

CAD Designer Vacancy - Freelance



Hertfordshire Zoo is focused on Long-term Conservation and on creating the best possible environments for the 500+ animals that call HZ home.

We now have a unique opportunity for a CAD Designer to use their skills to create technical design drawings to help us design, cost-estimate and build animal enclosures and other constructions around the Zoo site.

Recent and current builds vary hugely in type and scale of project, and include the new Sun Bear Heights. Big Cat (Lion, Tiger & Jaguar) habitats, large public walkways, a new Gibbon habitat, theming of on-site buildings and more regular constructions (such as a native species trail, enormous natural wooden pergolas and hexagonal glass habitats for reptiles). You could literally be working on anything!

What Are We Doing?

We have our own in-house construction team that builds our enclosures, and we want to take to it the next level with better and more detailed design at the beginning of projects. This will enable us to better estimate costs, build times and help the team in the construction process with better drawings.

What Are We Looking For?

Someone who can:

- Produce 2D scaled CAD designs with dimensions, possibly turning them into 3D rendered as well
- Be able to layer up drawings (e.g. studwork, insulation, plasterboard, plaster, paint etc.)
- Be able to modify/revise drawings quickly (this will sometimes mean coming to the Zoo to attend design meetings as well as working remotely)

There is a possibility that this could lead to continuous work for the right candidate, and you will be gaining experience in a unique and prestigious sector (How many Zoo

designers do you know?!)

How Will It Work?

Initially, we would like you to advise a lump sum £ price to produce a set of drawings and include x amount of revisions to the drawing and be available also for occasional site and design meetings. This will be further discussed once we short-list the applicants.

How Do I apply?

We, of course, would like to see your CV plus two or three examples from your portfolio (in pdf format), but we also require applicants to submit a simple design based on the attached "Quarantine" brief (this is not an academic exercise - In the next few months we will be starting this as a live project so whoever the selected candidate is will be using this to continue the design). There is no right/wrong answer to this either - we just want to see what you can do.

If you think you are the perfect fit for this role, please apply now by emailing your CV and a cover letter, along with any relevant examples of your work, to

michael.felstead@hertfordshirezoo.com

Closing date: Sunday 12th May 5pm

Quarantine Brief

We occasionally have to hold animals (coming in and going out of the zoo) in a separate quarantine area. This is normal under the requirements for Zoos participating in international exchange of animals for conservation and international breeding programs.

Attached is a previous GA (General Arrangement) Drawing that is a previous rough draft and just for reference.

We would like you to create some new example drawings 2D and/or 3D to show plot plan, side elevations and possibly 3D rendering. We would also like you to have a free reign to show as many detailed dimensions as you see fit. The purpose being that the more dimensions on a drawing the easier it is for our team to build. Also if you can show examples of layers such as drainage, electrical wiring, studwork, plumbing.

Please remember there is no right or wrong answer to this and you are free to make as many assumptions as you like for example, you may opt to put in and show underground drainage. It doesn't matter what size pipe diameter you use or where you put it, it's just to show that the design can be layered up so we can see the different construction layers.

So, we are looking at a plot of 50m Long x 10m Wide.

On one side we have a Category 1 holding area (for big cats) 25m Long x 10m Wide x 4m Tall. The exterior holding pen is constructed of steel. Steel posts (steel Hollow Section) set in the ground in concrete. Welded/Riveted to these posts is steel mesh 25mm x 25mm square holes with 4mm thick wire. There should be a double-door "airlock" to gain access to the outside enclosure (i.e.

so there isn't a single door in/out). Next to the exterior cat enclosure is the Cat den and keeper area. This can be a brick-built construction and it is an area where the cats can sleep/be inside. There should be a mesh barrier between the cat den and the keeper area. There can be water facilities for cleaning (sink, taps etc)

On the remaining 25m x 10m plot we would like to have an area for smaller animals So maybe 3 or 4 units that consist of the same external area in steel posts/mesh (50mm square mesh), each with its own attached brick built den area and a common keeper area.

