Suttle Projects' first job as Principal Contractor
Poole Quay, January 2017

# Company Portfolio

Suttle Projects

www.suttles.co.uk
**01929 439444**
38-40 Sterte Avenue
West, Poole, BH15 2AR

# Welcome.

**Suttle Projects**, based in Dorset, has been completing inshore marine and earthworks projects since its inception in 2008.

Through **Suttle Piling** we developed the capability to complete CFA piling and sheet piling. Other augered and driven piling systems, such as screw piles, marine timber piles, and kingpost wall solutions are also offered.

From the beginning, we have sought more technically challenging works to establish capability and stimulate our motivated and enthusiastic staff.

Typical of this approach has been our development of the **Little Mermaid** underwater excavator to tackle confined spaces and submerged, restricted access environments. We seek to work on Britain's railway infrastructure, in particular establishing ourselves as the leading scour protection installation contractor in southern England. To enhance this capability, we have invested in our own modular pontoon systems.

Importantly, we have an in-house team of design engineers that turn around technical designs at very short notice and under our own control. This will range from embedded retaining wall designs to marine stability calculations, and together with our unrivaled access to rock quarries, has led to a formidable reputation for dealing with railway emergency landslips and highly technical work packages.

Directors Joe Paine and Ali Maidman, after taking delivery of a Casagrande B125 piling rig, August 2016

Suttle Piling offers a UK-wide full range of piling techniques supported by our in-house design capability.

This means we can give an impartial view on the economical solution for your project, selecting from our capabilities in driven and augered piling. We install sheet piling, timber piling, secant walls, contiguous pile walls, CFA bearing piles, kingpost piling, screw piling and bottom-driven steel tubing.

We operate Movax equipment, silent piling rigs, leader rigs, as well as Klemm and Casagrande CFA and restricted access segmental flight auger equipment. We ensure good concrete supply to meet programs by running our own concrete mixer lorry provision.

**Kingpost Piling**
**Case Study:** Gatwick Airport
Kingpost Piling for Juliet Bund

**Client – Dyer and Butler**

**Project duration – 8 weeks**

**When – Feburary 2015**

Kingpost piles make use of structural UC or UB sections that can either be driven or cast into the ground using CFA piling equipment.

Kingposts are typically spaced at 2.5m centre spacings to accommodate either timber sleepers or precast concrete plank infills.

Kingpost piling is an economical solution for temporary excavations and is particularly useful for installation from the excavated level.

**Overview.**

Our kingpost piling expertise was called on for a taxiway widening scheme at Gatwick Airport.

Alongside the Juliet taxiway, the Juliet Bund – which suppresses the noise made by planes in the area – had to be cut back to accommodate the increased wingspan of the Airbus A380.

Projects installed a concrete wall of 69 kingposts and navigated substantial operational difficulties, including having to stop working while planes in the vicinity passed.

A Klemm 709 was used to open-bore holes for steel kingposts that were inserted into concrete with a Movax SP70. They weighed up to 1.5 tonnes each and were up to 11.5m long.

Projects also supplied and installed 420m2 of pre-cast concrete panels.

**Secant Piling**
**Case Study:** Woodlands Burial Ground, Lytchett Matravers

**Customer – Glossbrook**

**Project Duration – 5 weeks**

**When – January 2016**

Similar to contiguous piling, secant piling employs cast-in-situ concrete piles to form retaining walls for excavation support, but where the ground water table level is known to be above the excavation depth.

Piles are interlocked by 150mm to ensure a watertight construction. Primary piles are installed first using a low strength concrete, followed by secondary piles cut into the primary piles and cast in a structural concrete and reinforced with steel bars or structural steel sections. A temporary guidewall is required to ensure tolerance is limited.

**Overview.**

Woodlands Burial Ground is a natural woodland cemetery. After deciding to construct a crematorium in their grounds, which has a high water table in the area, Suttle Projects was tasked with creating a water-tight seal with secant piling to enable the construction of a basement.

The pile wall was made up of female and male piles. To install the piles, a RTG 19T with auger and casing attachments was used, and the piles were filled with concrete injection. The female piles were installed using a soft concrete mix. The male piles were then installed by penetrating the edges of the female piles and filling them with a harder concrete mix. This was followed by the insertion of a reinforcement cage using a crawler crane.

Suttle Projects were also contracted to install bearing piles for structural support of the crematorium. The RTG 19 T and Klemm 709 were used for this, using auger with concrete injection to install the piles.

**Contiguous Piling**
**Case Study:** Lilliput Road
Property Development

**Customer – Glossbrook**

**Contract – Lilliput Road**

**When – Autumn 2015**

A sequence of closely spaced bored cast-in-situ concrete piles are used to form retaining walls for excavation support where the ground water table level is known to be below the excavation depth.

The process involves a CFA pile boring rig to form piles in a sequence that ensures bore stability. Piles are reinforced with full depth steel cages that are plunged into the wet concrete pile. Piles are typically spaced with a 100mm clear spacing.

Our fleet of CFA rigs can cast piles from 300mm diameter to 800mm diameter and up to 23m deep.

**Overview.**

Glossbrook were replacing four bungalows with flats, including basements to maximise the plot size. Suttles were brought in to provide bulk excavation, taking away materials from the site. Suttle Projects designed and installed contiguous retaining piles to allow the excavation.

**Why Glossbrook Chose Suttles:** "We have worked with Suttles on several projects. Not only do they install piling, they do the design work, too."

**On the job:** "The challenge with this project was that we needed to support an 8 metre deep excavation adjacent to a high bank. Suttle Projects came up with a suitable design to allow the excavation. Their qualified chartered engineer provides an excellent service."

