



For Complete Security

Turnkey Civils Packages for Solar Farm & BESS Security

Civil infrastructure is the foundation of long-term security performance. Poorly executed groundworks can lead to structural failure, compromised system integrity and prolonged operational downtime. The quality of groundworks also determines how easily future repairs can be carried out and whether security systems can be expanded or upgraded as the site develops.

GBSG delivers complete civils packages designed specifically for solar farm and BESS security - ensuring compliant installation, accurate system integration and a single point of accountability from ground break to handover.

Security Civils Scope of Works

When civil works are handed to standard groundworks sub-contractors, critical failure points routinely emerge. Crushed ducting, incorrectly positioned poles causing earth-bonding issues, damaged inspection chambers and cabling concreted directly into foundations can all prevent future maintenance and compromise long-term system integrity.

The GBSG civils package is engineered to support secure, compliant installation of CCTV, access control, UPS systems, perimeter infrastructure and fire protection systems.

- **Site Survey & CAD Layouts:** Detailed CAD drawings showing trenching routes, ducting, pole foundations and cabinet locations.
- **Groundworks:** Trenching, ducting, manholes, concrete bases for small GRP buildings, UPS systems and main data cabinets.
- **Cable Installation:** Node box installation, radial circuit installation, connection to mains voltage supply and full testing.
- **CCTV Pole Installation:** Galvanised steel, GRP or timber poles selected according to site conditions.
- **Daily Reporting:** Photographic evidence and daily progress logs for complete oversight.

Engineering Standards

The GBSG groundworks package is engineered to ensure system integrity, streamline installation and protect project timelines.

Every site will have unique requirements, but our approach typically covers:

Specialist Trenching Approach

- Deployment of narrow-cut trenchers to produce controlled ducting channels with reduced lateral soil displacement. This mitigates compression from construction traffic, preventing ducting deformation that can obstruct fibre pulls, compromise segregation requirements or necessitate remedial excavation.
- The narrow trench walls hold 110mm flexible ducting perfectly straight.

Technical Installation Requirements

- SWA mains power directly buried alongside 110mm/63mm corrugated ducting for fibre/data.
- Minimum 3m separation from HV DC cabling.
- Cabling segregation in accordance with BS 6701 and BS EN 51074-2.

Structural Foundations & Futureproofing

- Heavy equipment, including small GRP buildings, primary UPS enclosures, control cabinets and generator backup systems, is mounted on an engineered concrete base with a minimum depth of 200mm to guarantee long-term load bearing and structural stability.
- Duct terminations in cabinets and junction boxes are sealed using expandable foam backed with a heavy-duty fire cement top layered. As standard expandable foam alone is vulnerable to rodent damage, fire cement layer provides a durable, vermin-resistant and moisture proof barrier that protects long-term system integrity.

Compliance Standards

All GBSG civils works comply with mandatory UK legislation and recognised engineering standards, including:

- Construction Design & Management (CDM) Regulations 2015
- Electricity at Work Regulations 1989
- Network & Information Systems (NIS) Regulations 2018
- Health and Safety at Work Act 1974

A Structured, Accountable Civils Service Built for Security Performance

	Elimination of Contractor Interface Risk	A single turnkey partner for groundworks and technology installation removes additional sub-contractor requirements and prevents misinterpretation of security designs, avoiding costly rework at installation stage.
	Working to Site Health & Safety Standards	Full RAMS compliance, safe excavation practices and documented daily reporting.
	Guaranteed System Integrity & Compliance	Specialist installation of ducting, inspection chambers and foundations aligned with security system design and monitoring standards.
	Complex Site Expertise	Proven delivery across challenging environments including capped landfill sites, complex ground conditions and high-voltage BESS compounds.
	Seamless Project Lifecycle Support	Integrated Rapid Deployment Security Towers protect assets before civil works begin, transitioning seamlessly into permanent, monitored perimeter infrastructure.
	End-to-End Accountable Management	Dedicated project management providing complete RAMS compliance, daily progress reporting and full timeline documentation.
	Protection of Construction Schedule & Commercial Margin	Civils works delivered in line with project milestones, preventing delays caused by rework, misinterpretation or multi-contractor dependency.

Partner with GBSG for complete Solar and BESS site protection.

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