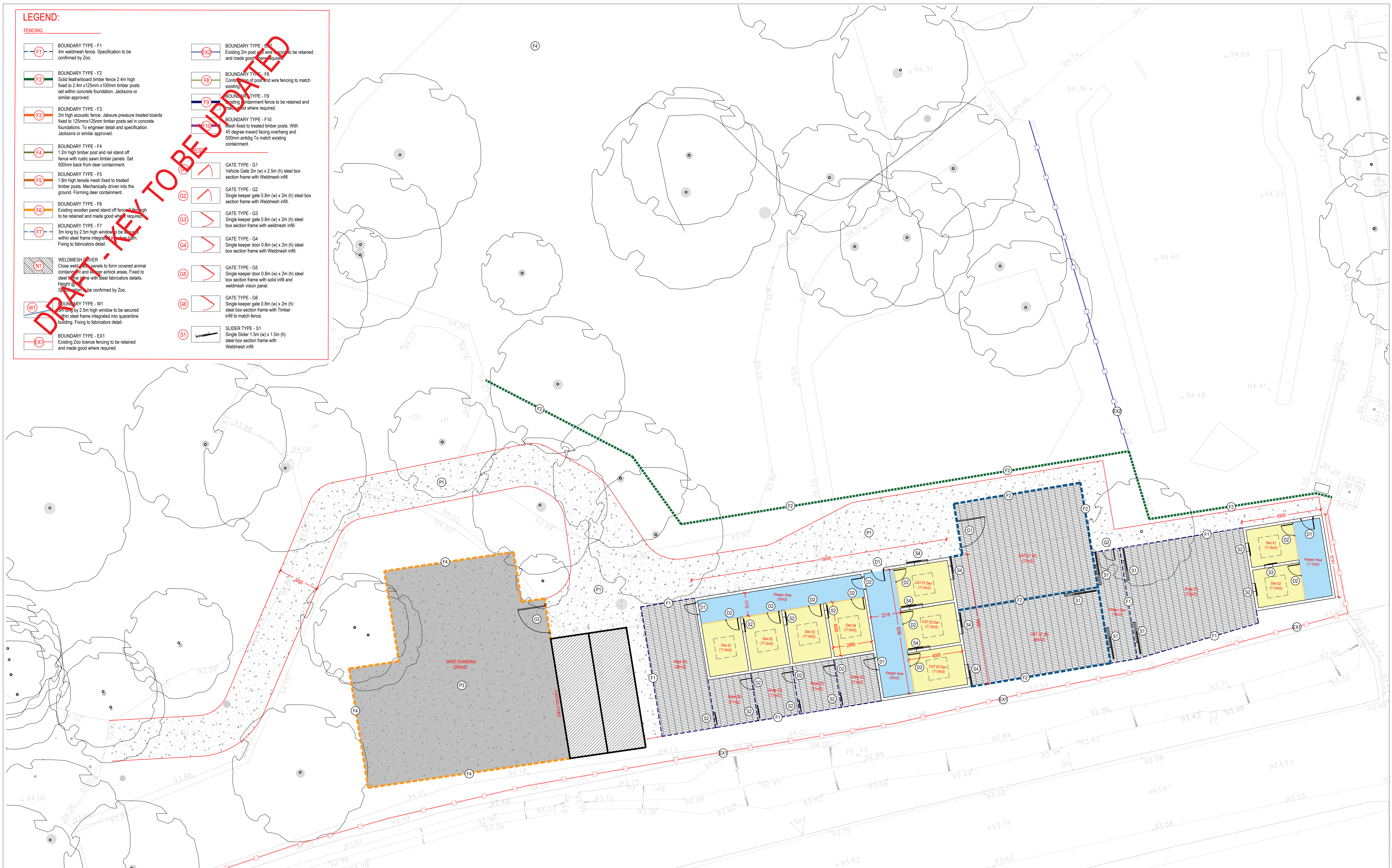
There is no right or wrong answer to this. You are free to make assumptions as you see fit and show us your technical and creative skills !

