with the specified specifications and standards, the Contractor shall take the actions prescribed in BS EN 206-1, clause 8. The Engineer shall dis/approve the Contractor’s proposal for action to be taken with regards to concrete already placed. This may range from rejection and removal of the suspect concrete to qualified acceptance, depending on the degree of non-compliance and the type of member involved.

The Engineer may order further tests to be carried out on the hardened concrete, in line with BS EN 12390:2009 which may include cored samples and non-destructive testing. The cost of such action and testing shall be at the Contractor’s expense.

* + 1. The testing laboratory shall be accredited by the relevant local Authority. The Contractor shall submit the name and MSA or NAB reference number/certificates of the testing laboratory well in advance of making trial mixes or concrete for use in the works.

## Formwork for concrete

* 1. **Formwork – General**
		1. The requirements for formwork shall generally follow the provisions and requirements of BS 5975 Code of Practice for Falsework and BS 8110, Part 1:1997: Structural use of Concrete with particular reference to clause 6.9, Formwork.
		2. Formwork shall be so designed and constructed that the concrete can be properly placed and thoroughly compacted and that the hardened concrete, whilst still supported by the formwork, shall comply with the required shape, position and levels subject to the tolerances and the standards of finish required by this Specification.
		3. Formwork or shuttering shall not be re-used without the prior approval of the Architect and Civil Engineer in Charge of Works.
	2. **Sufficiency of Formwork**
		1. The Contractor shall be responsible for the sufficiency of all formwork, but if required by the Architect and Civil Engineer in Charge of Works, he shall, before it is erected, submit details of formwork and supports he proposes to use for approval. Guidance on the loads and worst combination scenarios is given in CIRIA Report No. 13 and BS 5975:1996: Code of practice for Falsework.
	3. **Cleanliness of Formwork**
		1. Special care shall be taken to ensure the cleanliness of formwork prior to deposition of concrete. Temporary openings shall be provided in stop-ends for the removal of water and debris.
		2. All re-usable formwork shall be thoroughly scraped, cleaned and, if necessary, repaired before being raised.
	4. **Ties**
		1. The material and positioning of any ties passing through the concrete shall be approved by the Architect and Civil Engineer in Charge of Works. The whole, or part of the tie shall be capable of being removed so that no part remaining embedded in the concrete shall be nearer the surface than the specified cover to reinforcement. Any holes left after the removal of ties shall be plugged immediately with a cement mortar of the same richness using non-shrink materials.
	5. **Surface Treatment of Forms**
		1. The faces of the formwork in contact with the concrete shall be coated with non-staining shuttering oil or other approved material to prevent adhesion. Care shall be taken that the coating material is kept out of contact with reinforcement or embedded steelwork.
	6. **Inspection and Approval**
		1. All shuttering shall be inspected and approved by the Architect and Civil Engineer in Charge of Works before concrete is placed within it.
	7. **Striking of Formwork**
		1. Minimum striking times shall be in accordance with BS 8110, Part 1, clause 6.9.3 with special reference to Table 6.6. or as otherwise agreed with the Architect and Civil Engineer in Charge of Works. Notwithstanding any approval given by the Architect and Civil Engineer in Charge of Works, the Contractor shall remain responsible for any damage arising from the removal of formwork.
		2. All formwork shall be designed so that it can be removed without shock or vibration.
	8. **Tolerances**
		1. Except where detailed elsewhere in this Specification, the tolerances on all concrete works shall be as indicated in BS 8110, Part 1, clause 6.11.2.
	9. **Quality of Finishes**
		1. The classes of the finishes required shall be as indicated on the Drawings, if applicable.
	10. **Classes of Surface Finish Where Cast Against Formwork**
		1. Class F1
			1. Finish for surfaces against which backfill or other concrete is to be placed. Formwork shall consist of sawn boards, sheet metal or any other suitable material which will prevent the loss of grout when the concrete is vibrated.
		2. Class F2
			1. Finish for permanently exposed surfaces but where special finishes are not required. Formwork shall be faced with sound and plain plywood, steel panels or other suitable materials arranged in a uniform pattern. Joints in facing shall be horizontal and vertical unless otherwise directed.
			2. On striking the formwork the surface shall be plain and smooth and shall not be treated in any way. The Architect and Civil Engineer in Charge of Works may order rubbing down of any minor surface blemishes at the Contractor's expense.
		3. Class F3
			1. Finish which is required for permanently exposed surfaces where a high standard is of particular importance.
			2. The formwork shall be faced with plywood or equivalent suitable material in large sheets arranged to the approval of the Architect and Civil Engineer in Charge of Works in a uniform pattern. Metal panels shall not be used for F3 finishes.
			3. Where possible, joints in sheets shall be arranged to coincide with particular features or changes in the direction of the surface. All joints shall be vertical and horizontal unless otherwise directed.
		4. Permanent formwork of precast slabs, natural stone, brickwork and the like shall have surface finishes of the quality shown on the Drawings. They shall be fixed to the structure by approved means and joints shall be made tight with mortar or other means of preventing grout leakage.
	11. **Classes of Surface Finish When Not Cast Against Form Work**
		1. Class U1
			1. Finishing operations shall consist of compacting and tamping the concrete to the required lines and producing a uniform lightly ridged surface.
		2. Class U2
			1. Finishing operations shall consist of the above requirements for Class U1 and, after allowing the concrete surface to harden sufficiently floating the surface by hand with a wood float to produce a uniform surface free of screed marks. Care shall be taken not to work the surface more than is necessary.
		3. Class U3
			1. Finishing operations shall consist of the above requirements for Class U2, after allowing the concrete surface to harden sufficiently then floating the surface by power tool to produce a uniform surface free of screed marks. Care shall be taken not to work the surface more than is necessary.
		4. Class U4
			1. Non-skid surface. Finishing operations shall consist of the above requirements for class U2 using a plain wood float finish and evenly dusting the surface with carborundum grains graded between 500 microns and 3mm at the rate of 1.0 kg/sq.m of surface area before the surface of the concrete has set. The carborundum shall then be trowelled lightly into the surface.
	12. **Defective Concrete Finishes**
		1. Any defective concrete finish shall be rejected and the Architect and Civil Engineer in Charge of Works may order the defect(s) to be cut out and made good, all at the Contractor's expense.
		2. Any proposed remedial treatment to concrete surfaces shall be submitted to the Architect and Civil Engineer in Charge of Works for approval and no work shall be carried out until the approval has been obtained. This remedial treatment will be at the Contractor's expense.
		3. Any concrete, the surface of which has been repaired before being inspected by the Architect and Civil Engineer in Charge of Works shall be liable to rejection.

