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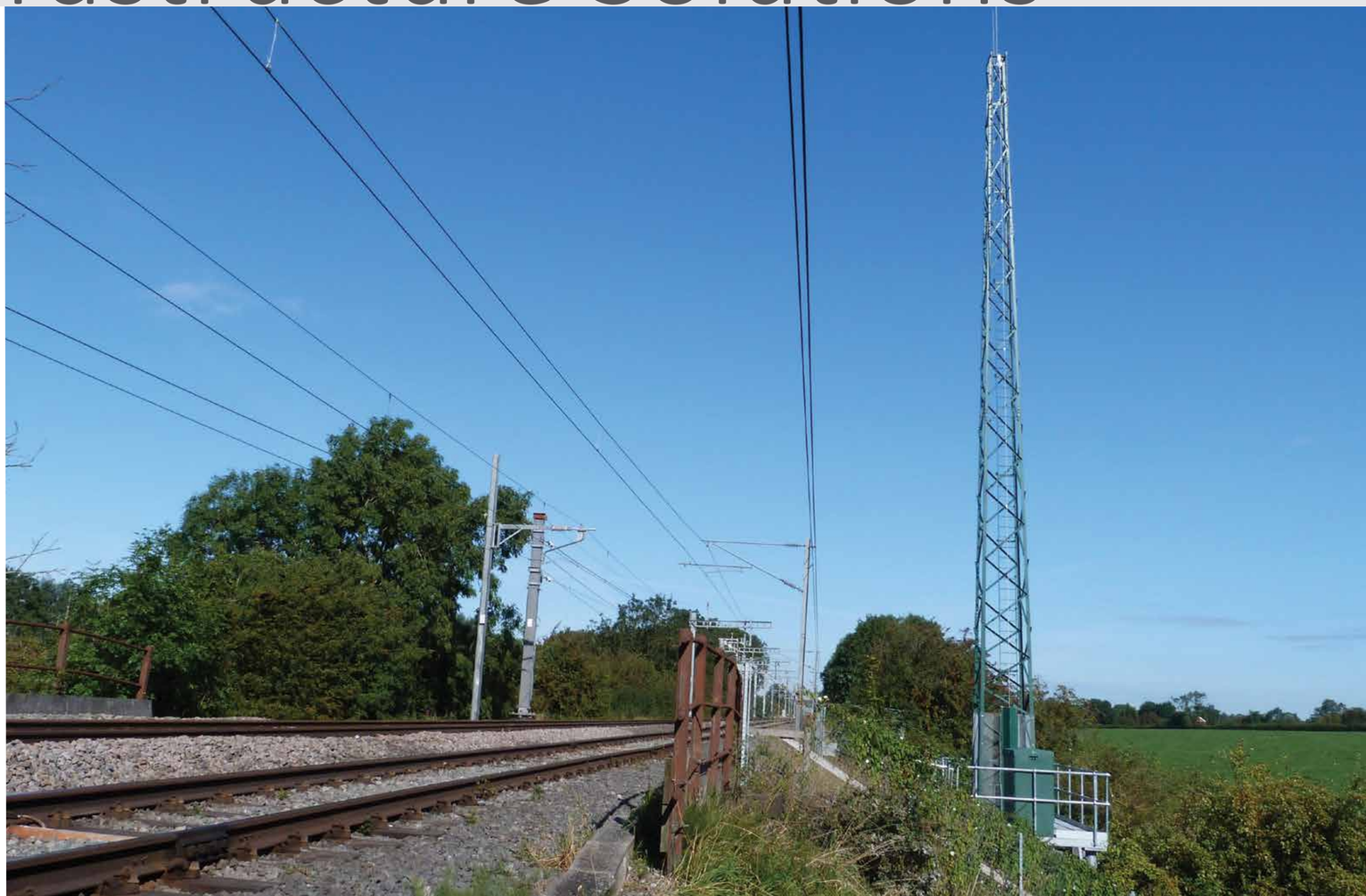
FLI structures

Rail Telecoms Infrastructure Solutions

- Lattice Towers
- Monopoles
- Hinged Poles
- Laydown Platforms
- Rapid Deployment Foundations
- Screw Piles



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FLI structures

5G Telecoms for Rail

High-capacity lattice towers & monopoles for 5G loading and multiple users are available.

The latest range of towers can be supplied with headframe options to suit your antenna loading criteria.

Integrating with RDS foundations, sites on embankments, in cuttings or on soft ground are feasible. FLI can provide the complete sub/super structure as a system, enabling quicker installation on the Rail.

