



Pipe Bridge Steelwork

Steel gantry booms

Steel columns

Low impact foundations

FLI design, fabricate, pre-assemble & install steel pipe bridge structures and their foundations, into critical infrastructure across the UK.

FLI's pipe bridge structures are suitable for water, energy, or hospital sites. Whether it's craning radar towers into airports or installing telecoms towers on mountain tops with helicopters, FLI are trusted to build steel structures to the highest standards in the most demanding and sensitive locations.



Pipe Bridge Steelwork

FLI scope of work:

Design, Supply & Installation, including foundations Support Columns & Bridges.

All capabilities in-house:

Efficient project delivery with design, supply, pre-assembly & installation in one mobilisation, by a single team.

Leaner solutions:

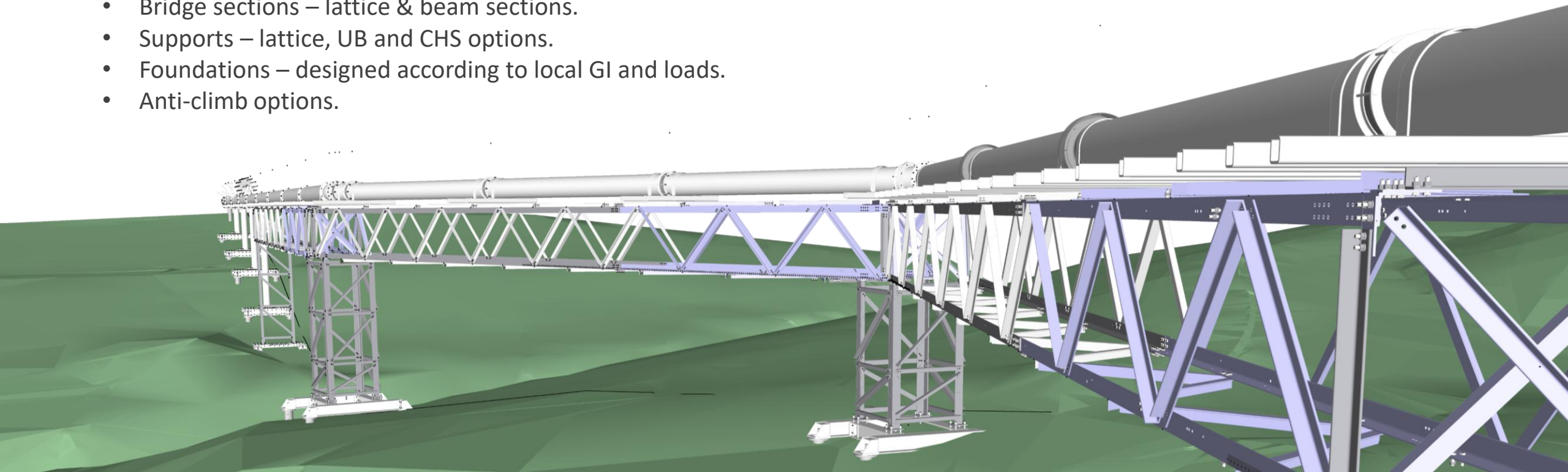
Foundation & superstructure are designed & installed as one.



Design & Detailing, In-House

Team of 20 in-house design engineers, with detailing to BIM level 1.

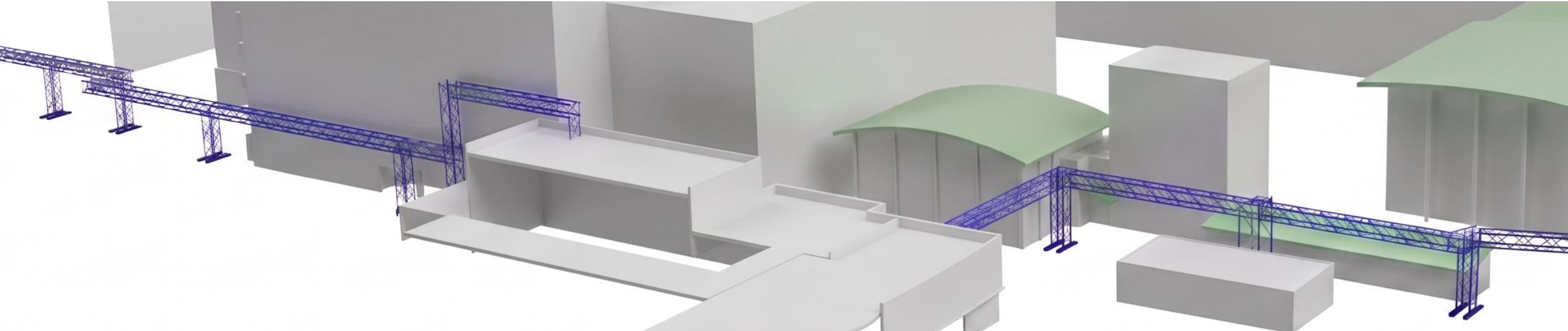
- Bridge sections – lattice & beam sections.
- Supports – lattice, UB and CHS options.
- Foundations – designed according to local GI and loads.
- Anti-climb options.