## Steel reinforcement for concrete

* 1. **General Note on European Eurocodes**
		1. This specification is primarily based on the provisions of BS 8110 – Design of Concrete Structures. Alternative provisions as indicated in Eurocode 2, EN 1992, parts 1 to 3, are acceptable.
	2. **Reinforcing Steel – Material**
		1. Steel bars for the reinforcement of concrete shall comply with EU Regulation No. 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonized conditions for the marketing of construction products and repealing Council Directive 89/106/EEC.
		2. Welded Steel fabric for the reinforcement of concrete shall comply with EU Regulation No. 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonized conditions for the marketing of construction products and repealing Council Directive 89/106/EEC.
		3. Technical characteristics of steel bars for the reinforcement of concrete shall comply with BS EN 4449:2005, Grade 460A or B. Steel shall preferably also be CE marked in compliance with ENV 10080, Steel for the Reinforcement of Concrete, Weldable Ribbed Reinforcement.
		4. Technical characteristics of Welded Steel fabric for the reinforcement of concrete shall comply with BS 4483, Grade 460A or B. Steel Fabric shall preferably also be CE marked in compliance with ENV 10080, Steel for the Reinforcement of Concrete, Weldable Ribbed Reinforcement.
		5. Testing of reinforcement shall comply with BS EN ISO 15630 Parts 1 to 3: Steel for the Reinforcement and Pre-stressing of Concrete, Test Methods.
		6. The manufacturer's milling identification tags are to be supplied with each consignment bundle of reinforcing steel.
		7. Reinforcement which is found to have developed brittleness, cracks or other imperfections shall be rejected and removed from the site.
	3. **Reinforcing Steel Grade**
		1. The grade of bar reinforcement and the mesh reference shall be as indicated in the Drawings.
	4. **Reinforcement to be Clean**
		1. All reinforcement shall be clean and free from loose mill scale, dust, loose rust and coatings such as paint, oil etc.
		2. Grit blasting may be used to remove rust, oil, grease, salt or other deleterious matter. Repeated grit blasting may be necessary where reinforcement is in final position, but found on inspection to be contaminated.
	5. **Bending and Cutting**
		1. Bending and cutting of reinforcement shall comply with BS EN ISO 8666:2018. The provision in BS 8110: Part 1, clause 7.2 shall also apply.
	6. **Fixing of Reinforcement**
		1. Reinforcement shall be wired together, or otherwise effectively secured, to prevent displacement during concreting. The provisions in BS 8110: Part 1, clause 7.3 shall also apply.
		2. Wire for binding shall be 1.63 mm +/- 0.05mm annealed soft iron and the binding shall be done tightly with proper tools. Alternative methods of fixing reinforcement shall be submitted to the Architect and Civil Engineer in Charge of Works for his approval. Laps and joints shall be in strict accordance to those specified in the Drawings. Any relocation and additional laps shall be approved by the Architect and Civil Engineer in Charge of Works.
	7. **Cover to Reinforcement**
		1. Reinforcement shall, in all cases, be covered with the thickness of concrete shown on the Drawings. Accurate cover shall be secured by the use of plastic distant pieces of the correct size or other approved means.
	8. **Spacers and Chairs**
		1. Spacers and chairs for reinforcement shall be as shown on the Drawings and complying with BS EN ISO 7973:2015, Parts 1 and 2: Spacers and Chairs for Steel Reinforcement and their Specification.
	9. **Welding Reinforcement**
		1. Welding of reinforcement will not generally be permitted. If, in exceptional circumstances, the Contractor particularly wishes to weld reinforcement, details of the method and location shall be submitted to the Architect and Civil Engineer in Charge of Works for his consideration and approval. The provisions in BS 8110, Part 1, clause 7.6 shall apply.
		2. The design of all items such as tack-welded reinforcement assemblies shall take into account any requirements in respect of transportation including the location and fixing of lifting points to ensure safe handling.

# SECTION 5 – SUPPLEMENTARY DOCUMENTATION

## 5.1 – Draft Contract Form

## 5.2 – Glossary

## 5.3 – Specimen Performance Guarantee

## 5.4 – Specimen Tender Guarantee

These are available to view and download from the ‘Resources Section’ at:

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

## 5.4 – 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.