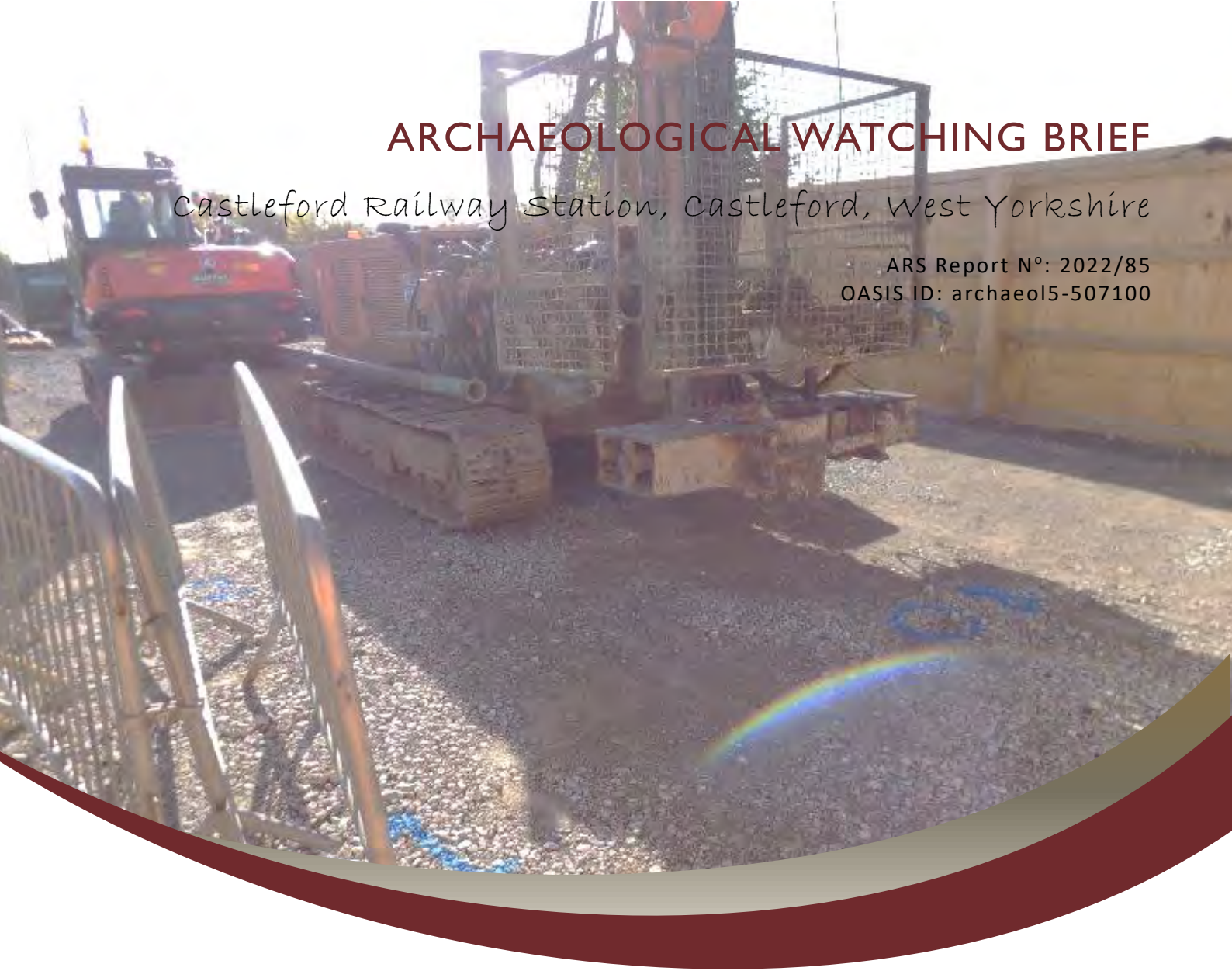


# ARCHAEOLOGICAL WATCHING BRIEF

Castleford Railway Station, Castleford, West Yorkshire

ARS Report N°: 2022/85  
OASIS ID: archaeol5-507100



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# An Archaeological Watching Brief at Castleford Railway Station, Castleford, West Yorkshire

ARS LTD REPORT 2022/85



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**Prepared on behalf of:** Murphy Group Ltd  
**Date of compilation:** 5/27/2022  
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**Approved for issue by:** Dr. Rebecca Trow ACIfA  
**Planning Reference:** 21/02407/PAO  
**Local Authority:** Wakefield Metropolitan District Council  
**Site central NGR:** SE 42109 25091  
**OASIS ID:** archaeol5-507100

## EXECUTIVE SUMMARY

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|                             |   |
|-----------------------------|---|
| <b>Project Name:</b>        | Castleford Railway Station  |
| <b>Site Code:</b>           | CRS22   |
| <b>Planning Authority:</b>  | Wakefield Metropolitan District Council   |
| <b>Planning Reference:</b>  | 21/02407/PAO  |
| <b>Location:</b>            | Beancroft Road, Castleford WF10 5DN   |
| <b>Parish:</b>              | Castleford  |
| <b>Hard Geology:</b>        | Pennine Middle Coal Measures formation consisting of mudstone, siltstone and sandstone. |
| <b>Superficial Geology:</b> | None recorded   |
| <b>Soil Type:</b>           | Slowly permeable seasonally wet acid loamy and clayey soils                             |
| <b>NGR:</b>                 | Centred SE 42660 25500  |
| <b>Date of Fieldwork:</b>   | 18 <sup>th</sup> to 24 <sup>th</sup> May 2022   |
| <b>Date of Report:</b>      | 27/05/2022  |

An archaeological watching brief was undertaken at Castleford Railway Station by Archaeological Research Services Ltd (ARS Ltd) on behalf of Murphy Group Ltd during May 2022. The purpose of the watching brief was to record any archaeological evidence that came to light during the placing of piles for a new pedestrian footbridge using the bore cast in situ technique.

Archaeological Research Services Ltd was contracted by Murphy Group Ltd to undertake a watching brief during the piling works (bore cast *in situ*), on Platform 1 and Platform 2 at Castleford Railway Station, Castleford, West Yorkshire as part fulfilment of conditioned planning permission.

The works on Platform 1 revealed an area of made up ground between 2.0m and 2.5m in depth composed at least in part of a layer of demolition debris. Only Piles 17 and 16 did not include evidence of demolition material in the form of brick debris, which may be accounted for by the known presence from historical mapping of areas on the platform that were used for planting.

As part of the ground investigation process for determining the suitability of piles positions on Platform 2, 1.2m trial holes were dug and these revealed the presence of the massive brick wall and foundation that supported the previous footbridge. This was subsequently grubbed out and the area backfilled with 140t of type 1 granular material, prior to commencement of piling.

# CONTENTS

---

|     |   |    |
|-----|---|----|
| 1   | Introduction .....  | 1  |
| 1.1 | Background and Scope of Work .....  | 1  |
| 1.2 | Site Location .....   | 1  |
| 1.3 | Site Description .....  | 2  |
| 1.4 | Geology and Soils .....   | 2  |
| 1.5 | Archaeological and Historical Background .....  | 2  |
| 2   | Aims And Objectives .....   | 5  |
| 2.1 | Research Aims and Objectives .....  | 5  |
| 2.2 | Watching Brief Aims and Objectives .....  | 5  |
| 3   | Method Statement.....   | 5  |
| 3.1 | Method .....  | 5  |
| 3.2 | Professional Standards .....  | 5  |
| 3.3 | Health and Safety .....   | 5  |
| 4   | Results.....  | 6  |
| 4.1 | Recording.....  | 6  |
| 4.2 | Site Taphonomy and Condition of Preservation .....  | 6  |
| 4.3 | Results .....   | 7  |
| 5   | Discussion.....   | 8  |
| 6   | Publicity, Confidentiality and Copyright .....  | 9  |
| 7   | Statement of Indemnity .....  | 9  |
| 8   | Archive .....   | 9  |
| 9   | Acknowledgements.....   | 9  |
| 10  | References.....   | 10 |
|     | APPENDIX I Context Description Table .....  | 11 |
|     | APPENDIX II Oasis Form .....  | 13 |
|     | APPENDIX III Specification For Archaeological Watching Brief At Castleford Railway Station..... | 15 |
|     | APPENDIX IV Piling Logs.....  | 25 |

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## LIST OF FIGURES

---

|   |   |
|---|---|
| Figure 1. Site location. ....   | 3 |
| Figure 2. Pile location plan.....   | 4 |
| Figure 3. Overview of Castleford Railway Station from Platform 1, looking west towards disused signal box ..... | 6 |
| Figure 4. Platform 2, overview of watching brief area piling mat, looking east.....                             | 7 |
| Figure 5. Piling in progress on Platform 1, looking west .....  | 7 |

## LIST OF TABLES.

---

|                                    |   |
|------------------------------------|---|
| Table 1. Finds quantification..... | 8 |
|------------------------------------|---|

# I INTRODUCTION

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## 1.1 Background and Scope of Work

1.1.1 A planning application 21/02407/PAO was submitted by Network Rail for the installation of a new footbridge and reinstatement of Platform 2 and prior approval planning permission was granted by Wakefield Metropolitan District Council. The archaeological condition (condition 1) of the planning consent required that:

*Prior Approval is granted for the development in accordance with the plans and specifications detailed below, and subject to the following condition(s) (if any):*

*1. Development shall not commence within the area indicated by the red line on the submitted location plan until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological recording. This recording must be carried out by an appropriately qualified and experienced archaeological consultant or organisation, in accordance with a written scheme of investigation which shall first be submitted to the Local Planning Authority for their approval in writing.*

*Reason: A pre-commencement condition is required to ensure the proposal does not disturb or destroy features of archaeological interest in accordance with Policy D17 in the Local Plan and guidance contained in the NPPF.*

1.1.2 Archaeological Research Services Ltd (ARS Ltd) was commissioned by Murphy Group Ltd (part of the Alliance awarded the Transpennine Route Upgrade East works) to undertake a watching brief at Castleford Railway Station, Beancroft Road, Castleford WF10 5DN (Figure 1), centred at NGR SE 42660 25500.

1.1.3 No previous archaeological fieldwork is known to have been carried out at the Railway Station itself, however a number of evaluations, excavations and finds have been recorded within a 500m radius of the station on the West Yorkshire Historic Environment Record (HER) (MWY 1536, MWY 2220, MWY 3197, MWY 14811, MWY 14815, MWY 14816, and MWY 14815).

1.1.4 The watching brief comprised the continuous archaeological monitoring of the boring stage works of the placement of 30 cast in place reinforced concrete piles

1.1.5 Works were undertaken in accordance with the *Archaeological Watching Brief Specification* issued by the West Yorkshire Archaeology Advisory Service (WYAAS) (See Appendix III) and took place between 18<sup>th</sup> and 24<sup>th</sup> May 2022. David Hunter, Senior Archaeologist at WYAAS, was kept informed of the progress of works throughout.

## 1.2 Site Location

1.2.1 The development area boundary is indicated in red on Figure 1. The site is located in the town of Castleford, the railway line with which it is associated acting as a demarcation between the town's retail and commercial area to the north and the late Victorian domestic dwellings to the south. The western boundary of the station consists of a late Victorian subway underground passage. The site is roughly centred on NGR SE 42660 25500.

### 1.3 Site Description

1.3.1 At the time of writing the site was occupied by the current Castleford Railway Station, comprising two platforms, the southernmost of which, Platform 2, has been out of use for a number of years and is due to be reopened as part of the current development. The western boundary of the station consists of a late Victorian subway underground passage, which historical mapping shows replaced a continuation of Beanfield Road, which follows the line of the Roman Road (Margary 1967). The eastern boundary is formed by the railway bridge that spans Station Road. The Station is positioned on a gentle slope at an approximate height of 20m above Ordnance Datum (aOD), with the ground falling gradually to the north and gently rising to the south.

### 1.4 Geology and Soils

1.4.1 The underlying solid geology of the PDA consists of Pennine Middle Coal Measures formation consisting of mudstone, siltstone and sandstone (BGS 2022). No superficial geology is recorded for the site (BGS 2022), but that observed on site comprised a deposit of a firm to stiff yellowish grey clay.

1.4.2 The soils of the PDA are classified as slowly permeable seasonally wet acid loamy and clayey soils (Soilscape 2022).

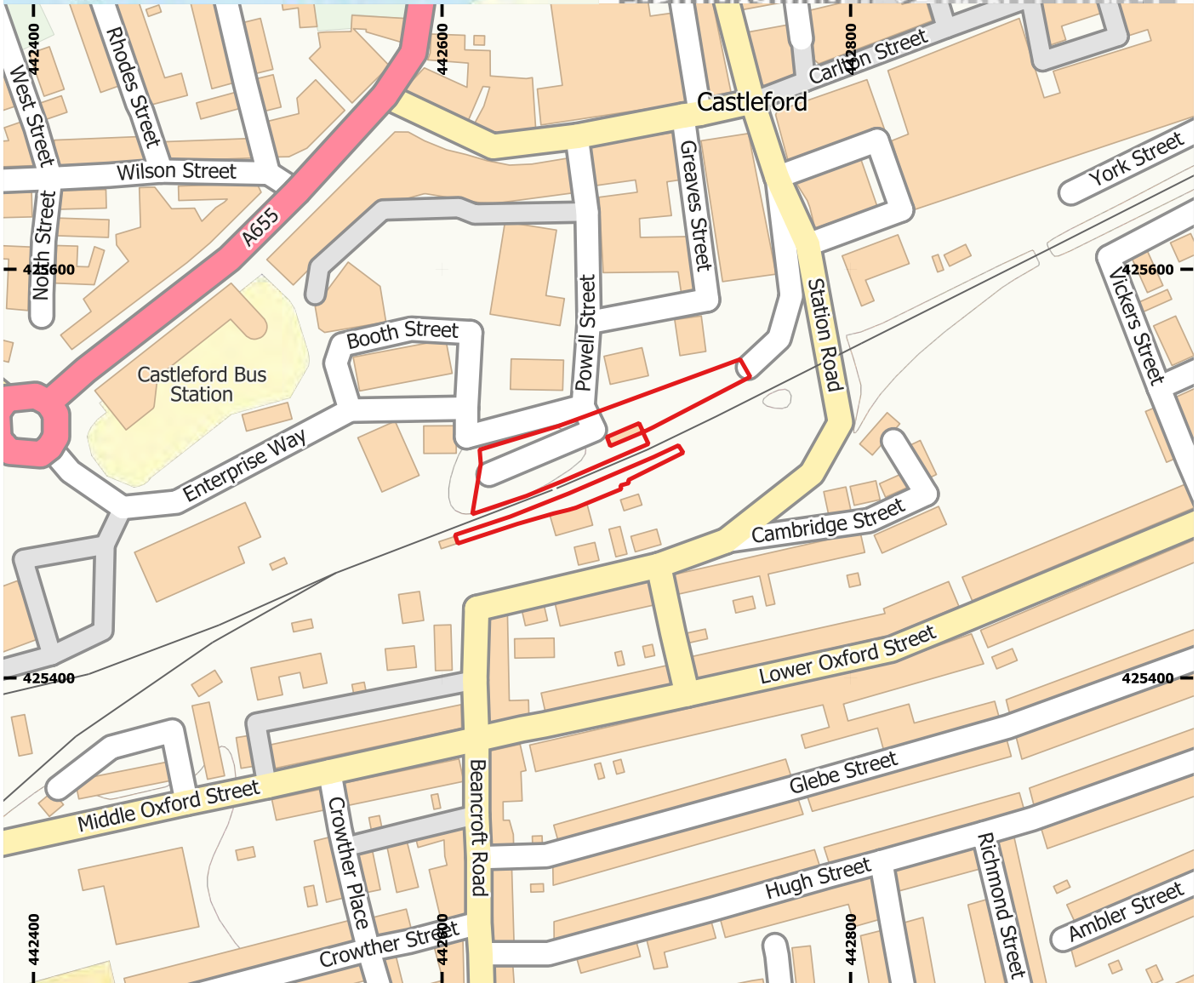
### 1.5 Archaeological and Historical Background

1.5.1 The archaeological and historical background for the site is contained in section 2 of the *Archaeological Watching Brief Specification* contained in Appendix III and is summarised here for the ease of the reader.

1.5.2 There is scant evidence of prehistoric activity in the Castleford area, what is known is limited to chance finds of residual flint artefacts and potential Neolithic pottery. Most likely the land ridge adjacent to the River Aire, where Castleford now lies, was used for seasonal hunting from the Mesolithic onwards. A potential Iron Age finger ring was found during excavations at the Station hotel, around 40m to the north-west of the current station building.