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FLI structures

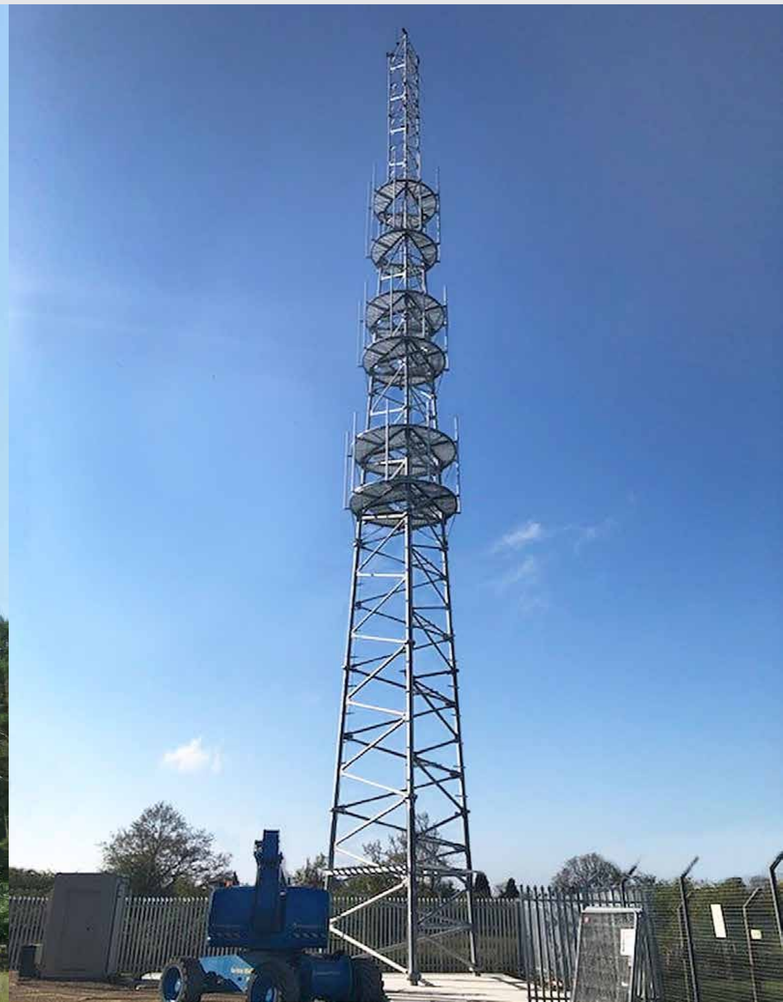
High Capacity Lattice Towers

ATS1300 Lattice Tower

Heights 15m to 50m, in 2.5m increments
Various headframe options
Widely used throughout the UK

T3A Heavy Duty Lattice Tower

Heights 15m to 50m, in 5m increments
Various headframe options
Used for higher load, altitudes or
wind speeds.



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FLI structures

GSM-r Infrastructure by FLI Structures

Over 2500 of FLI's lattice towers & monopoles form the backbone of the GSM-r network. With engineering expertise from a 70 year history in the telecoms sector, FLI own a catalogue of Network Rail PADs approved tower designs, as well as RDS foundations.

FLI structures

GSM-r Lattice Towers

Lattice towers installed on the rail network include:

ATS400 Lattice Tower – up to 40m
SLP3 Lattice Tower – up to 30m
SLP4 Lattice Tower – up to 40m

These structures can be supplied pre-assembled for faster site builds where access is good, or piece small for hand build where access is poor. These towers interface with FLI's Rapid deployment steel foundations.

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FLI structures

GSM-r Monopoles

Monopoles on the rail network include:

NR301 Monopole – 10m to 30m
NR302 Monopole – 10m to 30m
NR401 Hinged Monopole – 15m
NR402 Hinged Monopole – 20m

FLI provide the GSM-r network with fixed and hinged monopoles, which are suitable for concrete or Rapid Deployment foundations.

A range of high-capacity Monopole designs, are available for 5G antenna loads, for single or multiple users. Additionally, a range of headframes are available to suit your antenna loading criteria.

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FLI structures

Hand Build Monopoles

The ‘Rocket’ monopole is designed for rail sites where cranes are unable to access, so a hand build tower provides the solution. Once materials are on site the works can be carried out in green zone.

Installed using derrick lifting kits, monopole sections are lifted into place without a crane or the need for works during possessions.

FLI structures

Hinged Poles

Hinged poles & kentledge foundations support repeater or broadband antennas for Wi-Fi on trains.

Proven solution for repeater antennas on the GSM-r network.

Standard heights are 5m & 8m options. Other heights available upon request.

Low cost installation, working in green zone.
Hand buildable solution, no plant required.
Foundation options include kentledge & piles, all hand carry-able.

Laydown Platforms for Sloping Sites

Hinged pole & cabinet on platform at RIDC

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FLI structures

Rapid Deployment Foundations

Screw piles or pre-cast concrete with a steel interface grillage, enable quicker installation on the rail.

