TRITECH GROUND ENGINEERING
A E YATES GROUP

CASE STUDY

RESIDENTIAL DEVELOPMENT – ALSTON GRANGE

LONGRIDGE

Tritech Ground Engineering have successfully completed sectional-flight auger piling on a residential development.

CLIENT
TILIA HOMES

NUMBER OF PILES
43 SFA PILES AT 300MM DIAMETER

DEPTH
13M

Our pre-construction team were proactive and opted for sectional-flight auger piling over continuous-flight auger piling on this site for several reasons. Given that the site has already been built upon, the limited access and proximity to existing structures made SFA piling the preferred choice. With SFA, the auger flights are segmented, allowing for more precise control over the diameter and depth of the piles. This precision is particularly valuable when the project demands strict adherence to design specifications for pile dimensions. With precision and expertise, the team installed 43 SFA piles at 300mm diameter and reaching up to depths of 13m with a maximum safe working load of 350kN per pile. All piles were integrity tested which verified the strength and stability of each pile, providing our clients with peace of mind and confidence in their project's foundation.

The plant used on site was the Hutte 204 HBR rig which is a versatile and robust drilling rig, which is equipped with a powerful engine and an advanced hydraulic system. Connected to the rig via concrete hoses was a tracked agitator and concrete pump which TGE tend to use on all Restricted Access sites. At TGE we prioritise not only efficiency but also environmental responsibility. That's why, when selecting equipment for our projects, we prefer to opt for tracked concrete agitators and pumps over static alternatives which would require cranes or excavators to manoeuvre around site.

The site presented numerous challenges related to access and location, as it is situated adjacent to inhabited properties. Due to this we implemented vibration monitoring throughout the piling operations to ensure the safety and well-being of the residents in the nearby houses. Following the completion of the piling phase, our team transitioned into the installation of precast ground beams. Through careful consideration of factors such as soil composition, site conditions and project specifications, we tailored the design of the precast beams to meet the unique needs of the development. This bespoke approach allows us to deliver solutions that not only meet but exceed our clients' expectations.

At TGE, we believe that every detail matters, and our dedication to excellence extends to every aspect of the design and construction process. From concept to completion, we're committed to delivering superior results.