1.5.3 The Roman road, “the Great North Road” or “Ermine Street” running between Doncaster and Tadcaster ran through the town and its course is respected by Beancroft Lane and Welbeck Street (Margary 1967). There were two Roman forts located on the eastern side of what is now Church Street (c.200m to the north of the site) and the associated *vicus* was partially excavated by ARS Ltd. in 2014 (Lotherington 2015). Occupation declined following the end of military occupation c.AD 100 but a new defended civilian settlement appears to have developed from c.AD 250 to c. AD 400. Inscriptions from Roman milestones suggest that this settlement served as a regional administrative centre.

1.5.4 The village appears to have continued as a small settlement through Anglo-Saxon and into Medieval times. By the 19<sup>th</sup> century, it was a thriving industrial town, having local coal mines as well as other industries like pottery and glassworks. Part of one such glassworks was excavated by ARS Ltd. in 2014 (Lotherington 2015). The railway line is known to have been operational from 1840, when the first station at Castleford was opened and situated approximately 400m to the west of the current station. The current station was opened in 1870 and has remained in use ever since. Historical photographs of the station show that there were formerly more buildings on the platforms but these were demolished during the 20<sup>th</sup> century.



Site name: Castleford Railway Station  
 Date: May 2022  
 Drawn by: RLT  
 Scale: Varies

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**Figure 1:**  
**Site location**



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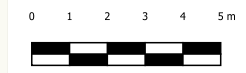
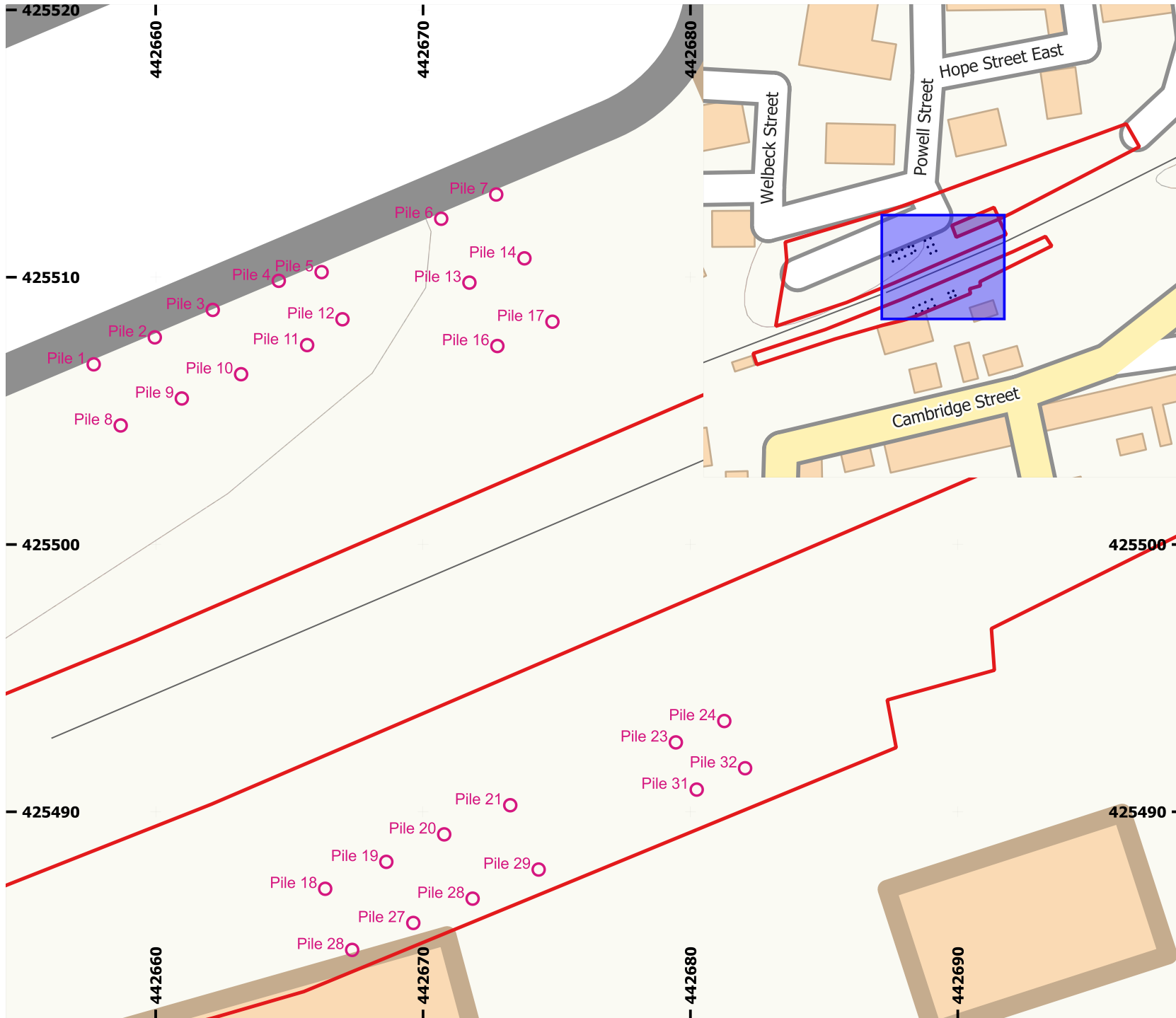
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Figure 2: Pile Location Plan



Site name: Castleford Railway Station  
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Scale: 1:200 @ A4; 1:2000: A4

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## 2 AIMS AND OBJECTIVES

---

### 2.1 Research Aims and Objectives

2.1.1 The aims and objectives of the archaeological watching brief are set out in the *Specification for Archaeological Watching Brief at Castleford Railway Station, Beancroft Road, Castleford, West Yorkshire* (see Appendix III) as below.

2.1.2 Relevant research topics identified in the *Specification For Archaeological Watching Brief At Castleford Railway Station, Beancroft Road, Castleford, West Yorkshire* include:

- ◆ There is potential for further significant evidence and extent of the Roman occupation at Castleford may be uncovered during construction of a new pedestrian bridge at Castleford Station.
- ◆ Evidence of earlier phases of railway use should also be recorded.

### 2.2 Watching Brief Aims and Objectives

2.2.1 The objective of the watching brief was to ensure that any archaeological remains encountered during the course of the ground works were not destroyed without first being recorded and interpreted. To this end, the removal of spoil from each pile was visibly monitored during the boring process and the arisings re-scanned once placed on the spoil heap.

## 3 METHOD STATEMENT

---

### 3.1 Method

3.1.1 The methodology for the watching brief is set out in detail in the *Specification For Archaeological Watching Brief At Castleford Railway Station, Beancroft Road, Castleford, West Yorkshire* (Hunter 2022 & Appendix III). The watching brief involved archaeological supervision of all the boring/coring works associated with the cast in situ concrete piles placed on Platform 1 and Platform 2, the coring/boring was continuously monitored until the auger reached a depth at which the natural underlying subsoil was breached and identified in the arisings reaching the piling mat level. Any archaeological deposits so observed were recorded and finds recovered. All spoil was scanned with metal detector for maximum finds retrieval.

### 3.2 Professional Standards

3.2.1 The archaeological fieldwork was undertaken in accordance with the Chartered Institute for Archaeologists (CIfA) *Code of Conduct* (2021) and *Standard and Guidance for an Archaeological Watching Brief* (2020a).

### 3.3 Health and Safety

3.3.1 All works were undertaken in full compliance with the Health and Safety at Work Act 1974 and with the Management of Health and Safety Regulations 1992.

3.3.2 A risk assessment (RA No. 029/22/B) was produced before commencement of the work and was adhered to throughout the course of the fieldwork.

## 4 RESULTS

---

### 4.1 Recording

4.1.1 An overall plan of the watching brief area and pile locations is presented in Figure 2. A context description table is contained in Appendix III and summary text description is presented below. Digital photographs of the watching brief results are included in this section for illustrative purposes. Additional digital photographs are contained in the project archive.

### 4.2 Site Taphonomy and Condition of Preservation

4.2.1 The site (Figure 3) comprised an area that in the case of Platform 1 forms part of the existing car park and railway platform; the area of Platform 2 is currently a redundant rail platform that has been out of use for a number of years.



Figure 3. Overview of Castleford Railway Station from Platform 1, looking west towards disused signal box

4.2.2 As part of the preparation process for piling works it is usual for 1.2m trial pits to be excavated for each proposed pile cap this is standard practice designed to identify and remove any near surface obstructions that might adversely affect pile placement. On Platform 1 the area chosen for piling represented an area where historical maps indicate a gap existed within the previous railway station buildings. Therefore all that was required in this area in terms of preparation was the placing of a 0.4m layer of type 1 granular material to provide a stable platform for the piling rig to operate from.

4.2.3 On Platform 2, the area chosen for piling corresponded with the same position of the massive brick wall and footings that supported the previous pedestrian footbridge. When these remains were encountered within the trial pit the works were expanded to allow their complete removal, this resulted in a hole being created that required 140t of granular material to backfill (Figure 4). The situation on Platform 2 was further complicated by the fact that the builder's yard

immediately to the south of the platform is significantly lower than the existing platform level. Consequently, the boring that occurred in this area was in an already disturbed area.



Figure 4. Platform 2, overview of watching brief area piling mat, looking east

### 4.3 Results

4.3.1 No features of archaeological significance were encountered during the watching brief on the pile works.



Figure 5. Piling in progress on Platform 1, looking west

4.3.2 The piling mat/granular imported material (001) and (020) consisted of an MOT type 1 crushed subbase aggregate (Figure 4 & 5). Made up ground was recorded to a depth of between 2.0m and 3.0m below the pile mat level. Although largely of a similar consistency and nature the made up ground deposits from each of the piles were given separate context numbers. Where the natural substrate deposit, (003) and (023), was encountered it comprised a firm to stiff yellowish grey clay.

4.3.3 In addition to the almost ubiquitous brick rubble, which was visually similar to the material used in the construction of the surviving signal box therefore likely associated with demolished station buildings, five individual finds (summarised in Table 1 below) were recovered. These consisted of a rail base plate, a piece of mangled lead, a fragment of potentially vitrified material, and a single sherd of post-medieval hand finished blue and white pottery. All the finds were recovered as the piling process was being carried out and refer to locations on Platform 1. No finds were recovered from the Platform 2 piles, potentially a result of earlier disturbance. Due to the nature of the finds and their retrieval from unstratified pile arisings they are of limited use for further research and it is recommended that they are discarded.

Table 1. Finds quantification

| Pile Number | Material                    | Description  | Number | Date        |
|-------------|-----------------------------|--|--------|-------------|
| 7           | Bone china                  | Blue and white underglaze floral pattern. Flatware, probable plate                       | 1      | E-MC19th    |
| 8           | Steel                       | Rail base shoe   | 1      | C20th       |
| 9           | Lead                        | Several pieces of UID lead crushed together  | 5?     | C19th-C20th |
| 14          | Salt glazed sanitation ware | Salt glazed drainage pipe fragments  | 3      | LC19th      |
| 16          | Bitumen/glass waste         | Small piece vitrified material possible bitumen or glass waste. Part of leveling deposit | 1      | C19th       |

## 5 DISCUSSION

5.1.1 Previous archaeological work within the vicinity of the railway station has revealed extensive archaeological remains from the Roman through to the 19<sup>th</sup> Century. Of significant note is that the Roman Road known as 28B (Margary 1967), has had its course traced down Beancroft Road and any surviving remains adjacent to the current railway station were probably removed during the construction of the railway subway during the late 19<sup>th</sup> Century. Heritage Gateway records from the WYAAS (MWY1536), shows the excavation of a 3<sup>rd</sup>/4<sup>th</sup> century inhumation cemetery centred upon SE 425 255. The presence of Roman burials in the vicinity of what is now the location of the Railway Station may serve as an indication that this area was beyond the boundary of the civilian Roman settlement (Vicus), as Roman cemeteries are never located within the boundaries of the settlement. This interpretation can be further supported by the evidence from the excavations carried out by ARS Ltd at Castleford Bus Station (Lotherington 2015), where the Roman ditches were identified as forming part of the agricultural field boundaries associated with the Vicus (Lotherington 2015, 120-121).

5.1.2 During the course of the watching brief no significant archaeological finds, deposits or features were identified. The absence of any archaeological evidence from the area can be in part attributed to the keyhole nature of the piling activity and to the fact that prior to the building of the railway historical mapping shows that the area was the northern extent of what was known as

the Bean Field and no evidence can be found of extensive human occupation in this location prior to the 19<sup>th</sup> century.

5.1.3 The next stage of the works will be after concrete curing, to expose and crop the piles for incorporation within the pile caps. Due to the nature of the material and the relative shallowness of the proposed excavations for the pile caps it is the recommendation that no further archaeological monitoring is necessary to allow completion of the works since this work will only impact the existing pile mat.

## **6 PUBLICITY, CONFIDENTIALITY AND COPYRIGHT**

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6.1.1 Any publicity will be handled by the client.

6.1.2 ARS Ltd will retain the copyright of all documentary, photographic and video material under the Copyright, Designs and Patent Act (1988).

## **7 STATEMENT OF INDEMNITY**

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7.1.1 All statements and opinions contained within this report arising from the works undertaken are offered in good faith and compiled according to professional standards. No responsibility can be accepted by the author/s of the report for any errors of fact or opinion resulting from data supplied by any third party, or for loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in any such report(s), howsoever such facts and opinions may have been derived.

## **8 ARCHIVE**

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8.1.1 The archive consists of digital and paper records consisting of all primary written documents, photographs and electronic data, it is the policy of Wakefield Museums to accept complete excavation archives, including primary site records and research archives, from all excavations carried out in the District that it serves. The archive will follow the recommendations provided by ClfA's (2020c) '*Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives*', and the Society of Museum Archaeologists' (1993) '*Selection, Retention and Dispersal of Archaeological Collections. Guidelines for use in England, Wales and Northern Ireland*'.

8.1.2 A set of annotated, illustrative pictures of the site and watching brief area is contained within the digital archive. Digital images will be archived on the ADS Easy service where they will be publicly accessible.

8.1.3 An OASIS online record <http://ads.ahds.ac.uk/project/oasis/> has been initiated and completed for this work and all parts of the OASIS online form completed for submission to the HER. This will include an uploaded pdf version of this report.

## **9 ACKNOWLEDGEMENTS**

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9.1.1 ARS Ltd would like to thank Murphy Group Ltd and David Hunter, Senior Archaeologist at WYAAS, for their assistance and cooperation in this project.

