EMPLOYER'S REQUIREMENTS

PROPOSED DRAINAGE AND WATER SERVICES INSTALLATION
NEW HORTICULTURAL NURSERY
IDLESS
TRURO

FOR
PARKS AND FACILITES DEPARTMENT
OF TRURO CITY COUNCIL

LLOYDS Architecture

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Chartered Institute of
Architectural Technologists

1. ROLES AND CONTACTS

1.1. Employer:

Parks and Facilities Department, Truro City Council, Truro Community Library, Union Place, Truro, TR1 1EP

Contact: Richard Budge, Parks and Facilities Manager, Truro City Council. 07854 859 871

richard@truro.gov.uk

Note: All Employer emails please also cc to Kate Bell

kate@truro.gov.uk

1.2. Architectural Consultant:

LLOYDS Architecture, 11 Kingsley Close, Truro, TR1 3XJ

Contact: Lloyd Richards 07875 481 919

mail@lloydsarchitecture.co.uk

2. SITE HISTORY

2.1. The site was a charitable donation to the Council by a private individual.

2.2. Two sets of three high voltage 11kV overhead cables cross the site which is understood to require a 3.0m radius, safety exclusion zone around each overhead conductor.

2.3. Historically the site was used by a previous contractor as spoil fill so the underlying soil is made ground and there is also high water table.

2.4. The site is bounded by a stream to the south. To the east and south east corner there is a 2.0m drop to a river abutting the site. The bank is steep, unfaced soil which is crumbling. The Contractor should take reasonable preventative measures during the works to ensure that silt does not enter and pollute the adjacent stream or river during the works.

2.5. The approach to the site is through Higher Trehaverne, a residential suburb of Truro City which has traffic calming road humps, a 20mph speed limit and passes St. Mary's Primary School.

2.6. Contractors to avoid construction traffic during term time of St. Mary's Primary School daily drop off and pick up periods which are as follows:
8:00 – 9:00, Monday to Friday
14:45 – 15:45 Monday to Thursday
13:30 – 14:30 Fridays

Subject to Contract, the selected Contractor should contact the School direct to confirm construction start and completion dates and establish school holiday and half term dates.

2.7. Between Higher Trehaverne and the site is a length of single track lane with high edges and short visibility which is a "Quiet Zone" used by local traffic, pedestrians, dog walkers, horse riders etc. The highway is a narrow shared surface with no footway.

2.8. Site is accessed off the designated highways "Quiet Zone" via a field gate that has limited visibility to the south. Contractors should not permit construction traffic to reverse out onto the highway

2.9. Since taking over the property the Employer has carried out extensive phase 1 infrastructure and construction works work including site enclosure, erection of blockwork compost bays, installation of main electricity supply and borehole private water supply and the construction of two agricultural type buildings. There are also partially completed poly tunnels on site.

2.10. Note that the as-built location of the poly tunnels is different to that indicated on the previous drainage layout drawing 5218-CFM-3001-A, prepared by Nijhuis Industries in February 2015 so I have prepared and as-built layout to accompany this tender. Note also that the proposed glasshouses on the drainage site layout have not yet been constructed.

2.11. Of the two buildings on site, the larger Materials and Facilities Building, has no soil and waste drainage requirement. This building is exempt from Building Regulations. The other, smaller Ancillary Building houses an office and staff welfare accommodation, including a kitchenette and inclusive WC. This contains just one sink, one hand basin and one WC. This smaller building required Building Control consent. The Building Control has phased completion pending the associated drainage works of this contract.

3. PROJECT DESCRIPTION

3.1. This proposal is a Design and Build contract to design and install rainwater harvesting system, private foul treatment system with river discharge and attenuated surface water drainage system with river discharge.

3.2. The rainwater harvesting system is limited to the roof water of the larger Materials and Equipment building. The harvesting storage to be an above ground tank. The overflow discharges into the proposed surface water system.

3.3. The foul drainage system needs to be treated to the required level for river discharge.

3.4. The surfacewater drainage system includes the roof run off the smaller building and land drainage related to each long side and valley discharge point of the poly tunnels.

3.5. The combined river discharge would be to a new headwall with flap valve.

3.6. The systems were originally designed by Nijhuis Industries but this contract provides for design and build, so Tenderers are able to review and design amendments if they feel it would improve operational efficiency or lower contract cost.

3.7. The site has soil conditions that vary widely across the site but it is probable that high water table conditions will be encountered. Contractor to allow for pumping or wellpoint dewatering of excavations to enable the underground services to be installed.

4. SCOPE OF WORKS - TENDER

4.1. The scope and limits of this tender are to provide a Design and Build Tender for the design and installation of the specified drainage and water services.

4.2. The Form of Tender will provide for a fixed price Design and Build tender for each element of the works and a total figure ex VAT. That is Rainwater Harvesting, Foul drainage and treatment plant and surfacewater drainage system. Tenderers are also to make it clear on their tender if they are of the opinion that the proposed outfall is exempt from Environment Agency consent or not. If the opinion is that consent is required then please make this clear and quote for that application on behalf of the Client.

