

Role summary

We have an excellent opportunity for a Utility Infrastructure Engineer to join our Environmental Engineering team. Providing design, research, and Analysis support to the integrated environmental and sustainable design of masterplans and projects all over the world.

Role definition

Job Title: Utility Infrastructure Engineer

Reporting to: Discipline Lead on a day-to-day basis and ultimately to the Senior Partner

Responsibilities

- To provide design, research, and Analysis support to the integrated environmental and sustainable design of masterplans and projects.
- Advise and support design teams in the integration of sustainable infrastructure design concepts for various scales of masterplans.
- Support the delivery of conceptual and schematic utility infrastructure design for masterplanning projects within Foster + Partners.
- Liaise with other members of the team towards the integration of resource efficient solutions in shaping masterplans and guiding towards zero energy, water, waste, and discharge frameworks.
- Present analysis results in the form of reports and presentation to the clients and design teams internally.
- Conduct research to all relevant aspects of utility infrastructure including power, water, wastewater, drainage, and district thermal systems.
- Thorough knowledge of and compliance with Foster + Partners procedures and standards.
- Contribute, or otherwise assist, as required.

Qualities and skills required

- Able to demonstrate ability to undertake the above responsibilities.
- Undergraduate degree in Engineering (civil or similar) and/or master's degree in Engineering/Environmental Design/Sustainability.
- Minimum 2~3 years of experience in large scale masterplans and sustainable infrastructure applications.
- Enthusiasm to pursue sustainable infrastructure designer on large scale masterplans as the central part of the individual's career development
- Legally able to work in the country in which the position is based
- Technical knowledge and expertise in most of the following fields:
 - o A good understanding on masterplan scales and land-use typologies
 - o Infrastructure load estimations for power, water and waste
 - o HV/MV networks (supply & distribution)
 - o HV/MV substations and power supply zones
 - o Basic knowledge on LV and streetlighting networks
 - o Renewable power generation options

- o A good knowledge on hydraulics to carry out high-level assessments of gravity/pressurized networks
- o Potable water networks (transmission and distribution)
- o Wastewater networks (gravity, vacuum, etc.)
- o Knowledge on different wastewater treatment plants and re-use of treated water
- o Sustainable urban drainage design and knowledge of international frameworks i.e. SuDS, Sponge City.
- o A good knowledge on hydrology to carry out high-level stormwater catchment assessments
- o Primary irrigation networks and irrigation demand irrigation cycles
- o Basic knowledge on external firefighting network requirements
- o District thermal distribution systems and associated renewable technologies i.e. cogeneration, lake and sea water cooling system, solar absorption.
- o Digital networks (telecoms, IoT, etc.)
- o Waste management strategies
- o Smart infrastructure applications
- o Utility reservations and strategies for efficient RoW design
- o Understanding of overall infrastructure plot requirements
- Broad understanding of multidisciplinary design process
- Good communication and presentation skills
- Able to demonstrate initiative and a proactive approach to daily tasks
- Able to work under pressure and to tight deadlines
- Excellent organisational skills
- Able to manage sensitive and sometimes confidential information
- Self-motivated and able to take responsibility
- Able to manage and prioritise tasks and time efficiently
- Good interpersonal skills and able to work independently and as part of an effective team
- Flexible attitude
- Able to build relationships at all levels, internally and externally

Desirable

- Qualified as a Chartered Engineer in the UK, or actively working towards.
- Experience on any large-scale masterplan design
- Experience on district thermal systems
- Experience on water infrastructure
- Experience in power systems
- Hands-on experience of hydraulic modelling via InfoWorks, WaterGEMS, WaterCAD, Epanet, SewerGEMS, etc.
- Hands-on experience of hydrological modelling via InfoWorks, HEC-RAS, StormCAD, etc.
- Very Good to Excellent Graphic skills
- Experience in the use of the following tools/ software packages: Photoshop, Illustrator, InDesign, Word, Excel, PowerPoint, PowerBI
- Professional accreditation preferred: LEED, BREEAM, Estidama, GSAS, CSH etc_{on site}.

This description reflects the core activities of the role but is not intended to be all-inclusive and other duties within the group/department may be required in addition

to changes in the emphasis of duties as required from time to time. There is a requirement for the post holder to recognise this and adopt a flexible approach to work. Job descriptions will be reviewed regularly and where necessary revised in accordance with organisational needs. Any major changes will be discussed with the post holder.

September 21