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## APPENDIX I CONTEXT DESCRIPTION TABLE

| Pile No. | Context Number | Context Description                 | Finds  | Estimated Date           |
|----------|----------------|-------------------------------------|--|--------------------------|
|          | 001            | Pile mat Platform 1                 |  | 21 <sup>st</sup> Century |
| P3       | 002            | Dark greyish black sandy silt       | Brick rubble demolition  | 20 <sup>th</sup> Century |
|          | 003            | Natural yellow/grey clay            |  | Natural                  |
| P10      | 004            | Dark greyish black sandy silt       | Brick rubble demolition  | 20 <sup>th</sup> Century |
| P4       | 005            | Dark greyish grey sandy silt        | Brick rubble demolition  | 20 <sup>th</sup> Century |
| P11      | 006            | Dark greyish grey sandy silt        | Brick rubble demolition  | 20 <sup>th</sup> Century |
| P1       | 007            | Dark greyish brown sandy silt       | Brick rubble demolition  | 20 <sup>th</sup> Century |
| P8       | 008            | Dark greyish brown sandy silt       | SF 001- Rail Base shoe   | 20 <sup>th</sup> Century |
| P2       | 009            | Dark greyish brown sandy silt       | Brick rubble demolition  | 20 <sup>th</sup> Century |
| P9       | 010            | Mid brownish grey coarse sand       | SF 002- Mangled piece of lead- Brick rubble demolition           | 20 <sup>th</sup> Century |
|          | 011            | Dark greyish brown sandy silt       | Brick rubble demolition  | 20 <sup>th</sup> Century |
| P5       | 012            | Dark greyish brown sandy silt       | Brick rubble demolition  | 20 <sup>th</sup> Century |
| P12      | 013            | Dark greyish grey sandy silt        | Brick rubble demolition  | 20 <sup>th</sup> Century |
| P17      | 014            | Dark greyish grey sandy silt        | Brick rubble demolition  | 20 <sup>th</sup> Century |
| P16      | 015            | Dark greyish black clayey sand      | SF 003- Small piece of vitrified material- residual?             | 20 <sup>th</sup> Century |
| P6       | 016            | Dark greyish brown sandy silt       | Brick rubble demolition  | 20 <sup>th</sup> Century |
| P7       | 017            | Dark greyish brown sandy silt       | SF 004- sherd of post-Med pot- residual? Brick rubble demolition | 20 <sup>th</sup> Century |
| P13      | 018            | Dark greyish grey silty sand        | Brick rubble demolition  | 20 <sup>th</sup> Century |
| P14      | 019            | Dark brownish grey clayey sand      | SF 005- Drainage sanitation pipe. Brick rubble demolition        | 20 <sup>th</sup> Century |
|          | 020            | Piling mat/Type 1 granular backfill |  | 21 <sup>st</sup> Century |
| P26      | 021            | Dark greyish grey sandy silt        | Small amount of demolition debris mixed in with type 1           | 20 <sup>th</sup> Century |
|          | 022            | Natural yellow/grey clay            |  | Natural                  |



| Pile No. | Context Number | Context Description           | Finds  | Estimated Date           |
|----------|----------------|-------------------------------|--|--------------------------|
| P27      | 023            | Dark greyish grey sandy silt  | Small amount of demolition debris mixed in with type 1 | 20 <sup>th</sup> Century |
| P28      | 024            | Dark greyish brown sandy silt | Small amount of demolition debris mixed in with type 1 | 20 <sup>th</sup> Century |
| P29      | 025            | Dark greyish brown sandy silt | Small amount of demolition debris mixed in with type 1 | 20 <sup>th</sup> Century |
| P30      | 026            | Dark greyish black sandy silt | Small amount of demolition debris mixed in with type 1 | 20 <sup>th</sup> Century |
| P31      | 027            | Dark greyish black sandy silt | Small amount of demolition debris mixed in with type 1 | 20 <sup>th</sup> Century |
| P18      | 028            | Dark greyish grey sandy silt  | Small amount of demolition debris mixed in with type 1 | 20 <sup>th</sup> Century |
| P19      | 029            | Mid greyish brown silty sand  | Small amount of demolition debris mixed in with type 1 | 20 <sup>th</sup> Century |
| P20      | 030            | Mid greyish grey silty clay   | Small amount of demolition debris mixed in with type 1 | 20 <sup>th</sup> Century |
| P21      | 031            | Dark greyish grey silty clay  | Small amount of demolition debris mixed in with type 1 | 20 <sup>th</sup> Century |
| P22      | 032            | Mid greyish grey silty clay   | Small amount of demolition debris mixed in with type 1 | 20 <sup>th</sup> Century |
| P23      | 033            | Mid greyish grey sandy silt   | Small amount of demolition debris mixed in with type 1 | 20 <sup>th</sup> Century |
| P32      | 034            | Dark greyish black silty clay | Small amount of demolition debris mixed in with type 1 | 20 <sup>th</sup> Century |
| P24      | 035            | Dark greyish brown silty clay | Small amount of demolition debris mixed in with type 1 | 20 <sup>th</sup> Century |

## APPENDIX II OASIS FORM

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## Summary for archaeol5-507100

|                                   |  |
|-----------------------------------|--|
| OASIS ID (UID)                    | archaeol5-507100   |
| Project Name                      | Watching Brief at Castleford Railway Station, Beancroft Road   |
| Sitename                          | Castleford Railway Station, Beancroft Road   |
| Activity type                     | Watching Brief   |
| Project Identifier(s)             | ARS22-168  |
| Planning Id                       | 21/02407/PAO   |
| Reason For Investigation          | Planning: Post determination   |
| Organisation Responsible for work | Archaeological Research Services Ltd   |
| Project Dates                     | 18-May-2022 - 24-May-2022  |
| Location                          | Castleford Railway Station, Beancroft Road<br>NGR : SE 42660 25500<br>LL : 53.7241671316965, -1.35495433798904<br>12 Fig : 442660,425500   |
| Administrative Areas              | Country : England<br>County : West Yorkshire<br>District : Wakefield<br>Parish : Wakefield, unparished area  |
| Project Methodology               | Watching brief during flight augering works associated with the construction of a new footbridge and remodelling of platform 2. In area with high potential for Roman archaeology.   |
| Project Results                   | <p>An archaeological watching brief was undertaken at Castleford Railway Station by Archaeological Research Services Ltd (ARS Ltd) on behalf of Murphy Group Ltd during May 2022. The purpose of the watching brief was to record any archaeological evidence that came to light during the placing of piles for a new pedestrian footbridge using the bore cast in situ technique.</p> <p>Archaeological Research Services Ltd was contracted by Murphy Group Ltd to undertake a watching brief during the piling works (bore cast in situ), on platform 1 and platform 2 at Castleford Railway Station, Castleford, West Yorkshire as part fulfilment of conditioned planning permission.</p> <p>The works revealed an area of made up ground between 2.0m and 2.5m in depth composed at least in part of a layer of demolition debris. Only Piles 17 and 16 did not include evidence of demolition material in the form of brick debris, which may be accounted for by the known presence from historical mapping of areas on the platform that were used for planting.</p> |
| Keywords                          |  |
| Funder                            |  |
| HER                               | West Yorkshire HER - unRev - STANDARD  |
| Person Responsible for work       | Jeff, Morris   |
| HER Identifiers                   |  |
| Archives                          | Documentary Archive - to be deposited with Wakefield Council, Arts and Museums;  |

## **APPENDIX III SPECIFICATION FOR ARCHAEOLOGICAL WATCHING BRIEF AT CASTLEFORD RAILWAY STATION.**

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**SPECIFICATION FOR ARCHAEOLOGICAL WATCHING BRIEF AT CASTLEFORD  
RAILWAY STATION, BEANCROFT ROAD, CASTLEFORD, WEST YORKSHIRE**

**SE4266025500**

**This specification was prepared at the request of Mr Thomas Rogers of Transpennine Route Upgrade East (email [thomas.rogers@trueast.co.uk](mailto:thomas.rogers@trueast.co.uk) Tel.: 07542133600) and on behalf of Wakefield Metropolitan District Council. It details the requirements for an archaeological watching brief during site investigations and the construction of a pedestrian bridge at Castleford Railway Station (planning consent 21/02407/PAO condition 1).**

**1. Summary**

1.2 This specification covers the requirements for an archaeological watching brief during groundworks on land at Castleford railway station, Beancroft Road, Castleford.

1.3 This specification has been prepared by the West Yorkshire Archaeology Advisory Service (WYAAS), the holders of the West Yorkshire Historic Environment Record.

**1.4 The WYAAS will not recommend that any archaeological condition is discharged until all analysis and final reporting have been received and approved on behalf of the planning authority. A hard copy of the final report must be submitted to the West Yorkshire Historic Environment Record to enable the results of fieldwork to be made publically accessible as required by the National Planning Policy Framework.**

**2. Archaeological Interest**

2.1. The following short summary covers the discovery and current understanding of the Roman occupation at Castleford. The town's importance as a Roman fort and later settlement has been known if poorly understood since the 16<sup>th</sup> century.

2.2. Until the late 19<sup>th</sup> century Castleford was little developed with occupation lining what is now Church Street and the vicinity of the roundabout on Savile Street. As the town industrialised and expanded Roman artefacts were found and recognised in ever greater quantities. Some observers also noted building footings and at least one mosaic was remarked upon. The location of the latter is now lost. A series of archaeological excavations during the 1970s and 1980s helped put these findings in to context and develop an understanding of the sequence of Roman activity.

2.3. Two forts were constructed on the east side of Church Street during the first century AD (roughly located in "Wilkinson's car park"). An annex containing a bath house was constructed between the fort and the River Aire. Excavation beyond the fort established that a civilian settlement was also present to the south and west of the fort. When the military occupation ended c. AD100 this settlement declined. However, a new defended civilian settlement developed here from c. 250AD to around 400. This settlement ran from Bank Street in the east, straddled the site of the earlier forts and Roman road and extended west

beyond All Saints' Church. The area to the south, the centre of modern Castleford, was crossed by 4 defensive ditches. However, buildings including a temple and numerous burials have also been found here. Inscriptions from Roman milestones suggest this settlement served its hinterland as a regional administrative centre.

- 2.4. Excavations north of the railway and west of Welbeck Street recorded evidence of the main Roman Road, which Welbeck Street follows, along with evidence of occupation during the 1<sup>st</sup> to 3<sup>rd</sup> century. This included a stone lined drain, evidence of both stone and timber buildings, ovens, industrial/craft activities and occasional burials. The well preserved archaeological deposits and a complex stratigraphic sequence here are important to our understanding of late Roman Castleford (EWY6141 and EWY6805).
- 2.5. Evidence of earlier phases of railway use should also be recorded.
- 2.6. There is potential for further significant evidence and extent of the Roman occupation at Castleford may be uncovered during construction of a new pedestrian bridge at Castleford Station.
- 2.7. For a wider understanding of the relevant archaeological research priorities in West Yorkshire please see the period specific research agenda available to download as PDF documents from the WYAAS website:

<https://www.wyjs.org.uk/archaeology-advisory/>

- 2.8. A brief guide to Roman and later Castleford is also available online at

[Microsoft Word - Roman Castleford \(wakefield.gov.uk\)](https://www.wakefield.gov.uk/microsoft-word-roman-castleford)

### **3. Aims of the Project**

- 3.1. The aim of the watching brief is to identify and record the presence/absence, extent, condition, character and date (as far as circumstances permit) of any archaeological features and deposits which are disturbed or exposed as a result of site investigation and construction at Castleford Railway Station and deposit a report on this work with West Yorkshire Historic Environment Record (West Yorkshire Archaeology Advisory Service, West Yorkshire Joint Service, Nephshaw Lane South, Morley, Leeds LS27 7JQ; email [wyher@wyjs.org.uk](mailto:wyher@wyjs.org.uk)).
- 3.2. This work is intended to mitigate the destruction of any buried archaeological remains that may be revealed / disturbed through 'preservation by record'.
- 3.3. The archaeologist shall not excavate any area beyond those to be disturbed/destroyed by the development.

### **4. General Instructions**

#### **4.1. Health and Safety**

- 4.1.1. The archaeologist on site will naturally operate with due regard for Health and Safety regulations. In this case, where archaeological work is carried out at the same time as the work of other contractors, regard should also be taken of any reasonable additional constraints that these contractors

may impose. This work will require the preparation of a Risk Assessment of the site, in accordance with the Health and Safety at Work Regulations. The West Yorkshire Archaeology Advisory Service and its officers cannot be held responsible for any accidents or injuries that may occur to outside contractors engaged to undertake this watching brief while attempting to conform to this specification. Any Health and Safety issues which may hinder compliance with this specification should be discussed with WYAAS at the earliest possible opportunity (see section 11).

#### **4.1 Confirmation of Adherence to Specification**

4.1.1 Prior to the commencement of any work, the archaeological contractor must confirm adherence to this specification in writing to WYAAS, or state (with reasons) any proposals to vary the specification. Unauthorised variations are made at the sole risk of the contractor (see para. 11.2 below). Modifications presented in the form of a re-written specification/project design will not be considered by WYAAS.

#### **4.2 Confirmation of Timetable and Contractors' Qualifications**

4.2.1 Prior to the commencement of any work, the archaeological contractor must provide WYAAS in writing with:

- a projected timetable for the site work
- details of the staff structure and numbers
- names and CVs of key project members (the project manager, site supervisor, any proposed specialists, sub-contractors *etc.*)

4.2.2 All project staff provided by the archaeological contractor must be suitably qualified and experienced for their roles. The timetable should be adequate to allow the work to be undertaken to the appropriate professional standard, subject to the ultimate judgement of WYAAS.

#### **4.3 Notification**

4.3. The Local Authority, the Historic England science adviser (Andy Hammon; email [andy.hammon@HistoricEngland.org.uk](mailto:andy.hammon@HistoricEngland.org.uk); tel. 01904 601983) and WYAAS should receive at least one week's notice in writing of the intention to start fieldwork.

4.4. A **Notification of Commencement** form should be completed and returned to the West Yorkshire Archaeology Advisory Service.

### **5 Fieldwork Methodology**

5.1 An archaeological watching brief should be held during site investigation work to gauge the presence or absence of any Roman period deposits below the present railway station's platforms. Based on the results of this "evaluation" a further phase of watching brief may then be held during construction activity.

5.2 The intention of the archaeological watching brief is not to unduly delay the work of other contractors on site, however, a degree of flexibility is also expected of the developer in order that the archaeologist can fulfil the terms of this specification (see 7.1 below).

- 5.3 An archaeologist should be present on site during any excavation. The archaeologist should view the area as it is being dug and any trench sections after excavation has been completed. Where archaeology is judged to be present, the excavated area should be rapidly cleaned and the need for further work assessed. Where appropriate, any features and finds should then be quickly hand excavated, sampled if appropriate, and recorded.
- 5.4 Any features/deposits of archaeological interest should be accurately located on a site plan and recorded by photographs, scale drawings and written descriptions sufficient to permit the preparation of a report. Section drawings (at a minimum scale of 1:20) must include heights O.D. Plans (at a minimum scale of 1:50) must include O.D. spot heights for all principal strata and any features.
- 5.5 The actual areas of ground disturbance (even if no archaeological remains are present) should be recorded on a suitable base map/development plan and the stratigraphic sequence and the depth of the excavations will be briefly recorded. If archaeological remains are identified, their location is to be accurately tied into the National Grid and located on an up-to-date 1:1250 O.S. map base. (Also see para. 8.5 below).
- 5.6 **Metal Detecting:** Excavated soil should be thoroughly searched for finds including the use of a metal detector to search for artefacts (see section 6 & 8.1). All finds, except unstratified 20th & 21st century material, should be collected and retained for processing. The make and model of the metal detector used should be stated in the contractor's report.
- 5.7 The make and model of the instrument used should be given in the methodology section of the contractor's report and metal detected finds identified in the relevant finds section.
- 5.8 All securely stratified contexts should be sampled for environmental analysis and scientific dating. Additional 'spot' samples should be taken if suitable material is encountered during the watching brief.
- 5.9 If, in the professional judgement of the archaeologist on site, the watching brief reveals below-ground conditions which indicate that potentially archaeological deposits are absent, the archaeologist should contact WYAAS to discuss reducing or curtailing the requirements. The work may only be curtailed with the prior agreement of WYAAS and written confirmation of this agreement will be provided by WYAAS.
- 5.10 **As of April 2022 the West Yorkshire Archaeology Advisory Service no longer requires the use of 35mm black and white film photography.** When archaeological remains are encountered good quality digital photography may be employed. Images must be archived with the Archaeological Data Service. These images will assume the role of the "permanent photographic record" in place of monochrome 35mm photographs.



- 5.11 The archaeologist must plan for using this digital photography and prepare a Data Management Plan to track the various components of the site archive and their archiving procedures.
- 5.12 Images should be archived using the ADS Easy service ([ADS Guidelines For Depositors](#))
- 5.13 In general good quality digital photography using cameras with a minimum resolution of 10 megapixels; RAW format may be used to capture images on site but these must be archived as required by the ADS. Digital photography should follow the guidance given by Historic England in Digital Image Capture and File Storage: Guidelines for Best Practice, July 2015. The contractor must include metadata embedded in the image file. This metadata must include the following: the commonly used name for the site being photographed, the relevant centred OS grid coordinates for the site to at least six figures, the relevant township name (**Castleford**) the date of photograph, the subject of the photograph, the direction of shot and the name of the organisation taking the photograph. Copies of the archived digital images will be supplied to West Yorkshire Archaeology Advisory Service by file transfer accompanying the submission of the watching brief report.

## 6 Human Remains

- 6.1 Any human remains that are discovered must initially be left *in-situ*, covered and protected. WYAAS will be notified at the earliest opportunity. If removal is necessary the remains must be excavated archaeologically in accordance with the ClfA Technical Paper 14 "Excavation and Post-Excavation Treatment of Cremated and Inhumed Remains (Mckinley and Roberts 1994). The treatment of human remains will be in accordance with *Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England* (Advisory Panel on the Archaeology of Burials in England 2017), a valid Ministry of Justice licence and any local environmental health regulations.

