OUR LADY OF LOURDES CATHOLIC MULTI ACADEMY

October 2018

Our ref: WLIT2018

INVITATION TO TENDER (ITT) for Infrastructure rebuild at St Augustine's Catholic High School

1   Your organisation along with others is invited to offer a tender for provision of the above, to the specification outlined in the attached documents. Enclosed are:

   Document 1   Instructions and information on the tendering procedures.

   Document 2   Specification of the Requirement.

2   Please read the instructions on the tendering procedures carefully. Failure to comply with them may invalidate your tender which must be returned by the date and time given below.

3   Two copies of your tender must be received by **Mrs Ann Cullwick, MAC Business Manager, Our Lady of Lourdes Catholic MAC, The School House, Holloway Lane, Redditch, Worcestershire; B98 7HA** no later than **Noon, Thursday 8th November 2018** Late tenders will **not** be considered.

4   If having read the enclosed specification you decide not to submit a tender, I would be grateful if could send your reasons (though you are under no obligation to do so) to Mrs Cullwick, at the above address marked 'No Tender'.

   Questions in relation to the tender specification or to book a site visit please contact **Mr Matthew Setchell**, Lourdes it Services Lead at suppliers@lourdesit.org.uk please use reference **WLIT2018** in the subject header.

5   Please contact me at ann@lourdesmac.org.uk or on 01527 528 261 if you have any questions about the tendering procedure. The enclosed Document 1 also contains details for providing you with further information or clarification of the Multi Academy's requirement.

I look forward to your response.

Mrs Ann Cullwick

Yours sincerely

Mrs Ann Cullwick
MAC Business Manager

Instructions and information on the tendering procedures.

1 These instructions are designed to ensure that all tenders are given equal and fair consideration. It is important therefore that you provide all the information asked for in the format and order specified. Please contact Mrs Ann Cullwick ann@lourdesmac.org.uk 01527 528 261 if you have any doubts as to what is required or you have difficulty in providing the information requested. Pre-tender negotiations are **not** allowed.

Incomplete Tender

2 Tenders may be rejected if the information asked for in the ITT and Specification is not given at the time of tendering.

Returning Tenders

3 Electronic tenders submissions are accepted with the subject title **WLIT2018** to ann@lourdesmac.org.uk a confirmation of receipt return email will be sent.

Manuscript bids including envelopes and packages must bear no reference to the tenderer by name; franking machines which automatically print the company's name should not be used. Tenders must be delivered **Noon, Thursday 8th November 2018** to **Mrs Cullwick MAC Business Manager Our Lady of Lourdes Catholic MAC, The School House, Holloway Lane, Redditch, Worcestershire: B98 7HA**

Receipt of Tenders

4 Tenders will be received up to the time and date stated. Those received before the due date will be retained unopened until then. It is the responsibility of the tenderer to ensure that their tender is delivered not later than the appointed time.

Acceptance of Tenders

5 By issuing this invitation the Multi Academy is not bound in any way and does not have to accept the lowest or any tender, and reserves the right to accept a portion of any tender, unless the tenderer expressly stipulates otherwise in their tender.

Inducements

6 Offering an inducement of any kind in relation to obtaining this or any other contract with the Multi Academy will disqualify your tender from being considered and may constitute a criminal offence.

Confidentiality of Tenders

7 Please note the following requirements, you must not:

- Tell anyone else what your tender price is or will be, before the time limit for delivery of tenders.

- Try to obtain any information about anyone else's tender or proposed tender before the time limit for delivery of tenders.

- Make any arrangements with another organisation about whether or not they should tender, or about their or your tender price.

Failure to comply with these conditions may disqualify your tender.

Costs and Expenses

8 You will not be entitled to claim from the Multi Academy any costs or expenses which you may incur in preparing your tender whether or not you're tender is successful.

Evaluation Criteria

9   The tender process will be conducted in a manner that ensures tenders are evaluated fairly to ascertain the most economically advantageous tender.

Freedom Of Information

10   The Multi Academy is committed to open government and to meeting their responsibilities under the Freedom of Information Act 2000. Accordingly, all information submitted to the Multi Academy may need to be disclosed in response to a request under the Act. If you consider that any of the information included in your tender is commercially sensitive, please identify it and explain (in broad terms) what harm may result from disclosure if a request is received, and the time period applicable to that sensitivity. You should be aware that, even where you have indicated that information is commercially sensitive, we may still be required to disclose it under the Act if a request is received. Please also note that the receipt of any material marked 'confidential' or equivalent by the Multi Academy should not be taken to mean that we accept any duty of confidence by virtue of that marking. If a request is received, we may also be required to disclose details of unsuccessful tenders.

Tender Period

11   Due to the intensive evaluation process, the Multi Academy requires tenders to remain valid for a 30day period.

Basis of the Contract

12   The specification in Document 2 will form the basis of the contract between the successful tenderer and the Multi Academy.

Timetable

13   This timetable is provisional and may be subject to change, but will be adhered to by the Multi Academy as far as reasonably possible.

ACTIVITY	TIMESCALE
Advertise Tender	22/10/2018
Start of clarifications stage / any questions about the specification or procurement process	22/10/2018
End of clarifications stage	05/11/2018
Submission deadline for receipt of bids	Noon 08/11/2018
Award contact	12/11/2018

Format of Bids

14   Tenderers should present their proposals in the following format:

        Section 1   **Table of Contents**

        Section 2   **Management Summary**

        Section 3   **Meeting the Specification**

        Section 4   **Cost and Charging Arrangements**

Conclusions

15   Whilst every endeavour has been made to give tenderers an accurate description of the Multi Academy's requirement, tenderers should make their own assessment about the methods and resources needed to meet those requirements.