**Testimonial:** "Their service provided is second-to-none. They are very easy and professional to work with."

— Dave Escott, Glossbrook

**Driven Piling**
**Case Study:** Shelter Hall, Brighton - Seafront Revamp

**Customer – CJ Thorne**

**Project duration – 3 weeks**

**When – October 2015**


The sheet pile installation process can be executed in three ways:

Impact driving; a traditional method that involves dropping a weight vertically onto the top of the pile.

Vibration; Effective in granular soils, high frequency vibration is used to excite, or liquefy the surrounding particles to assist pushing the pile into the ground

Pile pressing; also known as silent piling, involves a hydraulic machine that uses the reaction force from between 3 & 5 piles installed previously to push the successive pile into the ground. The press then 'walks' along the top of the sheet piles once installed to continue the process.



**Overview:**

Suttle Projects played a key role in an ongoing scheme to revamp a historic section of Brighton's seafront.

Suttles' piling expertise was called on by CJ Thorne to help reinforce part of the iconic beach promenade to enable the construction of a new walkway over a larger area.

More than 62m linear metres of sheet piling was driven with specialist silent piling equipment in order to reduce the future effects of erosion on the new infrastructure.

A Giken Japanese-type silent piler was used for the task of driving in the sheets. This machinery uses hydraulic pressure – a different technique to more conventional piling installation. This method prevented structural damage to the nearby Shelter Hall (built in the 1880s), which since 2013 has been undergoing extensive renovation.

**Equipment:**

Our team used four pieces of plant equipment for the job – an RTG RG16T telescopic leader rig, with drilling attachment (to loosen the ground), a Giken silent piler (to drive in the sheets), a 50-tonne crawler crane, and a Movax side grip rig (to lift and move the piles into place). The Movax proved critical in allowing work to proceed through a period of adverse weather, when the crane could not be deployed. The piled retaining wall was 94nr Arcelor-type AZ26-700 section steel sheet piles.

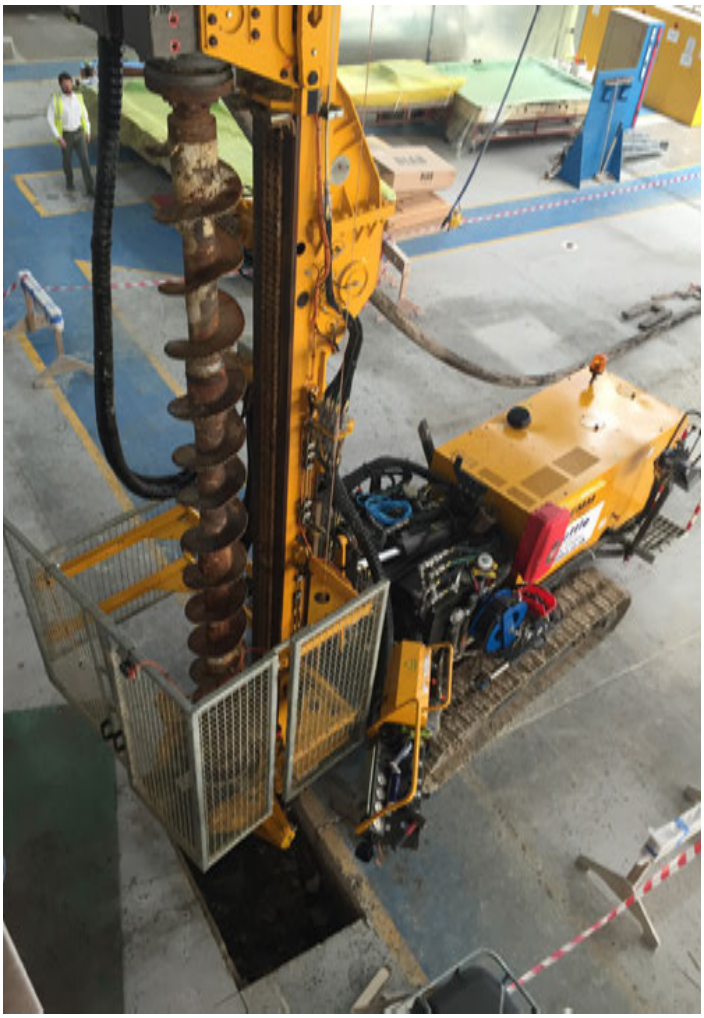
**Plant Profiles**
Casagrande B125 /
Concrete Pumping Setup


(L-R) A Casangrande B125 was used at Wimbledon Train-care Depot as a deep foundation solution was needed


Also at Wimbledon, our in-house concrete pumping setup was used to meet the critical timings involved in the piling work

**Plant Profiles**
Klemm Kr709-2 /
Klemm Kr708-2


(L-R) A Klemm 709 was used at Canford Cliffs, Poole, to build a retaining wall solution for a basement



(L-R) A Klemm 708 was used to reinforce the ground for increased loading by a gantry crane at Sunseeker's depot at Osprey Quay, Portland

**Plant Profiles**
Movax SP70F4 /
Movax SG30



(L-R) 11m PU28 piles were installed by a Movax SP70F4 at Bexley College


A Movax SG30 was used to install a temporary cofferdam at River Loddon

Our Movax ML15 was used as part of a scour protection scheme at River Mole, near Epsom, in Surrey

(L-R) Our Movax DH20 was used to drive in piles at the Hitachi train service depot at Stoke Gifford

**Plant Profile**
Little Mermaid

Our unique and highly innovative Little Mermaid underwater hydraulic excavator can be viewed online at: www.youtube.com/watch?v=4NL6M41mURg


**Plant Profile**
RTG RG16T Leader Rig /
Giken


(L-R) An RTG RG16T was used at Gravel Hill, Poole for inserting sheet pilings to reinforce the carriageway


(L-R) A Giken silent piling rig was used to ensure minimal vibration during works at Shelter Hall, Brighton