Welcome to the second webinar in the series
OFF SITE MANUFACTURE, ON SITE PILING

www.roger-bullivant.co.uk

Info@roger-bullivant.co.uk

0845 838 1801

@rogerbullivantlimited

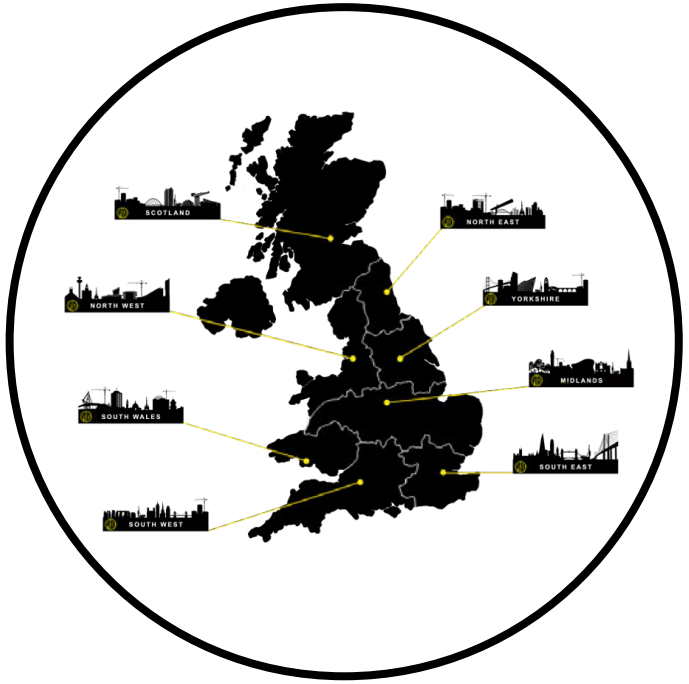
Construction Phase – Manufacturing the foundations offsite and installation of piles

Jamie Brotherhood
Manufacturing Supervisor

Matt Walpole MEng MBA CEng MICE
Area Manager – South East

About


ROGER BULLIVANT
DAF


SCOTLAND
NORTH EAST
NORTH WEST
YORKSHIRE
MIDLANDS
SOUTH WALES
SOUTH EAST
SOUTH WEST

01

Manufacturing the foundations off site

Jamie Brotherhood
Manufacturing Supervisor

The Facility

Roger Bullivant moved to its current location in **Swadlincote** in 2016 with the capability to produce Pre Cast Piles and RBeam on fully automated machinery.

Piles and Beams:

- 200mm - 250mm - 300mm Precast Concrete Piles
- 2m – 6m segmental lengths
- Ground beams, tie beams, RBeam and pile caps

The Batch

- 630 tonnes of concrete produced per day consisting of:-
- 6 lorry loads of sand
- 10 lorry loads of gravel
- 4 lorry loads of cement
- 900L of concrete additive

The Machinery

Quadra Difal – 2m, 3m and 4m pile sections
- 210 moulds produced per day
- Around 2,500m of pile per day

Quadra Optimal – 6m piles and RBeam
- 35 moulds produced per day
- Around 790m of pile per day
- 44 RBeam moulds produced per day
- Around 253m of RBeam per day

The Yard

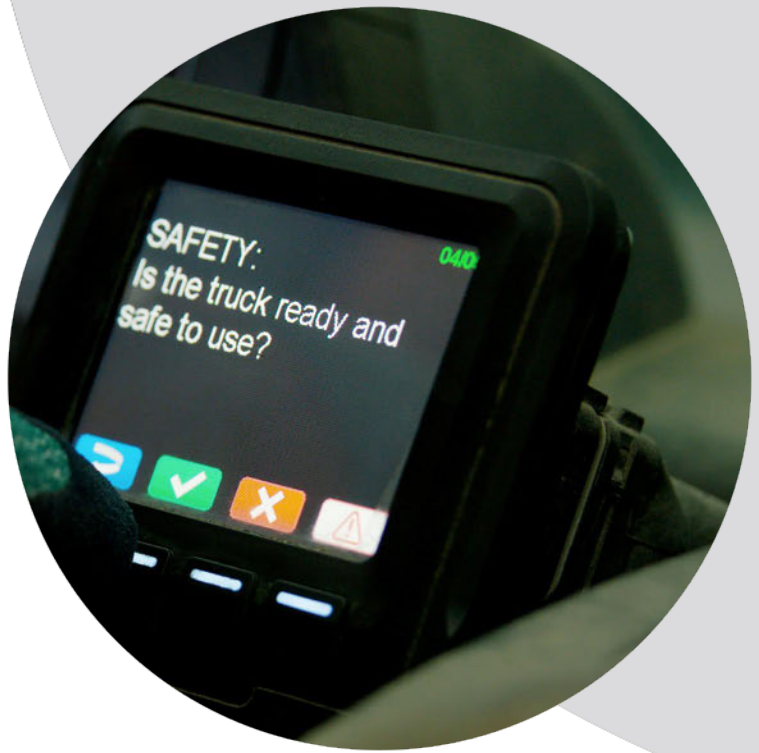
- Holds 120,000m of Pile product
- 14,000m Beam product