4.3. Full details of the Form of Tender, how to submit and present the tenders and the tender procedures that will be followed are described in the accompanying Invitation to Tender letter.

4.4. The Design and Build tender will be let on an exchange of letters based on the Tender Document Set and the selected Contractor's Form of Tender and Contractor's Proposals documents rather than a printed Form of Contract.

4.5. During the tender evaluation process, a Tenderer may be asked to email a Contractor's Proposals document set within 7 days to LLOYDS Architecture for review. As far as is practical it will be assumed that the Contractor's Proposals will not deviate from the provisions of the Tender Documents. If there are any deviations from the Tender Documents the Contractor should highlight these in the Contractor's Proposals documents for review.

4.6. Final selected tenderer will be required to provide evidence of both Designer's Professional Indemnity Insurance and Contractor's Insurance for the works before a contract is let.

4.7. The interior of the existing newly completed buildings are excluded from the work area except where required to make electrical connections for the works. The Tenderers should allow for their own temporary site secure storage units and provide temporary construction staff welfare facilities including a messroom with hot and cold water, a first aid station and a site WC for use by the Contractor and their sub-contractors.

4.8. The Contractor is to provide all their own materials, construction plant and equipment for the execution of the works.

4.9. The Contractor is to provide their own licensed waste skips and haulage, and deal with the licensed disposal of all waste and surplus excavated materials arising from the Contractors works.

4.10. Contractor is responsible for ensuring that waste materials are segregated and managed for maximising recycling of waste as specified by their licensed waste contractor.

4.11. Contractor is responsible for the removal from site of all pallets, packaging and wrappings of all materials and components delivered to site and for a site clean on completion prior to handover.

4.12. The property is in a rural, unsupervised location at risk of unauthorised intrusion. The Contractor must consider physical security of their, plant, equipment and unincorporated materials.

4.13. Note that the existing site levels are lower than the proposed finished levels anticipated by the Client. The Client intends to import recycled road planings as a surfacing to the site. For this reason, the appointed design and build contractor will need design the system, pipework, above ground and underground features to account for the final surface levels anticipated by the Client. The Contractor will need to liaise closely with the Client during the design phase to settle the

proposed finished levels and installation levels of plant and components, cover levels etc.

5. STATUTORY CONSENTS

5.1. **Planning**.

5.2. The development of the site as a Horticultural Nursery has been the subject of formal Planning Consent ref: PA15-04961, dated 18th September 2015. A nominal site start was made by the Client to secure the consent condition to start within 3 years of the consent.

5.3. Condition (4) of the consent requires the submission of a Construction Management Plan (CMP)which the Employer will apply for and clear with the Council Planning department prior to commencement of these tendered works. A copy of the CMP will be provided with the tender documents.

5.4. **Building Control.**

5.5. In relation only to the internal fit-out of the staff welfare facilities in the Ancillary Building, the Employer has Building Regulations consent. Ref: BC19/00520/IAPPLY, dated 27th February 2019. This is subject to phased completion with Phase 1 recently completed with the construction of the Ancillary Building.

5.6. This tender relates to Phase 2 which is the drainage and water services for the site and the Contractor will be required to liaise with Cornwall Council Building Control, giving two working days' notice of a construction start and notifying the Council for required site inspections and completion inspection.

5.7. If in this tender, the Contractor has proposed alterations to the project specification which have been approved by the Client, then the Contractor will be responsible for liaising with Cornwall Council Building Control to obtain approval of any amendments to the consent.

6. CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS

6.1. The entire Client project to develop the horticultural nursery, of which these two buildings form a part, is notifiable to the HSE under CDM.

6.2. For the purposes of the CDM Regulations the Employer, Truro City Council, will be deemed to assume the CDM defined roles of Client, Principal Designer and Principal Contractor and will notify the HSE of this overall project accordingly.

6.3. The Employer has produced a Construction Phase Safety Plan for the project.

6.4. LLOYDS Architecture are a designer reporting to the Principal Designer and has produced a design risk assessment which accompanies the Tender Documents. As this is being let as a Design and Build contract, the successful Contractor will also be a designer and contractor and be required to submit both their own Design Risk Assessment and Construction Risk Assessments and Method Statements for these buildings to the Client's Health and Safety Advisor (JNC Safety Services), for review.

6.5. Construction Programming. The successful tenderer will be required with the Client to agree sufficient lead time, between letting a contract and site commencement, for adequate time to address matters pertaining to managing construction safety as part of the CDM Regulations

6.6. As part of CDM compliance for the completion and handover of the buildings, the Client will require the Contractors to provide as-built services layouts; operation and maintenance manuals; electrical commissioning and test certificates; materials and fixtures and fittings warranties to go in the Client's Safety File for the property.