Hospital Sites

FLI has survey and design capabilities in-house, to route pipe bridges through complex sites such as hospitals (image: Southampton NHS Trust).

Screw pile foundations are quick to install, use no wet trades and are a concrete free solution. Screw Piles solve problems with traditional foundations, for example, bridging existing buried services. Installation is quiet and vibration free. Less plant is required as there is no cart away and smaller plant is used.



Screw Pile Foundations

Screw Piles & Steel interface Grillages:

- Quick to install. Saves time on works programme.
- No wet trades/concrete used, so no curing time.
- Simple installation on slopes / uneven ground.
- Compact foundations for constrained sites.
- Efficient installation. A single mobilisation to install foundations & erect the bridge, using less and smaller plant, helps provide a quick, easy, safe solution on site.



More Screw Pile Benefits:

- Compact option, useful for constrained sites.
- Can be installed through existing hard surfaces.
- Solutions can bridge existing services.
- No vibration close to existing structures.
- Low noise installation.
- Suitable for various ground conditions.



All Steel: Sustainable Foundations

All-Steel foundations combine Steel Piles with Steel Interface Grillages, replacing concrete. The embedded carbon in these lighter steel foundations that can be unscrewed and recycled, is significantly less than mass concrete. Making FLI's foundations the **sustainable solution** for your project.

FLI's steel foundations can provide an 70% saving in CO2 over concrete. Furthermore, with no spoil away, fewer HGVs, fewer days on site, and reduced mobilisations, there is a further 60% CO2 saving on installation.



Projects:

Southampton NHS Trust – Thermamech:

328m long, multi span, multi directional, multi sectioned pipe bridge, threading through existing hospital buildings.

Durham – Northeast Water – ESH Stantec JV:

114m long, multi-span, multi-directional, pipe bridge, installed on a sloping site, 100 year design life.

Pirbright Institute - Kier:

68m long, multi-span pipe bridge in industrial park, supporting steam, waste, fresh water and electrical services. (photo)

Cinderford - Severn Trent:

44m long pipe bridge, to replace decaying existing structure. 3 support columns and piled foundations.



Durham Pipe Bridge

Client: North East Water Contractor: ESH Stantec JV

Project Value: £835,000

Scope of Work: Design, supply and install of 114m long pipe bridge. Three 20m spatial lattice gantries and column superstructure on ten substructure frames and forty-two screw piles. 100 year design life.

Challenges:

Uneven, Sloped Terrain: The site was unsuitable for traditional concrete foundations due to its challenging topography.

Environmental Constraints: Working over a watercourse required minimising earthworks to comply with environmental regulations.

Complex Pipe Layout: The multi-directional pipe run added design and installation complexity within tight timescales.

Rural Location Logistics: Developing and executing lift plans in a remote area posed significant logistical challenges.



Case Study: Cinderford

Client: Severn Trent

44m long pipe bridge, to replace decaying existing structure. 3 support columns and piled foundations.

Photo:

Old pipe support with scaffold strengthening, next to FLI's replacement column and foundation.

Early contractor involvement helped with the design of a solution that made installation on a potentially challenging site, quicker, easier and safer.





Contact FLI

For your next Turnkey Pipe Bridge Project.
Visit www.fli.co.uk for more information.

Contact the FLI Sales team with details of your project, including location, pipe bridge length and ground conditions.

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