End

Lourdes IT

Project Plan: St Augustine's Network Rebuild – Technical Specification 19/20/2018

Current Server and Network Infrastructure:

Physical Infrastructure

8 Physical Servers and 1 Storage Area Network (SAN) most with failover, no warranty, aging hardware and much more Storage than needed. There are multiple Backup Network Area Storage (NAS) devices around the site used to store backups.

- 7 used for Production environment, 1 used as a backup repository.
- Only 1 of these Servers is documented as having a Valid Warranty and at least 2 Documented as Expired, the rest are unknown, but due to age presumed expired.
- 1 SAN (where 20TBs of the data is store). This has no warranty, no failover should there be a problem with a data controller (should have 2 in case of failure).

Total Physical Storage of the working (production) environment:

- Capacity: 45 Terabytes
- Used: 15 Terabytes

Virtual Infrastructure

Stored and running on the Physical Server infrastructure are 27 Virtual Servers. 27 is a lot for what we think is required as many of the roles and functions appear duplicated onto multiple VMs with over-provisioned storage. This will mean that resources are wasted by doing this, increasing the number of servers and storage capacity that has been used to do tasks. It is also important to note that some essential services like the School's website are currently hosted on this infrastructure at a significant resource cost and could lead to issues over sustainability and uptime, should a disaster happen or something as simple as a power failure occur. This would mean the school website would go offline and unavailable as well.

Server Backup Infrastructure

1x30TB Synology NAS

1x Backup Server with 30TB

Other NASs around the school can be used for smaller VMs

Tape drive for old SIMS server

Network Infrastructure

There is currently a core switch on the network with 10Gb/s backbone to some of the other switch nodes around the site. Current servers connect to the switch with 1Gb links.

The core switch is a "HP 5406R zl2" with 4 out of 6 expansion modules used.

Different geographic locations of the network have been segregated off with different vlans

Different equipment has been segregated off with different vlans

Proposed Server Infrastructure Specification:

Physical Infrastructure

Retire old server equipment that is no longer in warranty – except Backup-SRV and new Host (in warranty)

3x New Rack mounted Physical Servers in failover-cluster configuration with the new SAN. Having 3 servers allows the cluster to continue running in the event that 1 physical server has a problem, the VM load can still be balanced between a working cluster of Physical servers. In a scenario where 2 of 3 physical servers are out of action VMs could still run on just 1 of the hosts, providing total RAM usage of running VMs doesn't exceed spec of 1 host. Spec per host as follows:

- 2x Intel Xeon Multi-cored Processors (8 core)
- 192GB RAM
- Local storage in RAID1 to run the Windows Server 2016 and Microsoft Hyper-V Failover Cluster (the Operating system that will run the virtual servers in failover-cluster configuration).
- 2x 10Gb/s ISCSI data connection to new SAN (Failover Cluster Shared Volume)
- 2x 10Gb/s Network to Core Switch
- 2x 1Gb/s Network to Core Switch
- Dual PSU for redundancy
- iLO for remote management even if hosts are offline
- 5 Year NBD Onsite Warranty

1x New Rack mounted SAN

- 20TB of fast, useable storage is required. We have spec'd this amount due to having provisioned 16TB of this just for new Virtual Servers and for the transferring of existing User Data and Shares onto this. 20TB allows a 25% (4TB) increase in usage for expansion over the lifetime of the device. If the storage requirement vastly increases then there are also options for adding additional storage to this device at additional cost.
- The data on the SAN will be accessed only by the 3 new physical Servers, as their central Storage for failover and be connected to each of the 3 new servers with redundant 10Gb/s iscsi links.
- Redundancy for Power, Disks, Controller and host connections.
- 5 Year NBD Onsite Warranty

Server Backup Infrastructure

- We will need 2x USB portable harddrives which can be encrypted 8TB each or larger to be used as Veeam Offsite backups. These can be used on a weekly cycle for offsite data backups.
- It would be best to get another 30TB synology or Netgear NAS for Veeam backup routines, as existing are already provisioned for current backups and would not have any capacity to backup a new network.
- After the new network is up and running the aim would be to re-build the old 'Backup-svr' as a Veeam Backup server and additional repository for the new equipment.

Virtual Infrastructure

The aim will be to create a new set of Virtual Servers, condensing the roles and functions of the 27 that already exist to between 15 – 18 (depending on backup server being VM or offhost and number of Storage VMs are decided).

Moving the website and Music website onto web hosting, moving them both off the School's infrastructure.

Retiring old and redundant servers that no longer need to be used, such as Exchange.

Total estimated resource usage of proposed 18 VMs-

- CPUs used: 92 virtual cores
- RAM Used: 182GB
- Storage Used: 15.9TB

Network Infrastructure

- For the new servers to connect to the network at 10Gb/s, we'll need an additional module in the Core Switch with at least 6 10Gb ports for the 10Gb links from the new servers.
- We would also need to look into what vlans are and aren't necessary and how to re-configure this. So that the new servers can talk to the rest of the network.

Power redundancy

New 3000VA UPS rackmounted and with Network management and environment monitoring.

New Server Cabinet

Size TBC - Cabinet with fans for circulation (needs to be measured)

Misc equipment:

- 4port KVM switch with cables for servers.
- 8 UPS cables for equipment
- 6x 3m 10Gb DAC cables for 10Gb iscsi
- 6x 5m 10Gb DAC cables for 10Gb links to Core Switch (length TBC)
- 10x 10m Cat6 ethernet cables for new equipment to be patched to core switch
- Cab nuts and bolts for rackmounting

End