## 7 Unexpectedly Significant or Complex Discoveries

- 7.1 Should there be, in the professional judgement of the archaeologist on site, unexpectedly significant or complex discoveries made that warrant more detailed recording than possible within the terms of this specification, then the archaeological contractor is to urgently contact WYAAS with the relevant information to enable the matter to be resolved with the developer.
- 7.2 The terms of the Treasure Act, 1996 as amended and the Treasure (Designation) Order 2002, must be followed with regard to any finds, which might fall within its purview. Any such finds must be removed to a safe place and reported to the local coroner as required by the procedures laid down in the 'Code of Practice'. Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

## 8 Post-excavation Analysis and Reporting

- 8.1 On completion of the fieldwork, any samples shall be processed and all finds shall be cleaned, identified, analysed, dated (if possible), marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines. Finds of 20th & 21st century date should be quantified and summarily

described, but can then be discarded if appropriate. All finds of 19th century or earlier date should be retained and archived. Finds retrieved by metal detecting should be identified as such in the report.

8.2A fully indexed field archive shall be compiled consisting of all primary written documents, plans, sections, and fully labelled photographs/slides. Standards for archive compilation and transfer should conform to those outlined in Archaeological Archives – a guide to best practice in creation, compilation, transfer and curation (Archaeological Archives Forum, 2011).

8.3A quantified index to the field archive should form an appendix to the report. The original archive is to accompany the deposition of any finds, providing the landowner agrees to the deposition of finds in a publicly accessible archive (see Section 10 below). In the absence of this agreement the field archive (less finds) is to be deposited in the West Yorkshire Historic Environment Record.

8.4A fully illustrated report should be produced, which should include background information on the need for the project, a description of the methodology employed, and a full description and interpretation of the results, placing them in a local and regional, and if appropriate, national context. It is not envisaged that the report is likely to be published, but it should be produced with sufficient care and attention to detail to be of academic use to future researchers.

8.5Any digital prints in the hard copy report must be made on paper and with inks which are certified against fading or other deterioration for a period of 75 years or more when used in combination. If digital printing is employed, the contractor must supply details of the paper/inks used in writing to the WYAAS, with supporting documentation indicating their archival stability/durability.

8.6Location plans should be produced at a scale which enables easy site identification and which depicts the full extent of the areas covered by the watching brief (a scale of 1:50,000 is not regarded as appropriate unless accompanied by a more detailed plan or plans). Plans should be at an appropriate scale showing: areas excavated and the identified (and, where possible, predicted) archaeological features/deposits. Trench and feature plans must include O.D. spot heights for all principal strata and any features. Section drawings must include O.D heights and be cross-referenced to an appropriate plan.

8.7All artefacts and environmental material will be analysed by a qualified and experienced specialist. Artefact analysis is to include the production of a descriptive catalogue. Finds critical for dating and interpretation should be illustrated. Reporting on ceramic artefacts and pottery should follow the guidance given in 'A Standard for Pottery Studies in Archaeology' (2016) and endorsed by the Prehistoric Ceramics Research Group; the Study Group for Roman Pottery & the Medieval Pottery Research Group.

8.8Details of the style and format of the report are to be determined by the archaeological contractor, but should include:

- A full bibliography

- A quantified index to the site archive
- Details of the current and intended location of the archive and,
- A copy of this specification as an appendix to the report

## 9 Report Submission and Deposition with the HER

9.1 The archaeological contractor will supply a hard copy of the report to the client and another hard copy (plus a digital copy on a gold (archive quality) compact disk or by file transfer in ISO 19005-1 compliant PDF/A format) directly to the WYAAS within a period of one month following completion of fieldwork, unless a revised date has been agreed in writing with WYAAS. A copy of the final report (in .pdf format) shall also be supplied to Historic England Science Advisor.

9.2 Any comments made by WYAAS in response to the submission of an unsatisfactory report will be taken into account and will result in the reissue of a suitably edited report to all parties, within a timescale which has been agreed with WYAAS.

9.3 The report will be supplied on the understanding that it will be added to the West Yorkshire Historic Environment Record and will become publicly accessible once deposited with the WYAAS.

9.4 Copyright - Please note that by depositing this report, the contractor gives permission for the material presented within the document to be used by the WYAAS, in perpetuity, although the Contractor retains the right to be identified as the author of all project documentation and reports as specified in the Copyright, Designs and Patents Act 1988 (chapter IV, section 79). The permission will allow the WYAAS to reproduce material, including for commercial use by third parties, with the copyright owner suitably acknowledged.

9.5 The West Yorkshire HER supports the Online Access to Index of Archaeological Investigations (OASIS) project. The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large-scale developer funded fieldwork. The archaeological contractor must therefore complete the online OASIS form at <http://ads.ahds.ac.uk/project/oasis/>. Contractors are advised to contact the West Yorkshire HER officer prior to completing the form. Once a report has become a public document by submission to or incorporation into the HER, the West Yorkshire HER may place the information on a website. Please ensure that you and your client agree to this procedure in writing as part of the process of submitting the report to the case officer at the West Yorkshire HER.

9.6 A note or longer article should also be supplied to the Council for British Archaeology's Yorkshire Forum publication (please contact the editor or CBA's website for more information: [associate.editor@cba-yorkshire.org.uk](mailto:associate.editor@cba-yorkshire.org.uk)).

## 10 Archive Deposition

- 10.1 Before commencing the project, the archaeological contractor must contact the Wakefield district's archaeological curator to determine the museum's requirements for the deposition of an excavation archive (Mr David Evans Wakefield M.D.C. Museum and Arts, Pontefract Museum, 5 Salter Row, Pontefract, WF8 1BA. Tel.: 01924 305352 (davidevans@wakefield.gov.uk)).
- 10.2 It is the policy of Wakefield Museums to accept complete excavation archives, including primary site records and research archives and finds, from all excavations carried out in the District that it serves.
- 10.3 It is the responsibility of the archaeological contractor to endeavour to obtain consent of the landowner, in writing, to the deposition of finds with Wakefield Museum.
- 10.4 It is the responsibility of the archaeological contractor to meet Wakefield Museums' requirements with regard to the preparation of excavation archives for deposition

## 11 General Considerations

### 11.1 Authorised Alterations to Specification by Contractor

11.1.1 If, on first visiting the site or at any time during the course of the recording exercise, it appears in the archaeologist's professional judgement that:

- a part or the whole of the site is not amenable to recording as detailed above, and/or
- an alternative approach may be more appropriate or likely to produce more informative results,

then it is expected that the archaeologist will contact WYAAS as a matter of urgency in order that the matter can be resolved in liaison with the developer and the Local Planning Authority.

### 11.2 Unauthorised Alterations to Specification by Contractor

11.2.1 It is the archaeological contractor's responsibility to ensure that they have obtained WYAAS' consent in writing to any variation of the specification prior to the commencement of on-site work or (where applicable) prior to the finalisation of the tender. Unauthorised variations may result in WYAAS being unable to recommend determination of the planning application to the Local Planning Authority based on the archaeological information available and are therefore made solely at the risk of the contractor.

### 11.3 Technical Queries

11.3.1 Similarly, any technical queries arising from the specification detailed above, should be addressed to WYAAS without delay.

### 11.4 Valid Period of Specification

11.4.1 This specification is valid for one year to reflect changing best practice and techniques. It is the archaeological contractor's responsibility to ensure that they are working to the latest current WYAAS watching brief specification. Please check the WYAAS website for the latest version.

**David Hunter**

**April 2022**

**West Yorkshire Archaeology Advisory Service  
West Yorkshire Joint Services,  
Nepshaw Lane South,  
Morley,  
Leeds  
LS27 7JQ**

**Telephone: 0113 535 0300**

**E-mail: [David.Hunter@wyjs.org.uk](mailto:David.Hunter@wyjs.org.uk)**

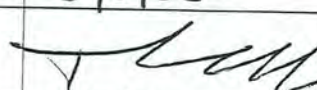

## APPENDIX IV PILING LOGS

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Platform 1

| Site: <b>Castledon Station</b>          |                         | Job No: <b>220929</b>     |   | PILE NO. <b>P3</b>         |      |
|---|-------------------------|---------------------------|---|----------------------------|------|
| Rig: <b>Wemco 709</b>                   |                         | Crew: <b>T. Widdowson</b> |   | Date: <b>18/5/22</b>       |      |
| Time Commenced Piling:                  |                         |                           | Time Finished Piling:                   |                            |      |
| Depth                                   | Strata Description      | Concrete / Grout Pressure | PILE DETAILS                            |                            |      |
|   |                         |                           | Pile Diameter                           | <b>450</b>                 |      |
|   |                         |                           | Spliced Reinforcement                   | <b>YES/NO</b>              |      |
| <b>0-2.5m</b>                           | <b>made ground</b>      |                           | Reinforcement Detail                    | <b>6x16 FD</b>             |      |
|   |                         |                           | Spacer Size                             | <b>75mm</b>                |      |
| <b>2.5-5m</b>                           | <b>yellow/grey clay</b> |                           | Concrete Cube Ref                       | <b>18/5/22</b>             |      |
|   |                         |                           | Concrete/Grout Mix Details              | <b>C32/40 DC2<br/>10mm</b> |      |
| <b>5-7m</b>                             | <b>weak mudstone</b>    |                           | Concrete/Grout Take                     | <b>1.2m<sup>3</sup></b>    |      |
|   |                         |                           | Tremie/SFA                              | <b>TREME</b>               |      |
|   |                         |                           | Date Commenced                          | <b>18/5/22</b>             |      |
|   |                         |                           | Date Cased                              | <b>18/5/22</b>             |      |
|   |                         |                           | Date Drilled                            | <b>18/5/22</b>             |      |
|   |                         |                           | Depth of Pile from PPL                  | <b>7m</b>                  |      |
|   |                         |                           | Dipped and checked depth/verticality    | <b>OK</b>                  |      |
|   |                         |                           | Reinforcement Placed                    | <b>18/5/22</b>             |      |
|   |                         |                           | Set out by M.C.<br>Signed by VE Foreman | <b>T. Widdowson</b>        |      |
|   |                         |                           | Date Concreted/Grouted                  | <b>18/5/22</b>             |      |
| CASING/WATER LEVEL DETAILS              |                         |                           | Drawing No Rev                          |                            |      |
| CASING                                  |                         | GROUNDWATER               |   |                            |      |
| Type                                    | Dia                     | Depth                     | Strike                                  | Sealed                     | Rise |
|   |                         |                           | <b>N/A</b>                              |                            |      |
|   |                         |                           |   |                            |      |
| COMMENTS/OBSTRUCTIONS                   |                         |                           | PILE CHECKED BY <b>A. LESLIE</b>        |                            |      |
| <b>Case to PPH as instructed by M/C</b> |                         |                           | CLIENT NAME <b>JMS</b>                  |                            |      |
|   |                         |                           | POSITION <b>ENGINEER</b>                |                            |      |
|   |                         |                           | SIGNATURE <b>[Signature]</b>            |                            |      |
|   |                         |                           | DATED <b>19/05/22</b>                   |                            |      |

Platform 1

| Site: <b>Cashford Station</b>           |                         | Job No. <b>202929</b>     |  | PILE NO. <b>P10</b>   |              |
|---|-------------------------|---------------------------|--|---|--------------|
| Rig: <b>Wenmu 709</b>                   |                         | Crew: <b>T. Widdowson</b> |  | Date: <b>18/5/22</b>  |              |
| Time Commenced Piling:                  |                         |                           | Time Finished Piling:  |   |              |
| Depth                                   | Strata Description      | Concrete / Grout Pressure | PILE DETAILS   |   |              |
|   |                         |                           | Pile Diameter  | <b>450</b>  |              |
|   |                         |                           | Spliced Reinforcement  | <b>YES/NO</b>   |              |
| <b>0-2.5m</b>                           | <b>made ground</b>      |                           | Reinforcement Detail   | <b>6x816 F10</b>  |              |
|   |                         |                           | Spacer Size  | <b>75mm</b>   |              |
| <b>2.5-5m</b>                           | <b>yellow/grey clay</b> |                           | Concrete Cube Ref  | <b>18/5/22</b>  |              |
|   |                         |                           | Concrete/Grout Mix Details   | <b>C32/40 AC2 10mm</b>  |              |
| <b>5-7m</b>                             | <b>weak mudstone</b>    |                           | Concrete/Grout Take  | <b>1.2m<sup>3</sup></b>   |              |
|   |                         |                           | Tremie/SFA   | <b>Tremied</b>  |              |
|   |                         |                           | Date Commenced   | <b>18/5/22</b>  |              |
|   |                         |                           | Date Cased   | <b>19/5/22</b>  |              |
|   |                         |                           | Date Drilled   | <b>—</b>  |              |
|   |                         |                           | Depth of Pile from PPL   | <b>7m</b>   |              |
|   |                         |                           | Dipped and checked depth/verticality   | <b>OK</b>   |              |
|   |                         |                           | Reinforcement Placed   | <b>18/5/22</b>  |              |
|   |                         |                           | Set out by M.C.<br>Signed by VE Foreman  |  |              |
|   |                         |                           | Date Concreted/Grouted   | <b>18/5/22</b>  |              |
| <b>CASING/WATER LEVEL DETAILS</b>       |                         |                           | Drawing No Rev   |   |              |
| CASING                                  |                         | GROUNDWATER               |  |   |              |
| Type                                    | Dia                     | Depth                     | Strike   | Sealed  | Rise         |
|   |                         |                           | <del>7m</del> <b>N/A</b>   |   | <b>0.00m</b> |
|   |                         |                           |  |   |              |
| COMMENTS/OBSTRUCTIONS                   |                         |                           | PILE CHECKED BY <b>A. LESLIE</b>   |   |              |
| <b>Case to PPL as instructed by m/c</b> |                         |                           | CLIENT NAME <b>JMS</b>   |   |              |
|   |                         |                           | POSITION <b>ENGINEER</b>   |   |              |
|   |                         |                           | SIGNATURE  |   |              |
|   |                         |                           | DATED <b>19/05/22</b>  |   |              |



Platform 1

| Site: <u>Cushford Station</u>           |                         | Job No. <u>262929</u>     |   | PILE NO. <u>P4</u>      |      |
|---|-------------------------|---------------------------|---|-------------------------|------|
| Rig: <u>Alum 409</u>                    |                         | Crew: <u>T. WILKINSON</u> |   | Date: <u>18/5/22</u>    |      |
| Time Commenced Piling:                  |                         |                           | Time Finished Piling:                   |                         |      |
| Depth                                   | Strata Description      | Concrete / Grout Pressure | PILE DETAILS                            |                         |      |
|   |                         |                           | Pile Diameter                           | <u>450</u>              |      |
|   |                         |                           | Spliced Reinforcement                   | <u>YES / NO</u>         |      |
| <u>0-2.5m</u>                           | <u>made ground</u>      |                           | Reinforcement Detail                    | <u>6x B16 cage HD</u>   |      |
|   |                         |                           | Spacer Size                             | <u>75mm</u>             |      |
| <u>2.5-5m</u>                           | <u>yellow/grey clay</u> |                           | Concrete Cube Ref                       | <u>18/5/22</u>          |      |
|   |                         |                           | Concrete/Grout Mix Details              | <u>C32/40 Oc2</u>       |      |
| <u>5-7m</u>                             | <u>weak mudstone</u>    |                           | Concrete/Grout Take                     | <u>1.2m<sup>3</sup></u> |      |
|   |                         |                           | Tremie/SFA                              | <u>Trimmed</u>          |      |
|   |                         |                           | Date Commenced                          | <u>18/5/22</u>          |      |
|   |                         |                           | Date Cased                              | <u>18/5/22</u>          |      |
|   |                         |                           | Date Drilled                            | <u>          </u>       |      |
|   |                         |                           | Depth of Pile from PPL                  | <u>7m</u>               |      |
|   |                         |                           | Dipped and checked depth/verticality    | <u>ok</u>               |      |
|   |                         |                           | Reinforcement Placed                    | <u>18/5/22</u>          |      |
|   |                         |                           | Set out by M.C.<br>Signed by VE Foreman | <u>T. Wilkinson</u>     |      |
|   |                         |                           | Date Concreted/Grouted                  | <u>18/5/22</u>          |      |
| CASING/WATER LEVEL DETAILS              |                         |                           | Drawing No Rev                          |                         |      |
| CASING                                  |                         | GROUNDWATER               |   |                         |      |
| Type                                    | Dia                     | Depth                     | Strike                                  | Sealed                  | Rise |
|   |                         |                           | <u>N/A</u>                              |                         |      |
|   |                         |                           |   |                         |      |
| COMMENTS/OBSTRUCTIONS                   |                         |                           | PILE CHECKED BY <u>A. LESLIE</u>        |                         |      |
| <u>Cage to PPL as instructed by m/c</u> |                         |                           | CLIENT NAME <u>JMS</u>                  |                         |      |
|   |                         |                           | POSITION <u>ENGINEER</u>                |                         |      |
|   |                         |                           | SIGNATURE <u>[Signature]</u>            |                         |      |
|   |                         |                           | DATED <u>19/05/22</u>                   |                         |      |