Quality Control

- Samples of concrete are taken from product moulds And tested onsite in our test room
- Piles have a 14 day cure time and Beams have a 7 day Cure time before being released to site

Sustainability

- Electric forklift and combi trucks
- Solar panels on factory roof
- Upgraded air compressors



Manufacturing Video

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On Site Installation

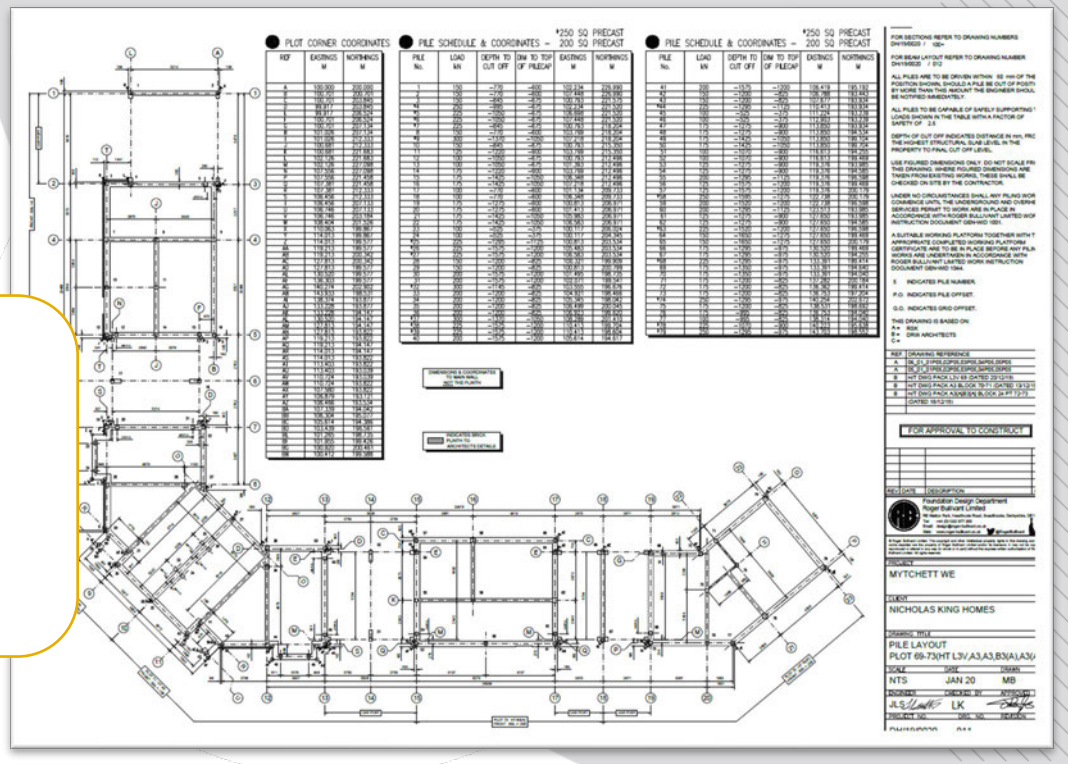
Matt Walpole
South East Area Manager

From Design to Reality

Design Development

Pile Layout and Loadings

Pile Design and Driving Criteria



Pre commencement:

- Pre-start meeting
- Site Access
- Project Specific Constraints
- Safe Systems of Work
- Approval of designs
- Permits required

Site Mobilisation:

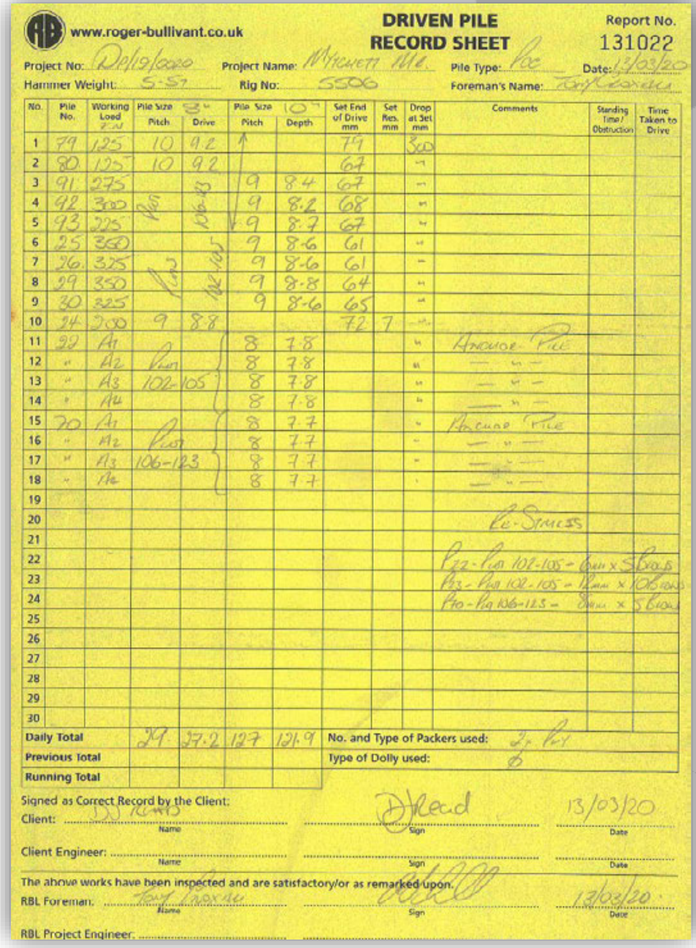
- Rig movements by internal haulage
- Flexibility to suit project constraints
- Self Erecting Rigs
- Delivery of product
- Setting out of piles

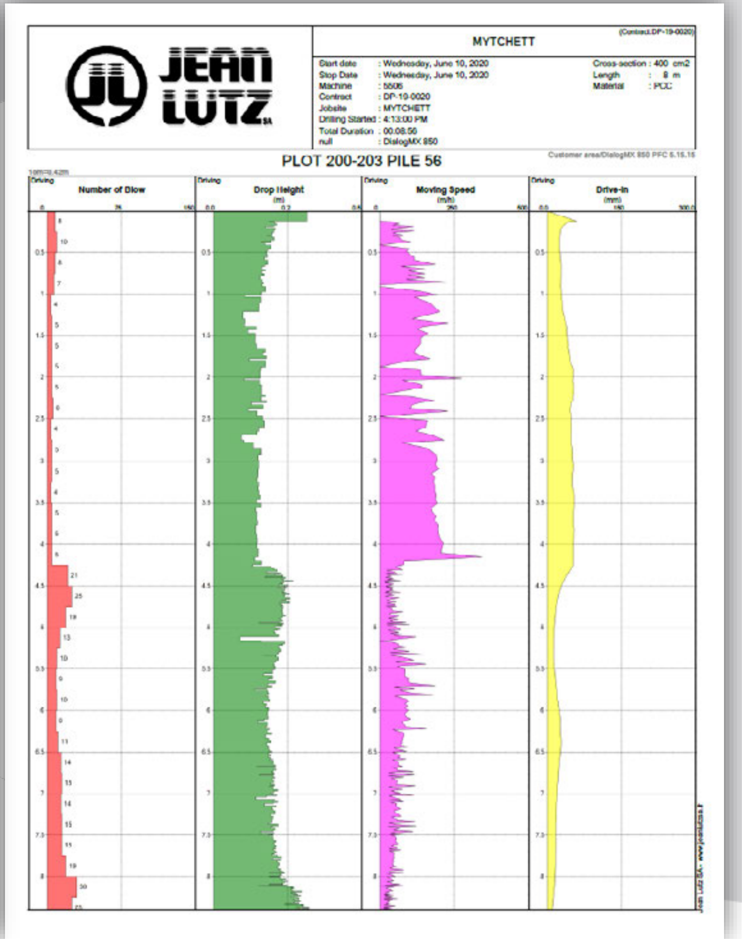
Installation of Piles – The Process

- Setting up on pile position
- Moving product to the pile position
- Driving segmental sections
- Achieve required set (or depth)

Installation of Piles – Quality Control

- Pile logs
- Digital pile driving records
- Positional as-built of piles
- Check driving resistance





Validation Testing - Dynamic

- Carried out typically on 3% of piles
- Short duration test
- Predicts pile capacity

Validation Testing - Static

- Tested to 1.5 x SWL
- Application of actual load
- Undertaken on 1% of Piles
- Requires sacrificial anchors
- Typical 24hr test duration

Site Installation Video

Thank you for listening. We will now do the Q&A, followed by a short questionnaire.

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