RAINWATER HARVESTING SYSTEM

7. RAINWATER HARVESTING SYSTEM

7.1. Proposed system only to receive roof water run-off from Materials and Equipment building. (Existing rainwater pipe of Ancillary building to connect to new trapped access gully and associated drainage pipework to new surfacewater drainage system). Tank to be an above ground unit.

7.2. Provide minimum 150mm thick insitu concrete base slab adjacent SE corner of Materials and Equipment building for siting of tank.

7.3. Supply and install of non-potable, above ground water tank of minimum 10,000 litre capacity.

7.4. Adapt and extend existing plastic rainwater pipes as required to discharge into the tank.

7.5. Provide trapped access gully adjacent the tank to receive overflow discharge from tank. Gully to be connected to proposed surfacewater drainage system.

PRIVATE FOUL DRAINAGE AND TREATMENT SYSTEM

8. TREATMENT SYSTEM

8.1. Supply and install Clearwater E6 foul sewage treatment plant to 1.0m inlet invert and blower kiosk (or equal approved).

8.2. Chamber to be encased in concrete in accordance with the manufacturer's installation specification for a wet site.

8.3. The Contractors have provided a first inspection chamber and connection to the Ancillary building to connect to, but may not have provided a vent pipe to the head of the run. As a contingency under this contract, allow for supplying a fitting an external vent pipe to the building, connected to the first inspection chamber terminating at roof level.

9. PIPEWORK

9.1. 100mm proprietary plastic underground pipework bedded and surrounded to 150mm minimum, to crown of pipe in pea gravel, followed by selected fill free from deleterious material.

9.2. Lay to general minimum depth of 900mm to minimum gradient of 1:80.

9.3. Where pipes have less than 600mm cover to be bedded and surrounded in concrete with flexible joints at each pipe joint.

9.4. Proprietary prefabricated access chambers at all connections and at all changes of direction/gradient. Allow for effluent sample chamber on the outlet site of the installation. Chamber covers to be medium duty suitable for light commercial vehicle loading of 3T.

9.5. Backfill and make good along the route of pipes, services and underground installations.

10. ELECTRICAL SERVICES

10.1. Allow for controls and wiring supplied back to the site electrical system in the Ancillary Building. Isolator and fuseway to be labelled at the Consumer Unit.

10.2. System to be designed and installed by Electrical engineer registered with an approved Competent Persons scheme.

10.3. Electrical registered with an approved Competent Person scheme to provide commissioning and test certificates on completion prior to final

building control inspection. Copy to be handed to Building Control, and originals to be put into Safety File and handed to Employer.

SURFACEWATER SYSTEM

11. MODULAR STORAGE TANK

11.1. Attenuated rainwater storage and flow-controlled discharge to the river. 4.0m x 17.5m x 0.66m modular storage tank, Stormbloc or equal approved. To provide 47m3 of storage capacity. (Note that shape of tank can be adjusted to suit as-built available space on site).

11.2. Allow for medium duty loading conditions for light commercial vehicle loading of 3T.

11.3. Note that high water table is expected and therefore it is expected the crate system attenuation tank will need to be wrapped in impermeable membrane and bedded and surrounded in concrete to prevent flotation.

11.4. Flow control device to allow maximum flow rate of 5 l/s.

12. RIVER OUTFALL

12.1. Proprietary prefabricated headwall to be installed at river discharge location. Althon SP101 or equal approved, with flap valve.

13. PIPEWORK

13.1. 100mm proprietary plastic underground pipework bedded and surrounded to 150mm minimum, to crown of pipe in pea gravel, followed by selected fill free from deleterious material.

13.2. Lay to general minimum depth of 900mm to minimum gradient of 1:80.

13.3. Where pipes have less than 600mm cover to be bedded and surrounded in concrete with flexible joints at each pipe joint.

13.4. Proprietary prefabricated access chambers at all connections and at all changes of direction/gradient. Chamber covers to be medium duty suitable for light commercial vehicle loading of 3T.

13.5. Backfill and make good along the route of pipes and underground installations.

13.6. Gravel infiltration trenches. Subject to the as-built layout of the polytunnels, lay Wavincoil flexible perforated land drains along both long sides of each polytunnel and include a gully connection at the valley rainwater pipe discharge end of valleys of multi span poly tunnels. Land drains to be bedded and surrounded in free draining granular material, wrapped in a geotextile filter membrane.

CONSENT TO DISCHARGE

14. CONSENT TO DISCHARGE

14.1. Contractor to advise the Client of the regulations regarding the requirement for statutory consent to discharge to the water course for this non-domestic installation foul and surfacewater installation.

14.2. Contractor to advise if in their opinion the systems are exempt from Environment Agency Consent. If required under the regulations, Contractor to include for applying for the consent to discharge, on behalf of the Client and pay all fees and charges related to the application.