Pilebeam 1

|                             |                       |                  |
|-----------------------------|-----------------------|------------------|
| Site:<br>Castleford Dragoon | Job No.<br>220929     | PILE NO.<br>P11  |
| Rig:<br>Merrim 709          | Crew:<br>T. Widdowson | Date:<br>18/5/22 |

|                        |                       |
|------------------------|-----------------------|
| Time Commenced Piling: | Time Finished Piling: |
|------------------------|-----------------------|

| Depth  | Strata Description | Concrete / Grout Pressure | PILE DETAILS                            |                    |
|--------|--------------------|---------------------------|---|--------------------|
|        |                    |                           | Parameter                               | Value              |
| 0-2.5m | made ground        |                           | Pile Diameter                           | 450                |
|        |                    |                           | Spliced Reinforcement                   | YES/NO             |
|        |                    |                           | Reinforcement Detail                    | 6x8B16 f17         |
|        |                    |                           | Spacer Size                             | 75mm               |
| 2.5-5m | yellow / grey clay |                           | Concrete Cube Ref                       | 18/5/22            |
|        |                    |                           | Concrete/Grout Mix Details              | C32/40 10mm DC2    |
| 5-7m   | weak mudstone      |                           | Concrete/Grout Take                     | 1.2m <sup>3</sup>  |
|        |                    |                           | Tremie/SFA                              | Tremie             |
|        |                    |                           | Date Commenced                          | 18/5/22            |
|        |                    |                           | Date Cased                              | 18/5/22            |
|        |                    |                           | Date Drilled                            |                    |
|        |                    |                           | Depth of Pile from PPL                  | 7m                 |
|        |                    |                           | Dipped and checked depth/verticality    | OK                 |
|        |                    |                           | Reinforcement Placed                    | 18/5/22            |
|        |                    |                           | Set out by M.C.<br>Signed by VE Foreman | <i>[Signature]</i> |
|        |                    |                           | Date Concreted/Grouted                  | 18/5/22            |

**CASING/WATER LEVEL DETAILS**

| CASING |     |       | GROUNDWATER |        |      | PILE CHECKED BY | CLIENT NAME | POSITION | SIGNATURE          | DATED    |
|--------|-----|-------|-------------|--------|------|-----------------|-------------|----------|--------------------|----------|
| Type   | Dia | Depth | Strike      | Sealed | Rise |                 |             |          |                    |          |
|        |     |       | N/A         |        |      | A. LESLIE       | JMS         | ENGINEER | <i>[Signature]</i> | 19/05/22 |

**COMMENTS/OBSTRUCTIONS**

Cage to pph agreed with M/C

Platform 1

| Site:<br>Castleford Station      |                                  | Job No.<br>220929         |   | PILE NO.<br>P1        |      |
|----------------------------------|----------------------------------|---------------------------|---|-----------------------|------|
| Rig:<br>Minn 704                 |                                  | Crew:<br>T. Walden        |   | Date:<br>19/5/22      |      |
| Time Commenced Piling:           |                                  |                           | Time Finished Piling:                   |                       |      |
| Depth                            | Strata Description               | Concrete / Grout Pressure | PILE DETAILS                            |                       |      |
|                                  |                                  |                           | Pile Diameter                           | 450/508               |      |
| 0-2.5m                           | made gravel                      |                           | Spliced Reinforcement                   | <del>YES/NO</del> yes |      |
|                                  |                                  |                           | Reinforcement Detail                    | 6x B16 cage 9.4m      |      |
|                                  |                                  |                           | Spacer Size                             | 75mm                  |      |
| 2-5-5m                           | <del>made</del> yellow grey clay |                           | Concrete Cube Ref                       | 19/5/22               |      |
|                                  |                                  |                           | Concrete/Grout Mix Details              | C82/40 DC2 10mm       |      |
|                                  |                                  |                           | Concrete/Grout Take                     | 1.7m <sup>3</sup>     |      |
| 5-7m                             | made mudstone                    |                           |   |                       |      |
| 7-9.4m                           | mudstone                         |                           |   |                       |      |
|                                  |                                  |                           | Tremie/SFA                              | Tremie                |      |
|                                  |                                  |                           | Date Commenced                          | 19/5/22               |      |
|                                  |                                  |                           | Date Cased                              | 19/5/22               |      |
|                                  |                                  |                           | Date Drilled                            | —                     |      |
|                                  |                                  |                           | Depth of Pile from PPL                  | 9.5m                  |      |
|                                  |                                  |                           | Dipped and checked depth/verticality    | OK                    |      |
|                                  |                                  |                           | Reinforcement Placed                    | 19/5/22               |      |
|                                  |                                  |                           | Set out by M.C.<br>Signed by VE Foreman | T. Walden             |      |
|                                  |                                  |                           | Date Concreted/Grouted                  | 19/5/22               |      |
|                                  |                                  |                           | Drawing No Rev                          |                       |      |
| CASING/WATER LEVEL DETAILS       |                                  |                           |   |                       |      |
| CASING                           |                                  |                           | GROUNDWATER                             |                       |      |
| Type                             | Dia                              | Depth                     | Strike                                  | Sealed                | Rise |
| SOF →                            |                                  | 1m                        | N/A                                     |                       |      |
|                                  |                                  |                           |   |                       |      |
| PILE CHECKED BY <u>A. LESLIE</u> |                                  |                           |   |                       |      |
| CLIENT NAME <u>JMS</u>           |                                  |                           |   |                       |      |
| POSITION <u>ENGINEER</u>         |                                  |                           |   |                       |      |
| SIGNATURE <u>[Signature]</u>     |                                  |                           |   |                       |      |
| DATED <u>19/05/22</u>            |                                  |                           |   |                       |      |
| COMMENTS/OBSTRUCTIONS            |                                  |                           |   |                       |      |
| Case to PPL AS instructed by MLC |                                  |                           |   |                       |      |

Platform 1

| Site: <u>Castleford Station</u>         |                           | Job No. <u>220929</u>     |                                      | PILE NO. <u>P8</u>           |      |
|---|---------------------------|---------------------------|--------------------------------------|------------------------------|------|
| Rig: <u>Ulexon 709</u>                  |                           | Crew: <u>T. Juddowson</u> |                                      | Date: <u>19/5/22</u>         |      |
| Time Commenced Piling:                  |                           |                           | Time Finished Piling:                |                              |      |
| Depth                                   | Strata Description        | Concrete / Grout Pressure | PILE DETAILS                         |                              |      |
|   |                           |                           | Pile Diameter                        | <u>450/508</u>               |      |
| <u>0-2.5m</u>                           | <u>moorland gravel</u>    |                           | Spliced Reinforcement                | <u><del>YES/NO</del> yes</u> |      |
|   |                           |                           | Reinforcement Detail                 | <u>19/5/22</u>               |      |
|   |                           |                           | Spacer Size                          | <u>75mm</u>                  |      |
| <u>2.5-5m</u>                           | <u>yellow / grey clay</u> |                           | Concrete Cube Ref                    | <u>19/5/22</u>               |      |
|   |                           |                           | Concrete/Grout Mix Details           | <u>C32/40 D22 10mm</u>       |      |
| <u>5-7m</u>                             | <u>weak mudstone</u>      |                           | Concrete/Grout Take                  | <u>1.7m<sup>3</sup></u>      |      |
| <u>7-9m</u>                             | <u>mudstone</u>           |                           | Tremie/SFA                           | <u>Tremied</u>               |      |
|   |                           |                           | Date Commenced                       | <u>19/5/22</u>               |      |
|   |                           |                           | Date Cased                           | <u>19/5/22</u>               |      |
|   |                           |                           | Date Drilled                         | <u>—</u>                     |      |
|   |                           |                           | Depth of Pile from PPL               | <u>9.7m</u>                  |      |
|   |                           |                           | Dipped and checked depth/verticality | <u>ok</u>                    |      |
|   |                           |                           | Reinforcement Placed                 | <u>19/5/22</u>               |      |
|   |                           |                           | Set out by M.C. Signed by VE Foreman | <u>TJ</u>                    |      |
|   |                           |                           | Date Concreted/Grouted               | <u>19/5/22</u>               |      |
| CASING/WATER LEVEL DETAILS              |                           |                           | Drawing No Rev                       |                              |      |
| CASING                                  |                           | GROUNDWATER               |                                      |                              |      |
| Type                                    | Dia                       | Depth                     | Strike                               | Sealed                       | Rise |
|   | <u>508</u>                | <u>1m</u>                 | <u>N/A</u>                           |                              |      |
| COMMENTS/OBSTRUCTIONS                   |                           |                           | PILE CHECKED BY <u>A. LESLIE</u>     |                              |      |
| <u>Cage to PPL as instructed by m/c</u> |                           |                           | CLIENT NAME <u>JMS</u>               |                              |      |
|   |                           |                           | POSITION <u>ENGINEER</u>             |                              |      |
|   |                           |                           | SIGNATURE <u>[Signature]</u>         |                              |      |
|   |                           |                           | DATED <u>19/05/22</u>                |                              |      |

Platform 1

|                                 |                           |                      |
|---------------------------------|---------------------------|----------------------|
| Site: <u>cashlewood station</u> | Job No. <u>220929</u>     | PILE NO. <u>P2</u>   |
| Rig: <u>klamm 709</u>           | Crew: <u>T. Widdowson</u> | Date: <u>19/5/22</u> |

Time Commenced Piling:

Time Finished Piling:

| Depth  | Strata Description | Concrete / Grout Pressure | PILE DETAILS                            |                    |
|--------|--------------------|---------------------------|---|--------------------|
|        |                    |                           | Pile Diameter                           |                    |
| 0-2.5m | weak gravel        |                           | 450/508                                 |                    |
|        |                    |                           | Spliced Reinforcement                   | <del>YES</del> yes |
|        |                    |                           | Reinforcement Detail                    | 6x B16 cage (D)    |
|        |                    |                           | Spacer Size                             | 75mm               |
| 2.5-5m | yellow/grey clay   |                           | Concrete Cube Ref                       | 19/5/22            |
|        |                    |                           | Concrete/Grout Mix Details              | C32/40<br>DC2 10mm |
| 5-7m   | weak mudstone      |                           | Concrete/Grout Take                     | 1.6 m <sup>3</sup> |
|        |                    |                           | Tremie/SFA                              | Tremied            |
| 7-9.5m | mudstone           |                           | Date Commenced                          | 19/5/22            |
|        |                    |                           | Date Cased                              | 19/5/22            |
|        |                    |                           | Date Drilled                            |                    |
|        |                    |                           | Depth of Pile from PPL                  | 9.5m               |
|        |                    |                           | Dipped and checked depth/verticality    | ok                 |
|        |                    |                           | Reinforcement Placed                    | 19/5/22            |
|        |                    |                           | Set out by M.C.<br>Signed by VE Foreman | <i>[Signature]</i> |
|        |                    |                           | Date Concreted/Grouted                  | 19/5/22            |

**CASING/WATER LEVEL DETAILS**

| CASING |     |       | GROUNDWATER |        |      |
|--------|-----|-------|-------------|--------|------|
| Type   | Dia | Depth | Strike      | Sealed | Rise |
|        | 508 | 1m    | N/A         |        |      |

PILE CHECKED BY A. LESLIE  
 CLIENT NAME JMS  
 POSITION ENGINEER  
 SIGNATURE *[Signature]*  
 DATED 19/05/22

**COMMENTS/OBSTRUCTIONS**

clay ~~tested~~ to ppl as instructed by m/c

Platform 1

| Site: <u>Oakland Station</u>            |                         | Job No. <u>220929</u>     |   | PILE NO. <u>P9</u>         |      |
|---|-------------------------|---------------------------|---|----------------------------|------|
| Rig: <u>Winn 704</u>                    |                         | Crew: <u>T. Wulfsberg</u> |   | Date: <u>19/5/22</u>       |      |
| Time Commenced Piling:                  |                         |                           | Time Finished Piling:   |                            |      |
| Depth                                   | Strata Description      | Concrete / Grout Pressure | PILE DETAILS  |                            |      |
|   |                         |                           | Pile Diameter   | <u>450/508</u>             |      |
| <u>0-2.5m</u>                           | <u>mud ground</u>       |                           | Spliced Reinforcement   | <u>YES/NO yes</u>          |      |
|   |                         |                           | Reinforcement Detail  | <u>19/5/22</u>             |      |
|   |                         |                           | Spacer Size   | <u>25mm</u>                |      |
| <u>2.5-5m</u>                           | <u>yellow/grey clay</u> |                           | Concrete Cube Ref   | <u>19/5/22</u>             |      |
|   |                         |                           | Concrete/Grout Mix Details  | <u>C32/40 DC2<br/>60mm</u> |      |
| <u>5-7m</u>                             | <u>mudstone</u>         |                           | Concrete/Grout Take   | <u>1.6m<sup>3</sup></u>    |      |
| <u>7-9.4m</u>                           | <u>mudstone</u>         |                           | Tremie/SFA  | <u>Tremmed</u>             |      |
|   |                         |                           | Date Commenced  | <u>19/5/22</u>             |      |
|   |                         |                           | Date Cased  | <u>19/5/22</u>             |      |
|   |                         |                           | Date Drilled  | <u>—</u>                   |      |
|   |                         |                           | Depth of Pile from PPL  | <u>9.4m</u>                |      |
|   |                         |                           | Dipped and checked depth/verticality  | <u>OK</u>                  |      |
|   |                         |                           | Reinforcement Placed  | <u>19/5/22</u>             |      |
|   |                         |                           | Set out by M.C.<br>Signed by VE Foreman   | <u>T. Wulfsberg</u>        |      |
|   |                         |                           | Date Concreted/Grouted  | <u>19/5/22</u>             |      |
| CASING/WATER LEVEL DETAILS              |                         |                           | Drawing No Rev  |                            |      |
| CASING                                  |                         | GROUNDWATER               |   |                            |      |
| Type                                    | Dia                     | Depth                     | Strike  | Sealed                     | Rise |
|   | <u>508</u>              | <u>1m</u>                 | <u>N/A</u>  |                            |      |
| COMMENTS/OBSTRUCTIONS                   |                         |                           | PILE CHECKED BY <u>A. LESLIE</u><br>CLIENT NAME <u>JMS</u><br>POSITION <u>ENGINEER</u><br>SIGNATURE <u>[Signature]</u><br>DATED <u>19/05/22</u> |                            |      |
| <u>Cage to pph as instructed by m/c</u> |                         |                           |   |                            |      |