LEGEND:

FENCING:

- BOUNDARY TYPE - F1**
4m weldmesh fence. Specification to be confirmed by Zoo.
- BOUNDARY TYPE - F2**
Solid featherboard timber fence 2.4m high fixed to 2.4m x 125mm x 100mm timber posts set within concrete foundation. Jacksons or similar approved.
- BOUNDARY TYPE - F3**
2m high acoustic fence. Jakura pressure treated boards fixed to 125mm x 125mm timber posts set in concrete foundations. To engineer detail and specification. Jacksons or similar approved.
- BOUNDARY TYPE - F4**
1.2m high timber post and rail stand off fence with rustic sawn timber panels. Set 500mm back from deer containment.
- BOUNDARY TYPE - F5**
1.8m high tensile mesh fixed to treated timber posts. Mechanically driven into the ground. Forming deer containment.
- BOUNDARY TYPE - F6**
Existing wooden panel stand off fence 0.9m high to be retained and made good where required.
- BOUNDARY TYPE - F7**
3m long by 2.5m high window to be secured within steel frame integrated into quarantine building. Fixing to fabricators detail.
- WELDMESH COVER**
Close welded panels to form covered animal containment and keeper airlock areas. Fixed to steel frame in line with steel fabricators details. Height to be confirmed by Zoo.
- BOUNDARY TYPE - W1**
3m long by 2.5m high window to be secured within steel frame integrated into quarantine building. Fixing to fabricators detail.
- BOUNDARY TYPE - EX1**
Existing Zoo license fencing to be retained and made good where required.
- BOUNDARY TYPE - EX2**
Existing 2m post and rail wire fencing to be retained and made good where required.
- BOUNDARY TYPE - F8**
Continuation of post and rail wire fencing to match existing.
- BOUNDARY TYPE - F9**
Existing containment fence to be retained and made good where required.
- BOUNDARY TYPE - F10**
Mesh fixed to treated timber posts. With 45 degree inward facing overhang and 500mm airgap. To match existing containment.
- GATE TYPE - G1**
Vehicle Gate 2m (w) x 2.5m (h) steel box section frame with Weldmesh infill.
- GATE TYPE - G2**
Single keeper gate 0.8m (w) x 2m (h) steel box section frame with Weldmesh infill.
- GATE TYPE - G3**
Single keeper gate 0.8m (w) x 2m (h) steel box section frame with weldmesh infill.
- GATE TYPE - G4**
Single keeper door 0.8m (w) x 2m (h) steel box section frame with Weldmesh infill.
- GATE TYPE - G5**
Single keeper door 0.8m (w) x 2m (h) steel box section frame with solid infill and weldmesh vision panel.
- GATE TYPE - G6**
Single keeper gate 0.8m (w) x 2m (h) steel box section frame with Timber infill to match fence.
- SLIDER TYPE - S1**
Single Slider 1.5m (w) x 1.5m (h) steel box section frame with Weldmesh infill.

DRAFT - KEY TO BE UPDATED



rev	details	by	date
SK00	FIRST ISSUE FOR COMMENT	ZW	19.02.2024
SK01	DRAFT ISSUE FOR COMMENT	JM	02.04.2024
SK02	DRAFT ISSUE FOR COMMENT	JM	05.04.2024

Notes

- Do not scale from drawing, use figured dimensions only.
- All dimensions to be checked onsite.
- This drawing to be read in conjunction with all other drawings and specifications.

1:125
0m 6.25m 12.5m

Project title
**HERTFORDSHIRE ZOO
QUARANTINE**

Drawing
Landscape GA

Drawing number
P24003-00-001-DZ-0102-SK00

Revision
PRELIMINARY

Date
19.02.2024

Scale
1:125 @ A1

Drawn
ZW

Checked
JM

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