Suitable for embankments, cuttings or on soft ground, FLI can provide the complete sub/super structure as a system installation integrating efficiently with tower and cabinet for quick and simple deployment.

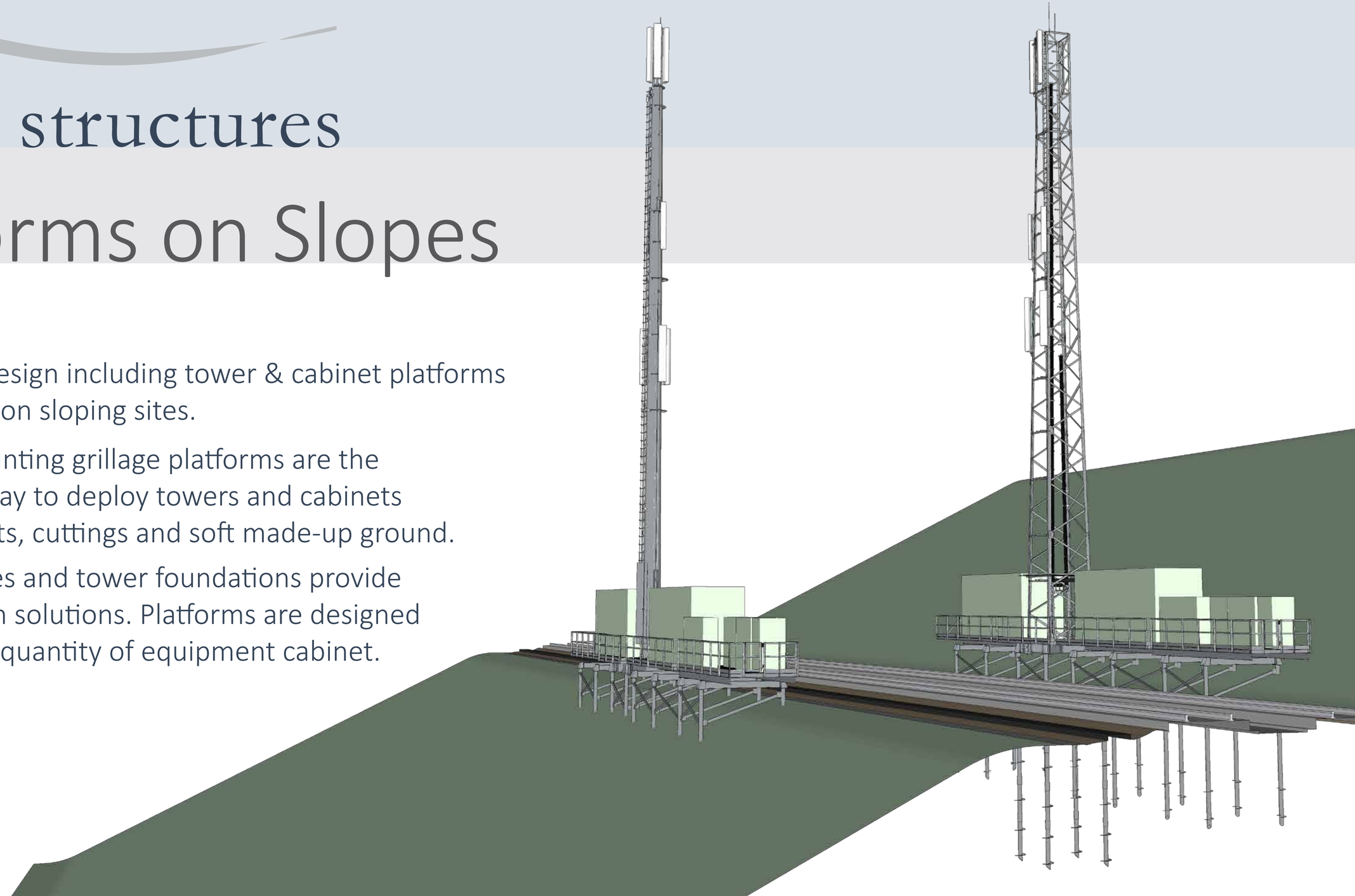
FLI structures

Platforms on Slopes

Complete site design including tower & cabinet platforms can be installed on sloping sites.

Screw piles mounting grillage platforms are the most efficient way to deploy towers and cabinets on embankments, cuttings and soft made-up ground.

Modular grillages and tower foundations provide rapid foundation solutions. Platforms are designed for any size and quantity of equipment cabinet.



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FLI structures

Screw Pile Foundations

Screw pile & grillage foundations can be installed in a single shift, using a small team, torque motor and an RRV.

These steel foundations are sustainable solutions that negate the need for concrete.

Quick to install, with no curing time, these foundations are ideally suited for sites with poor access, or are located on embankments or in cuttings.