Platform 1

| Site: <u>Costin Road Station</u>                           |                         | Job No. <u>220929</u>     |   | PILE NO. <u>P5</u>               |      |
|--|-------------------------|---------------------------|---|----------------------------------|------|
| Rig: <u>Nemco 709</u>                                      |                         | Crew: <u>T. Widdowson</u> |   | Date: <u>19/5/22</u>             |      |
| Time Commenced Piling:                                     |                         |                           | Time Finished Piling:                   |                                  |      |
| Depth  | Strata Description      | Concrete / Grout Pressure | PILE DETAILS                            |                                  |      |
|  |                         |                           | Pile Diameter                           | <u>650/508</u>                   |      |
|  |                         |                           | Spliced Reinforcement                   | <u>YES/NO</u>                    |      |
| <u>0-2m</u>  | <u>mudstone</u>         |                           | Reinforcement Detail                    | <u>19/5/22</u>                   |      |
|  |                         |                           | Spacer Size                             | <u>25mm</u>                      |      |
| <u>2-5m</u>  | <u>yellow grey clay</u> |                           | Concrete Cube Ref                       | <u>19/5/22</u>                   |      |
|  |                         |                           | Concrete/Grout Mix Details              | <u>C32/40</u><br><u>D22 16mm</u> |      |
| <u>5-7m</u>  | <u>weak mudstone</u>    |                           | Concrete/Grout Take                     | <u>1.2m<sup>3</sup></u>          |      |
|  |                         |                           | Tremie/SFA                              | <u>Stemmed</u>                   |      |
|  |                         |                           | Date Commenced                          | <u>19/5/22</u>                   |      |
|  |                         |                           | Date Cased                              | <u>19/5/22</u>                   |      |
|  |                         |                           | Date Drilled                            | <u>—</u>                         |      |
|  |                         |                           | Depth of Pile from PPL                  | <u>7m</u>                        |      |
|  |                         |                           | Dipped and checked depth/verticality    | <u>ok</u>                        |      |
|  |                         |                           | Reinforcement Placed                    | <u>19/5/22</u>                   |      |
|  |                         |                           | Set out by M.C.<br>Signed by VE Foreman | <u>[Signature]</u>               |      |
|  |                         |                           | Date Concreted/Grouted                  | <u>19/5/22</u>                   |      |
| CASING/WATER LEVEL DETAILS                                 |                         |                           | Drawing No Rev                          |                                  |      |
| CASING   |                         | GROUNDWATER               |   |                                  |      |
| Type   | Dia                     | Depth                     | Strike                                  | Sealed                           | Rise |
|  | <u>508</u>              | <u>1m</u>                 | <u>N/A</u>                              |                                  |      |
|  |                         |                           |   |                                  |      |
| PILE CHECKED BY <u>A. LESLIE</u>                           |                         |                           | CLIENT NAME <u>JMS</u>                  |                                  |      |
| POSITION <u>ENGINEER</u>                                   |                         |                           | SIGNATURE <u>[Signature]</u>            |                                  |      |
| DATED <u>19/05/22</u>                                      |                         |                           |   |                                  |      |
| COMMENTS/OBSTRUCTIONS                                      |                         |                           |   |                                  |      |
| <u>cage <del>checked</del> to PPL as instructed by MIC</u> |                         |                           |   |                                  |      |

| Site: <u>platform 1</u><br><u>Cashland Station</u>    |                           | Job No. <u>220922</u>     |   | PILE NO.                                    | <u>P12</u>     |
|---|---------------------------|---------------------------|---|---|----------------|
| Rig: <u>blenna 409</u>                                |                           | Crew: <u>T. Widdowson</u> |   | Date:                                       | <u>19/5/22</u> |
| Time Commenced Piling:                                |                           |                           | Time Finished Piling:                   |   |                |
| Depth   | Strata Description        | Concrete / Grout Pressure | PILE DETAILS                            |   |                |
|   |                           |                           | Pile Diameter                           | <u>450 / 508</u>                            |                |
|   |                           |                           | Spliced Reinforcement                   | <u>YES/NO</u>                               |                |
| <u>0-2m</u>   | <u>made ground</u>        |                           | Reinforcement Detail                    | <u>6x816 cage f/d</u>                       |                |
|   |                           |                           | Spacer Size                             | <u>75mm</u>                                 |                |
| <u>2-5m</u>   | <u>yellow / grey clay</u> |                           | Concrete Cube Ref                       | <u>19/5/22</u>                              |                |
|   |                           |                           | Concrete/Grout Mix Details              | <u>C32/40</u><br><u>Dc2 10m<sup>3</sup></u> |                |
| <u>5-7m</u>   | <u>weak mudstone</u>      |                           | Concrete/Grout Take                     | <u>1.2m<sup>3</sup></u>                     |                |
|   |                           |                           | Tremie/SFA                              | <u>Tremie</u>                               |                |
|   |                           |                           | Date Commenced                          | <u>19/5/22</u>                              |                |
|   |                           |                           | Date Cased                              | <u>19/5/22</u>                              |                |
|   |                           |                           | Date Drilled                            |   |                |
|   |                           |                           | Depth of Pile from PPL                  | <u>7m</u>                                   |                |
|   |                           |                           | Dipped and checked depth/verticality    | <u>OK</u>                                   |                |
|   |                           |                           | Reinforcement Placed                    | <u>19/5/22</u>                              |                |
|   |                           |                           | Set out by M.C.<br>Signed by VE Foreman | <u>[Signature]</u>                          |                |
|   |                           |                           | Date Concreted/Grouted                  | <u>19/5/22</u>                              |                |
| CASING/WATER LEVEL DETAILS                            |                           |                           | Drawing No Rev                          |   |                |
| CASING  |                           |                           | GROUNDWATER                             |   |                |
| Type  | Dia                       | Depth                     | Strike                                  | Sealed                                      | Rise           |
|   | <u>508</u>                | <u>1m</u>                 | <u>N/A</u>                              |   |                |
|   |                           |                           |   |   |                |
| PILE CHECKED BY <u>A. LESLIE</u>                      |                           |                           | CLIENT NAME <u>JMS</u>                  |   |                |
| POSITION <u>ENGINEER</u>                              |                           |                           | SIGNATURE <u>[Signature]</u>            |   |                |
| DATED <u>19/05/22</u>                                 |                           |                           |   |   |                |
| COMMENTS/OBSTRUCTIONS                                 |                           |                           |   |   |                |
| <u>Cage <del>to</del> to ppl as instructed by m/c</u> |                           |                           |   |   |                |



Platform 1

|                                 |                            |                      |
|---------------------------------|----------------------------|----------------------|
| Site: <b>Pastorford Station</b> | Job No. <b>220929</b>      | PILE NO. <b>P17</b>  |
| Rig: <b>Mlemini 709</b>         | Crew: <b>T. Wicklow SM</b> | Date: <b>19/5/22</b> |

|                        |                       |
|------------------------|-----------------------|
| Time Commenced Piling: | Time Finished Piling: |
|------------------------|-----------------------|

| Depth  | Strata Description | Concrete / Grout Pressure | PILE DETAILS                            |                  |
|--------|--------------------|---------------------------|---|------------------|
|        |                    |                           | Parameter                               | Value            |
| 0-2m   | made ground        |                           | Pile Diameter                           | 450/508          |
|        |                    |                           | Spliced Reinforcement                   | YES/NO           |
|        |                    |                           | Reinforcement Detail                    | 6x B16 cage FD   |
|        |                    |                           | Spacer Size                             | 25mm             |
| 2-5m   | yellow / grey clay |                           | Concrete Cube Ref                       | 19/5/22          |
|        |                    |                           | Concrete/Grout Mix Details              | C32/40 Dc2 10mm  |
| 5-5.5m | Weak mudstone      |                           | Concrete/Grout Take                     | 1 m <sup>3</sup> |
|        |                    |                           | Tremie/SFA                              | Tremie           |
|        |                    |                           | Date Commenced                          | 19/5/22          |
|        |                    |                           | Date Cased                              | 19/5/22          |
|        |                    |                           | Date Drilled                            | —                |
|        |                    |                           | Depth of Pile from PPL                  | 5.5m             |
|        |                    |                           | Dipped and checked depth/verticality    | OK               |
|        |                    |                           | Reinforcement Placed                    | 19/5/22          |
|        |                    |                           | Set out by M.C.<br>Signed by VE Foreman | T. Wicklow       |
|        |                    |                           | Date Concreted/Grouted                  | 19/5/22          |

**CASING/WATER LEVEL DETAILS**

| CASING |     |       | GROUNDWATER |        |      |
|--------|-----|-------|-------------|--------|------|
| Type   | Dia | Depth | Strike      | Sealed | Rise |
| "      | 508 | 1m    | N/A         |        |      |

PILE CHECKED BY **A. LESLIE**  
 CLIENT NAME **JMS**  
 POSITION **ENGINEER**  
 SIGNATURE *[Signature]*  
 DATED **19/05/22**

**COMMENTS/OBSTRUCTIONS**

Case to PPL as instructed by M/L

Platform 1

| Site: <u>Cashelwood Station</u>         |                         | Job No. <u>220929</u>     |   | PILE NO. <u>P16</u>     |
|---|-------------------------|---------------------------|---|-------------------------|
| Rig: <u>Manua 704</u>                   |                         | Crew: <u>T. Wellonsan</u> |   | Date: <u>19/5/22</u>    |
| Time Commenced Piling:                  |                         |                           | Time Finished Piling:                   |                         |
| Depth                                   | Strata Description      | Concrete / Grout Pressure | PILE DETAILS                            |                         |
|   |                         |                           | Pile Diameter                           | <u>450/508</u>          |
|   |                         |                           | Spliced Reinforcement                   | <u>YES/NO</u>           |
| <u>0-2m</u>                             | <u>moist gravel</u>     |                           | Reinforcement Detail                    | <u>6x B16 cage + 10</u> |
|   |                         |                           | Spacer Size                             | <u>25mm</u>             |
| <u>2-5m</u>                             | <u>yellow grey clay</u> |                           | Concrete Cube Ref                       | <u>19/5/22</u>          |
|   |                         |                           | Concrete/Grout Mix Details              | <u>C32/40 OC2 10mm</u>  |
| <u>5-5.5m</u>                           | <u>weak mudstone</u>    |                           | Concrete/Grout Take                     | <u>1m</u>               |
|   |                         |                           | Tremie/SFA                              | <u>removed</u>          |
|   |                         |                           | Date Commenced                          | <u>19/5/22</u>          |
|   |                         |                           | Date Cased                              | <u>19/5/22</u>          |
|   |                         |                           | Date Drilled                            |                         |
|   |                         |                           | Depth of Pile from PPL                  | <u>5.5m</u>             |
|   |                         |                           | Dipped and checked depth/verticality    | <u>OK</u>               |
|   |                         |                           | Reinforcement Placed                    | <u>19/5/22</u>          |
|   |                         |                           | Set out by M.C.<br>Signed by VE Foreman | <u>[Signature]</u>      |
|   |                         |                           | Date Concreted/Grouted                  | <u>19/5/22</u>          |
| CASING/WATER LEVEL DETAILS              |                         |                           | Drawing No Rev                          |                         |
| CASING                                  |                         | GROUNDWATER               |   |                         |
| Type                                    | Dia                     | Depth                     | Strike                                  | Sealed                  |
|   | <u>508</u>              | <u>1m</u>                 | <u>N/A</u>                              |                         |
|   |                         |                           |   |                         |
|   |                         |                           |   |                         |
|   |                         |                           |   |                         |
| PILE CHECKED BY <u>A. LESLIE</u>        |                         |                           |   |                         |
| CLIENT NAME <u>JMS</u>                  |                         |                           |   |                         |
| POSITION <u>ENGINEER</u>                |                         |                           |   |                         |
| SIGNATURE <u>[Signature]</u>            |                         |                           |   |                         |
| DATED <u>19/05/22</u>                   |                         |                           |   |                         |
| COMMENTS/OBSTRUCTIONS                   |                         |                           |   |                         |
| <u>Cage to pph as instructed by M/C</u> |                         |                           |   |                         |

| Site: <i>Platform Castleford Station</i> |                         | Job No. <i>220929</i>     | PILE NO. <i>P6</i>                      |  |      |
|--|-------------------------|---------------------------|---|--|------|
| Rig: <i>Teleman F09</i>                  |                         | Crew: <i>T. Widdowson</i> | Date: <i>20/5/22</i>                    |  |      |
| Time Commenced Piling:                   |                         | Time Finished Piling:     |   |  |      |
| Depth                                    | Strata Description      | Concrete / Grout Pressure | PILE DETAILS                            |  |      |
|  |                         |                           | Pile Diameter                           | <i>450/505</i>                           |      |
|  |                         |                           | Spliced Reinforcement                   | <i>YES/NO</i>                            |      |
| <i>0-2.5m</i>                            | <i>made ground</i>      |                           | Reinforcement Detail                    | <i><del>2x15#2</del> 6x816</i> <b>FD</b> |      |
|  |                         |                           | Spacer Size                             | <i>75mm</i>                              |      |
| <i>2.5-5m</i>                            | <i>yellow grey clay</i> |                           | Concrete Cube Ref                       | <i>20/5/22</i>                           |      |
|  |                         |                           | Concrete/Grout Mix Details              | <i>C32/40 DC2 10mm</i>                   |      |
| <i>5-7m</i>                              | <i>weak mudstone</i>    |                           | Concrete/Grout Take                     | <i>1.2m<sup>3</sup></i>                  |      |
|  |                         |                           | Tremie/SFA                              | <i>Tremmed</i>                           |      |
|  |                         |                           | Date Commenced                          | <i>20/5/22</i>                           |      |
|  |                         |                           | Date Cased                              | <i>20/5/22</i>                           |      |
|  |                         |                           | Date Drilled                            |  |      |
|  |                         |                           | Depth of Pile from PPL                  | <i>7m</i>                                |      |
|  |                         |                           | Dipped and checked depth/verticality    | <i>OK</i>                                |      |
|  |                         |                           | Reinforcement Placed                    | <i>20/5/22</i>                           |      |
|  |                         |                           | Set out by M.C.<br>Signed by VE Foreman | <i>T. Widdowson</i>                      |      |
|  |                         |                           | Date Concreted/Grouted                  | <i>20/5/22</i>                           |      |
| <b>CASING/WATER LEVEL DETAILS</b>        |                         |                           | Drawing No Rev                          |  |      |
| CASING                                   |                         | GROUNDWATER               |   |  |      |
| Type                                     | Dia                     | Depth                     | Strike                                  | Sealed                                   | Rise |
|  | <i>508</i>              | <i>1m</i>                 |   |  |      |
|  |                         |                           |   |  |      |
| COMMENTS/OBSTRUCTIONS                    |                         |                           | PILE CHECKED BY <i>A. LESLIE</i>        |  |      |
| <i>Cage to pph as instructed by m/c</i>  |                         |                           | CLIENT NAME <i>JMS</i>                  |  |      |
|  |                         |                           | POSITION <i>ENGINEER</i>                |  |      |
|  |                         |                           | SIGNATURE <i>[Signature]</i>            |  |      |
|  |                         |                           | DATED <i>20/05/22</i>                   |  |      |

Platform 1

| Site: <u>Cashford Station</u>                                    |                         | Job No. <u>220929</u>     |   | PILE NO. <u>P7</u>      |      |
|--|-------------------------|---------------------------|---|-------------------------|------|
| Rig: <u>Winn 709</u>   |                         | Crew: <u>T. Willowson</u> |   | Date: <u>20/05/22</u>   |      |
| Time Commenced Piling:   |                         |                           | Time Finished Piling:                   |                         |      |
| Depth  | Strata Description      | Concrete / Grout Pressure | PILE DETAILS                            |                         |      |
|  |                         |                           | Pile Diameter                           | <u>450/505</u>          |      |
|  |                         |                           | Spliced Reinforcement                   | <u>YES/NO</u>           |      |
| <u>0-2.5m</u>  | <u>made ground</u>      |                           | Reinforcement Detail                    | <u>6x816 cage FD</u>    |      |
|  |                         |                           | Spacer Size                             | <u>75mm</u>             |      |
| <u>2.5-5m</u>  | <u>yellow/grey clay</u> |                           | Concrete Cube Ref                       | <u>20/05/22</u>         |      |
|  |                         |                           | Concrete/Grout Mix Details              | <u>C32/40 DC2 10mm</u>  |      |
| <u>5-7m</u>  | <u>weak mudstone</u>    |                           | Concrete/Grout Take                     | <u>1.3m<sup>3</sup></u> |      |
|  |                         |                           | Tremie/SFA                              | <u>Tremied</u>          |      |
|  |                         |                           | Date Commenced                          | <u>20/05/22</u>         |      |
|  |                         |                           | Date Cased                              | <u>20/05/22</u>         |      |
|  |                         |                           | Date Drilled                            |                         |      |
|  |                         |                           | Depth of Pile from PPL                  | <u>7m</u>               |      |
|  |                         |                           | Dipped and checked depth/verticality    | <u>OK</u>               |      |
|  |                         |                           | Reinforcement Placed                    | <u>20/05/22</u>         |      |
|  |                         |                           | Set out by M.C.<br>Signed by VE Foreman | <u>[Signature]</u>      |      |
|  |                         |                           | Date Concreted/Grouted                  | <u>20/05/22</u>         |      |
| CASING/WATER LEVEL DETAILS                                       |                         |                           | Drawing No Rev                          |                         |      |
| CASING   |                         | GROUNDWATER               |   |                         |      |
| Type   | Dia                     | Depth                     | Strike                                  | Sealed                  | Rise |
|  | <u>508</u>              | <u>1m</u>                 | <u>N/A</u>                              |                         |      |
| PILE CHECKED BY <u>A. LESLIE</u>                                 |                         |                           | CLIENT NAME <u>JMS</u>                  |                         |      |
| POSITION <u>ENGINEER</u>   |                         |                           | SIGNATURE <u>[Signature]</u>            |                         |      |
| DATED <u>20/05/22</u>  |                         |                           |   |                         |      |
| COMMENTS/OBSTRUCTIONS<br><u>cage to ppl as instructed by m/c</u> |                         |                           |   |                         |      |

Platform 1

| Site: <u>Castleford Station</u> |                         | Job No. <u>220929</u>     |   | PILE NO. <u>P13</u>       |      |
|---------------------------------|-------------------------|---------------------------|---|---------------------------|------|
| Rig: <u>Wheeler 709</u>         |                         | Crew: <u>T. Waldsson</u>  |   | Date: <u>20/05/22</u>     |      |
| Time Commenced Piling:          |                         |                           | Time Finished Piling:   |                           |      |
| Depth                           | Strata Description      | Concrete / Grout Pressure | PILE DETAILS  |                           |      |
|                                 |                         |                           | Pile Diameter   | <u>450/508</u>            |      |
|                                 |                         |                           | Spliced Reinforcement   | <u>YES/NO</u>             |      |
| <u>0-2.5m</u>                   | <u>made ground</u>      |                           | Reinforcement Detail  | <u>6x116 cage f/d</u>     |      |
|                                 |                         |                           | Spacer Size   | <u>75mm</u>               |      |
| <u>2.5-5m</u>                   | <u>yellow/grey clay</u> |                           | Concrete Cube Ref   | <u>20/05/22</u>           |      |
|                                 |                         |                           | Concrete/Grout Mix Details  | <u>C32/40<br/>D2.10mm</u> |      |
| <u>5-7m</u>                     | <u>weak mudstone</u>    |                           | Concrete/Grout Take   | <u>1.3m<sup>3</sup></u>   |      |
|                                 |                         |                           | Tremie/SFA  | <u>Tremie</u>             |      |
|                                 |                         |                           | Date Commenced  | <u>20/05/22</u>           |      |
|                                 |                         |                           | Date Cased  | <u>20/05/22</u>           |      |
|                                 |                         |                           | Date Drilled  |                           |      |
|                                 |                         |                           | Depth of Pile from PPL  | <u>7m</u>                 |      |
|                                 |                         |                           | Dipped and checked depth/verticality  | <u>OK</u>                 |      |
|                                 |                         |                           | Reinforcement Placed  | <u>20/05/22</u>           |      |
|                                 |                         |                           | Set out by M.C.<br>Signed by VE Foreman   | <u>T. Waldsson</u>        |      |
|                                 |                         |                           | Date Concreted/Grouted  | <u>20/05/22</u>           |      |
| CASING/WATER LEVEL DETAILS      |                         |                           | Drawing No Rev  |                           |      |
| CASING                          |                         | GROUNDWATER               |   |                           |      |
| Type                            | Dia                     | Depth                     | Strike  | Sealed                    | Rise |
|                                 | <u>508</u>              | <u>1m</u>                 | <u>N/A</u>  |                           |      |
|                                 |                         |                           |   |                           |      |
| COMMENTS/OBSTRUCTIONS           |                         |                           | PILE CHECKED BY <u>A. LESLIE</u><br>CLIENT NAME <u>JMS</u><br>POSITION <u>ENGINEER</u><br>SIGNATURE <u>[Signature]</u><br>DATED <u>20/05/22</u> |                           |      |

Platform 1

| Site: <u>Cashford station</u>           |                         | Job No. <u><del>2012</del> 220929</u> |   | PILE NO. <u>P14</u>      |      |
|---|-------------------------|---------------------------------------|---|--------------------------|------|
| Rig: <u>Melmm 709</u>                   |                         | Crew: <u>T. Widdowson</u>             |   | Date: <u>20/05/22</u>    |      |
| Time Commenced Piling:                  |                         |                                       | Time Finished Piling:                   |                          |      |
| Depth                                   | Strata Description      | Concrete / Grout Pressure             | PILE DETAILS                            |                          |      |
|   |                         |                                       | Pile Diameter                           | <u>450 / 508</u>         |      |
|   |                         |                                       | Spliced Reinforcement                   | <u>YES/NO</u>            |      |
| <u>0-2.5m</u>                           | <u>made ground</u>      |                                       | Reinforcement Detail                    | <u>6x B16 cage FD</u>    |      |
|   |                         |                                       | Spacer Size                             | <u>75 mm</u>             |      |
| <u>2.5-5m</u>                           | <u>yellow/gray clay</u> |                                       | Concrete Cube Ref                       | <u>20/05/22</u>          |      |
|   |                         |                                       | Concrete/Grout Mix Details              | <u>C32/40 DC2 (only)</u> |      |
| <u>5-7m</u>                             | <u>weak mudstone</u>    |                                       | Concrete/Grout Take                     | <u>1.3m<sup>3</sup></u>  |      |
|   |                         |                                       | Tremie/SFA                              | <u>Tremie used</u>       |      |
|   |                         |                                       | Date Commenced                          | <u>20/05/22</u>          |      |
|   |                         |                                       | Date Cased                              | <u>20/05/22</u>          |      |
|   |                         |                                       | Date Drilled                            |                          |      |
|   |                         |                                       | Depth of Pile from PPL                  | <u>7m</u>                |      |
|   |                         |                                       | Dipped and checked depth/verticality    | <u>ok</u>                |      |
|   |                         |                                       | Reinforcement Placed                    | <u>20/05/22</u>          |      |
|   |                         |                                       | Set out by M.C.<br>Signed by VE Foreman | <u>[Signature]</u>       |      |
|   |                         |                                       | Date Concreted/Grouted                  | <u>20/05/22</u>          |      |
| CASING/WATER LEVEL DETAILS              |                         |                                       | Drawing No Rev                          |                          |      |
| CASING                                  |                         | GROUNDWATER                           |   |                          |      |
| Type                                    | Dia                     | Depth                                 | Strike                                  | Sealed                   | Rise |
|   | <u>508</u>              | <u>1m</u>                             | <u>N/A</u>                              |                          |      |
|   |                         |                                       |   |                          |      |
|   |                         |                                       |   |                          |      |
| COMMENTS/OBSTRUCTIONS                   |                         |                                       | PILE CHECKED BY <u>A. LESLIE</u>        |                          |      |
| <u>cage to ppl as instructed by m/c</u> |                         |                                       | CLIENT NAME <u>JMS</u>                  |                          |      |
|   |                         |                                       | POSITION <u>ENGINEER</u>                |                          |      |
|   |                         |                                       | SIGNATURE <u>[Signature]</u>            |                          |      |
|   |                         |                                       | DATED <u>20/05/22</u>                   |                          |      |

Platform 2

| Site: <i>Cyfllehad Station</i>                                    |                           | Job No. <i>220922</i>     |   | PILE NO. <i>28</i>  |              |
|---|---------------------------|---------------------------|---|---|--------------|
| Rig: <i>Wmm 709</i>   |                           | Crew: <i>T. Widdowson</i> |   | Date: <i>23/5/22</i>  |              |
| Time Commenced Piling:  |                           |                           | Time Finished Piling:   |   |              |
| Depth   | Strata Description        | Concrete / Grout Pressure | PILE DETAILS  |   |              |
|   |                           |                           | Pile Diameter<br>Spliced Reinforcement<br>Reinforcement Detail<br>Spacer Size<br>Concrete Cube Ref<br>Concrete/Grout Mix Details<br>Concrete/Grout Take<br>Tremie/SFA<br>Date Commenced<br>Date Cased<br>Date Drilled<br>Depth of Pile from PPL<br>Dipped and checked depth/verticality<br>Reinforcement Placed<br>Set out by M.C. Signed by VE Foreman<br>Date Concreted/Grouted | <i>450/505</i><br><i>YES/NO</i><br><i>6x B16 cage to</i><br><i>75mm</i><br><i>23/5/22</i><br><i>C32/40 DC2 10mm</i><br><i>1.6m<sup>3</sup></i><br><i>manually</i><br><i>23/5/22</i><br><i>23/5/22</i><br><br><i>9.4m</i><br><i>OK</i><br><i>23/5/22</i><br><br><br><i>23/5/22</i> |              |
| <i>0-3m</i>   | <i>made ground</i>        |                           |   |   |              |
| <i>3-5m</i>   | <i>yellow / grey clay</i> |                           |   |   |              |
| <i>5-9.4m</i>   | <i>Mudstone</i>           |                           |   |   |              |
| CASING/WATER LEVEL DETAILS  |                           |                           | Drawing No Rev  |   |              |
| CASING  |                           | GROUNDWATER               |   |   |              |
| Type  | Dia                       | Depth                     | Strike  | Sealed  | Rise         |
|   | <i>508mm</i>              | <i>2m</i>                 | <i>N/A</i>  | <i>N/A</i>  | <i>100mm</i> |
| PILE CHECKED BY <i>A. LESLIE</i>                                  |                           |                           | CLIENT NAME <i>JMS</i>  |   |              |
| POSITION <i>ENGINEER</i>  |                           |                           | SIGNATURE <i>[Signature]</i>  |   |              |
| DATED <i>23/05/22</i>   |                           |                           |   |   |              |
| COMMENTS/OBSTRUCTIONS<br><i>Case to PPH as instructed by M.C.</i> |                           |                           |   |   |              |

| Site: <u>platinum 2</u><br><u>residential stratum</u>                           |                         | Job No. <u>220929</u>     |   | PILE NO. <u>27</u>                     |      |
|---|-------------------------|---------------------------|---|--|------|
| Rig: <u>Winn 409</u>  |                         | Crew: <u>T. Sullivan</u>  |   | Date: <u>23/8/22</u>                   |      |
| Time Commenced Piling:  |                         |                           | Time Finished Piling:                   |  |      |
| Depth   | Strata Description      | Concrete / Grout Pressure | PILE DETAILS                            |  |      |
|   |                         |                           | Pile Diameter                           | <u>450 / 508</u>                       |      |
|   |                         |                           | Spliced Reinforcement                   | <u>YES/NO yes</u>                      |      |
| <u>0-3m</u>   | <u>make gravel</u>      |                           | Reinforcement Detail                    | <u><del>75mm</del> 6x B16 cage (1)</u> |      |
|   |                         |                           | Spacer Size                             | <u>75mm</u>                            |      |
| <u>3-5m</u>   | <u>yellow/gray clay</u> |                           | Concrete Cube Ref                       | <u>23/5/22</u>                         |      |
|   |                         |                           | Concrete/Grout Mix Details              | <u>c32/40<br/>DC2 10mm</u>             |      |
|   |                         |                           | Concrete/Grout Take                     | <u>1.6m<sup>3</sup></u>                |      |
| <u>5-9.1m</u>   | <u>mudstone</u>         |                           | Tremie/SFA                              | <u>Normal</u>                          |      |
|   |                         |                           | Date Commenced                          | <u>23/5/22</u>                         |      |
|   |                         |                           | Date Cased                              | <u>23/5/22</u>                         |      |
|   |                         |                           | Date Drilled                            | <u>—</u>                               |      |
|   |                         |                           | Depth of Pile from PPL                  | <u>9.4m</u>                            |      |
|   |                         |                           | Dipped and checked depth/verticality    | <u>OK</u>                              |      |
|   |                         |                           | Reinforcement Placed                    | <u>23/5/22</u>                         |      |
|   |                         |                           | Set out by M.C.<br>Signed by VE Foreman |  |      |
|   |                         |                           | Date Concreted/Grouted                  | <u>23/5/22</u>                         |      |
| CASING/WATER LEVEL DETAILS  |                         |                           | Drawing No Rev                          |  |      |
| CASING  |                         | GROUNDWATER               |   |  |      |
| Type  | Dia                     | Depth                     | Strike                                  | Sealed                                 | Rise |
|   | <u>508</u>              | <u>1m</u>                 | <u>N/A</u>                              |  |      |
| PILE CHECKED BY <u>A. LESLIE</u>  |                         |                           | CLIENT NAME <u>JMS</u>                  |  |      |
| POSITION <u>ENGINEER</u>  |                         |                           | SIGNATURE                               |  |      |
| DATED <u>23/05/22</u>   |                         |                           |   |  |      |
| COMMENTS/OBSTRUCTIONS<br><u>cage <del>not</del> to ppl as instructed by m/c</u> |                         |                           |   |  |      |



Platform 2

| Site: <i>Cashmere Station</i>                |                          | Job No. <i>220292</i>       |   | PILE NO. <i>P28</i>  |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
|--|--------------------------|-----------------------------|---|----------------------|----------------|--|-----------------------|--------|--|----------------------|----------------------|--|-------------|-------------|--|-------------------|----------------|--|----------------------------|--------------------------|--|---------------------|-------------------------|--|------------|---------------|--|----------------|----------------|--|------------|----------------|--|--------------|--|--|------------------------|-----------|--|--------------------------------------|-----------|--|----------------------|----------------|--|--------------------------------------|--------------------|--|------------------------|----------------|--|---|--|--|----------------------------|--|--|--|--|--|--------|--|--|-------------|--|--|------|-----|-------|--------|--------|------|--|------------|-----------|
| Rig: <i>Himm 704</i>                         |                          | Crew: <i>T. Steinhilber</i> |   | Date: <i>23/5/22</i> |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Time Commenced Piling:                       |                          |                             | Time Finished Piling:   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Depth  | Strata Description       | Concrete / Grout Pressure   | PILE DETAILS  |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
|  |                          |                             | <table border="1"> <tr> <td>PILE Diameter</td> <td colspan="2"><i>450/500</i></td> </tr> <tr> <td>Spliced Reinforcement</td> <td colspan="2">YES/NO</td> </tr> <tr> <td>Reinforcement Detail</td> <td colspan="2"><i>6x16 cage 610</i></td> </tr> <tr> <td>Spacer Size</td> <td colspan="2"><i>75mm</i></td> </tr> <tr> <td>Concrete Cube Ref</td> <td colspan="2"><i>2315/22</i></td> </tr> <tr> <td>Concrete/Grout Mix Details</td> <td colspan="2"><i>C32/40<br/>D216mm</i></td> </tr> <tr> <td>Concrete/Grout Take</td> <td colspan="2"><i>4.2m<sup>3</sup></i></td> </tr> <tr> <td>Tremie/SFA</td> <td colspan="2"><i>Tremie</i></td> </tr> <tr> <td>Date Commenced</td> <td colspan="2"><i>23.5/22</i></td> </tr> <tr> <td>Date Cased</td> <td colspan="2"><i>23/5/22</i></td> </tr> <tr> <td>Date Drilled</td> <td colspan="2"></td> </tr> <tr> <td>Depth of Pile from PPL</td> <td colspan="2"><i>7m</i></td> </tr> <tr> <td>Dipped and checked depth/verticality</td> <td colspan="2"><i>OK</i></td> </tr> <tr> <td>Reinforcement Placed</td> <td colspan="2"><i>23/5/22</i></td> </tr> <tr> <td>Set out by M.C. Signed by VE Foreman</td> <td colspan="2"><i>[Signature]</i></td> </tr> <tr> <td>Date Concreted/Grouted</td> <td colspan="2"><i>23/5/22</i></td> </tr> </table> | PILE Diameter        | <i>450/500</i> |  | Spliced Reinforcement | YES/NO |  | Reinforcement Detail | <i>6x16 cage 610</i> |  | Spacer Size | <i>75mm</i> |  | Concrete Cube Ref | <i>2315/22</i> |  | Concrete/Grout Mix Details | <i>C32/40<br/>D216mm</i> |  | Concrete/Grout Take | <i>4.2m<sup>3</sup></i> |  | Tremie/SFA | <i>Tremie</i> |  | Date Commenced | <i>23.5/22</i> |  | Date Cased | <i>23/5/22</i> |  | Date Drilled |  |  | Depth of Pile from PPL | <i>7m</i> |  | Dipped and checked depth/verticality | <i>OK</i> |  | Reinforcement Placed | <i>23/5/22</i> |  | Set out by M.C. Signed by VE Foreman | <i>[Signature]</i> |  | Date Concreted/Grouted | <i>23/5/22</i> |  | <table border="1"> <tr> <th colspan="6">CASING/WATER LEVEL DETAILS</th> </tr> <tr> <th colspan="3">CASING</th> <th colspan="3">GROUNDWATER</th> </tr> <tr> <th>Type</th> <th>Dia</th> <th>Depth</th> <th>Strike</th> <th>Sealed</th> <th>Rise</th> </tr> <tr> <td></td> <td><i>508</i></td> <td><i>1m</i></td> <td><i>2.5m</i></td> <td><i>N/A</i></td> <td><i>10mm</i></td> </tr> </table> |  |  | CASING/WATER LEVEL DETAILS |  |  |  |  |  | CASING |  |  | GROUNDWATER |  |  | Type | Dia | Depth | Strike | Sealed | Rise |  | <i>508</i> | <i>1m</i> |
| PILE Diameter                                | <i>450/500</i>           |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Spliced Reinforcement                        | YES/NO                   |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Reinforcement Detail                         | <i>6x16 cage 610</i>     |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Spacer Size                                  | <i>75mm</i>              |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Concrete Cube Ref                            | <i>2315/22</i>           |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Concrete/Grout Mix Details                   | <i>C32/40<br/>D216mm</i> |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Concrete/Grout Take                          | <i>4.2m<sup>3</sup></i>  |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Tremie/SFA                                   | <i>Tremie</i>            |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Date Commenced                               | <i>23.5/22</i>           |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Date Cased                                   | <i>23/5/22</i>           |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Date Drilled                                 |                          |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Depth of Pile from PPL                       | <i>7m</i>                |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Dipped and checked depth/verticality         | <i>OK</i>                |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Reinforcement Placed                         | <i>23/5/22</i>           |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Set out by M.C. Signed by VE Foreman         | <i>[Signature]</i>       |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Date Concreted/Grouted                       | <i>23/5/22</i>           |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| CASING/WATER LEVEL DETAILS                   |                          |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| CASING                                       |                          |                             | GROUNDWATER   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| Type   | Dia                      | Depth                       | Strike  | Sealed               | Rise           |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
|  | <i>508</i>               | <i>1m</i>                   | <i>2.5m</i>   | <i>N/A</i>           | <i>10mm</i>    |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| COMMENTS/OBSTRUCTIONS                        |                          |                             | PILE CHECKED BY <i>A. LESLIE</i><br>CLIENT NAME <i>JMS</i><br>POSITION <i>ENGINEER</i><br>SIGNATURE <i>[Signature]</i><br>DATED <i>23/05/22</i>   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |
| <p><i>Cage to PPL as agreed with MIC</i></p> |                          |                             |   |                      |                |  |                       |        |  |                      |                      |  |             |             |  |                   |                |  |                            |                          |  |                     |                         |  |            |               |  |                |                |  |            |                |  |              |  |  |                        |           |  |                                      |           |  |                      |                |  |                                      |                    |  |                        |                |  |   |  |  |                            |  |  |  |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |            |           |

Platform 2

| Site:                         |                    | Job No. 220929            |  | PILE NO. P29       |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|-------------------------------|--------------------|---------------------------|--|--------------------|-------------|--|---------------|---------|--|--|--|-----------------------|----------|--|--|--|----------------------|--------------|--|--|--|-------------|------|--|--|--|-------------------|---------|--------|--------------------|--|----------------------------|-------------------|------|------|--|---------------------|-------------------|--|--|--|------------|---------|--|--|--|----------------|---------|--|--|--|------------|---------|--|--|--|--------------|--|--|--|--|------------------------|----|--|--|--|--------------------------------------|----|--|--|--|----------------------|---------|--|--|--|---|--------------------|--|--|--|------------------------|---------|---|--|--|--------|--|--|-------------|--|--|------|-----|-------|--------|--------|------|--|--|--|
| Rig: Mann 709                 |                    | Crew: T. Williams         |  | Date: 23/5/22      |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
| Time Commenced Piling:        |                    |                           | Time Finished Piling:  |                    |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
| Depth                         | Strata Description | Concrete / Grout Pressure | PILE DETAILS   |                    |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | <table border="1"> <tr> <td>0-2.5m</td> <td>main ground</td> <td></td> <td>Pile Diameter</td> <td>450/508</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Spliced Reinforcement</td> <td>YES / NO</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Reinforcement Detail</td> <td>6x316 cwg FD</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Spacer Size</td> <td>25mm</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Concrete Cube Ref</td> <td>23/5/22</td> </tr> <tr> <td>2.5-5m</td> <td>yellow / grey clay</td> <td></td> <td>Concrete/Grout Mix Details</td> <td>C32/40<br/>Ø 2.10m</td> </tr> <tr> <td>5-7m</td> <td>main</td> <td></td> <td>Concrete/Grout Take</td> <td>1.3m<sup>3</sup></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Tremie/SFA</td> <td>Tremmed</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Date Commenced</td> <td>23/5/22</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Date Cased</td> <td>23/5/22</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Date Drilled</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Depth of Pile from PPL</td> <td>7m</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Dipped and checked depth/verticality</td> <td>OK</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Reinforcement Placed</td> <td>23/5/22</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Set out by M.C.<br/>Signed by VE Foreman</td> <td><i>[Signature]</i></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Date Concreted/Grouted</td> <td>23/5/22</td> </tr> </table> | 0-2.5m             | main ground |  | Pile Diameter | 450/508 |  |  |  | Spliced Reinforcement | YES / NO |  |  |  | Reinforcement Detail | 6x316 cwg FD |  |  |  | Spacer Size | 25mm |  |  |  | Concrete Cube Ref | 23/5/22 | 2.5-5m | yellow / grey clay |  | Concrete/Grout Mix Details | C32/40<br>Ø 2.10m | 5-7m | main |  | Concrete/Grout Take | 1.3m <sup>3</sup> |  |  |  | Tremie/SFA | Tremmed |  |  |  | Date Commenced | 23/5/22 |  |  |  | Date Cased | 23/5/22 |  |  |  | Date Drilled |  |  |  |  | Depth of Pile from PPL | 7m |  |  |  | Dipped and checked depth/verticality | OK |  |  |  | Reinforcement Placed | 23/5/22 |  |  |  | Set out by M.C.<br>Signed by VE Foreman | <i>[Signature]</i> |  |  |  | Date Concreted/Grouted | 23/5/22 | <b>CASING/WATER LEVEL DETAILS</b><br><table border="1"> <thead> <tr> <th colspan="3">CASING</th> <th colspan="3">GROUNDWATER</th> </tr> <tr> <th>Type</th> <th>Dia</th> <th>Depth</th> <th>Strike</th> <th>Sealed</th> <th>Rise</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>N/A</td> <td></td> <td></td> </tr> </tbody> </table> |  |  | CASING |  |  | GROUNDWATER |  |  | Type | Dia | Depth | Strike | Sealed | Rise |  |  |  |
| 0-2.5m                        | main ground        |                           | Pile Diameter  | 450/508            |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | Spliced Reinforcement  | YES / NO           |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | Reinforcement Detail   | 6x316 cwg FD       |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | Spacer Size  | 25mm               |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | Concrete Cube Ref  | 23/5/22            |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
| 2.5-5m                        | yellow / grey clay |                           | Concrete/Grout Mix Details   | C32/40<br>Ø 2.10m  |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
| 5-7m                          | main               |                           | Concrete/Grout Take  | 1.3m <sup>3</sup>  |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | Tremie/SFA   | Tremmed            |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | Date Commenced   | 23/5/22            |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | Date Cased   | 23/5/22            |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | Date Drilled   |                    |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | Depth of Pile from PPL   | 7m                 |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | Dipped and checked depth/verticality   | OK                 |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | Reinforcement Placed   | 23/5/22            |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | Set out by M.C.<br>Signed by VE Foreman  | <i>[Signature]</i> |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | Date Concreted/Grouted   | 23/5/22            |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
| CASING                        |                    |                           | GROUNDWATER  |                    |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
| Type                          | Dia                | Depth                     | Strike   | Sealed             | Rise        |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
|                               |                    |                           | N/A  |                    |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |
| COMMENTS/OBSTRUCTIONS<br><br> |                    |                           |  |                    |             |  |               |         |  |  |  |                       |          |  |  |  |                      |              |  |  |  |             |      |  |  |  |                   |         |        |                    |  |                            |                   |      |      |  |                     |                   |  |  |  |            |         |  |  |  |                |         |  |  |  |            |         |  |  |  |              |  |  |  |  |                        |    |  |  |  |                                      |    |  |  |  |                      |         |  |  |  |   |                    |  |  |  |                        |         |   |  |  |        |  |  |             |  |  |      |     |       |        |        |      |  |  |  |

Platform 2

| Site: <i>Castrolome Station</i>                               |                       | Job No. <i>220929</i>     |   | PILE NO. <i>P30</i>     |      |
|---|-----------------------|---------------------------|---|-------------------------|------|
| Rig: <i>Moran 70</i>  |                       | Crew: <i>Fransman</i>     |   | Date: <i>23/5/22</i>    |      |
| Time Commenced Piling:  |                       |                           | Time Finished Piling:                   |                         |      |
| Depth   | Strata Description    | Concrete / Grout Pressure | PILE DETAILS                            |                         |      |
|   |                       |                           | Pile Diameter                           | <i>450 / 568</i>        |      |
|   |                       |                           | Spliced Reinforcement                   | <i>YES/NO</i>           |      |
| <i>0-2.5m</i>   | <i>made ground</i>    |                           | Reinforcement Detail                    | <i>6x86 to 10</i>       |      |
|   |                       |                           | Spacer Size                             | <i>23/5/22</i>          |      |
| <i>2-5.5</i>  | <i>yellow lignite</i> |                           | Concrete Cube Ref                       | <i>23/5/22</i>          |      |
| <i>5-5.5m</i>   | <i>millstone</i>      |                           | Concrete/Grout Mix Details              | <i>C32/40<br/>PC-1</i>  |      |
|   |                       |                           | Concrete/Grout Take                     | <i>1.3m<sup>3</sup></i> |      |
|   |                       |                           | Tremie/SFA                              | <i>Permit</i>           |      |
|   |                       |                           | Date Commenced                          | <i>23/5/22</i>          |      |
|   |                       |                           | Date Cased                              | <i>23/5/22</i>          |      |
|   |                       |                           | Date Drilled                            |                         |      |
|   |                       |                           | Depth of Pile from PPL                  | <i>5.5m</i>             |      |
|   |                       |                           | Dipped and checked depth/verticality    | <i>OK</i>               |      |
|   |                       |                           | Reinforcement Placed                    | <i>23/5/22</i>          |      |
|   |                       |                           | Set out by M.C.<br>Signed by VE Foreman | <i>[Signature]</i>      |      |
|   |                       |                           | Date Concreted/Grouted                  | <i>23/5/22</i>          |      |
| <b>CASING/WATER LEVEL DETAILS</b>                             |                       |                           | Drawing No Rev                          |                         |      |
| CASING  |                       | GROUNDWATER               |   |                         |      |
| Type  | Dia                   | Depth                     | Strike                                  | Sealed                  | Rise |
|   | <i>308</i>            | <i>1m</i>                 | <i>/</i>                                |                         |      |
|   |                       |                           |   |                         |      |
| PILE CHECKED BY <i>A. LESLIE</i>                              |                       |                           | CLIENT NAME <i>JMS</i>                  |                         |      |
| POSITION <i>ENGINEER</i>                                      |                       |                           | SIGNATURE <i>[Signature]</i>            |                         |      |
| DATED <i>23/05/22</i>   |                       |                           |   |                         |      |
| COMMENTS/OBSTRUCTIONS<br><i>Curry installation to be done</i> |                       |                           |   |                         |      |

Platform 2

| Site: <i>Wleam 702</i>                   |                         | Job No. <i>220929</i>     |   | PILE NO. <i>P31</i>        |      |
|--|-------------------------|---------------------------|---|----------------------------|------|
| Rig: <i>Wleam 702</i>                    |                         | Crew: <i>T. Williams</i>  |   | Date: <i>23/5/22</i>       |      |
| Time Commenced Piling:                   |                         |                           | Time Finished Piling:                   |                            |      |
| Depth                                    | Strata Description      | Concrete / Grout Pressure | PILE DETAILS                            |                            |      |
|  |                         |                           | Pile Diameter                           | <i>450/565</i>             |      |
|  |                         |                           | Spliced Reinforcement                   | YES / NO                   |      |
| <i>0-2.5m</i>                            | <i>moist ground</i>     |                           | Reinforcement Detail                    | <i>6x816 cage f10</i>      |      |
|  |                         |                           | Spacer Size                             | <i>75mm</i>                |      |
| <i>2.5-5m</i>                            | <i>yellow grey clay</i> |                           | Concrete Cube Ref                       | <i>23/5/22</i>             |      |
|  |                         |                           | Concrete/Grout Mix Details              | <i>c32/40<br/>0.15 rom</i> |      |
| <i>5-5.5m</i>                            | <i>moist soil</i>       |                           | Concrete/Grout Take                     | <i>1.13</i>                |      |
|  |                         |                           | Tremie/SFA                              | <i>Checked</i>             |      |
|  |                         |                           | Date Commenced                          | <i>23/5/22</i>             |      |
|  |                         |                           | Date Cased                              | <i>23/5/22</i>             |      |
|  |                         |                           | Date Drilled                            |                            |      |
|  |                         |                           | Depth of Pile from PPL                  | <i>5.5m</i>                |      |
|  |                         |                           | Dipped and checked depth/verticality    | <i>OK</i>                  |      |
|  |                         |                           | Reinforcement Placed                    | <i>23/5/22</i>             |      |
|  |                         |                           | Set out by M.C.<br>Signed by VE Foreman | <i>[Signature]</i>         |      |
|  |                         |                           | Date Concreted/Grouted                  |                            |      |
| CASING/WATER LEVEL DETAILS               |                         |                           | Drawing No Rev                          |                            |      |
| CASING                                   |                         |                           | GROUNDWATER                             |                            |      |
| Type                                     | Dia                     | Depth                     | Strike                                  | Sealed                     | Rise |
| <i>R</i>                                 | <i>508</i>              | <i>1m</i>                 | <i>N/A</i>                              |                            |      |
|  |                         |                           |   |                            |      |
| PILE CHECKED BY <i>A. LESLIE</i>         |                         |                           |   |                            |      |
| CLIENT NAME <i>JMS</i>                   |                         |                           |   |                            |      |
| POSITION <i>ENGINEER</i>                 |                         |                           |   |                            |      |
| SIGNATURE <i>[Signature]</i>             |                         |                           |   |                            |      |
| DATED <i>23/05/22</i>                    |                         |                           |   |                            |      |
| COMMENTS/OBSTRUCTIONS<br><i>cage top</i> |                         |                           |   |                            |      |

Platform 2

| Site: <i>custleford station</i>                                  |                         | Job No. <i>220929</i>     |   | PILE NO.                   | <i>P18</i>     |
|--|-------------------------|---------------------------|---|----------------------------|----------------|
| Rig: <i>Winn 704</i>   |                         | Crew: <i>T. Willison</i>  |   | Date:                      | <i>24/5/22</i> |
| Time Commenced Piling:   |                         |                           | Time Finished Piling:                   |                            |                |
| Depth  | Strata Description      | Concrete / Grout Pressure | PILE DETAILS                            |                            |                |
|  |                         |                           | Pile Diameter                           | <i>450 508</i>             |                |
|  |                         |                           | Spliced Reinforcement                   | <i>YES/NO</i>              |                |
| <i>0-3m</i>  | <i>made ground</i>      |                           | Reinforcement Detail                    | <i>6x B16 cage HD</i>      |                |
|  |                         |                           | Spacer Size                             | <i>24/5/22</i>             |                |
| <i>3-5m</i>  | <i>yellow grey clay</i> |                           | Concrete Cube Ref                       | <i>24/5/22</i>             |                |
|  |                         |                           | Concrete/Grout Mix Details              | <i>C32/40 DC2<br/>10mm</i> |                |
| <i>5-9.4m</i>  | <i>millstone</i>        |                           | Concrete/Grout Take                     | <i>1.5 m<sup>3</sup></i>   |                |
|  |                         |                           | Tremie/SFA                              | <i>Tremie</i>              |                |
|  |                         |                           | Date Commenced                          | <i>24/5/22</i>             |                |
|  |                         |                           | Date Cased                              | <i>24/5/22</i>             |                |
|  |                         |                           | Date Drilled                            |                            |                |
|  |                         |                           | Depth of Pile from PPL                  | <i>9.4m</i>                |                |
|  |                         |                           | Dipped and checked depth/verticality    | <i>OK</i>                  |                |
|  |                         |                           | Reinforcement Placed                    | <i>24/5/22</i>             |                |
|  |                         |                           | Set out by M.C.<br>Signed by VE Foreman | <i>T. Willison</i>         |                |
|  |                         |                           | Date Concreted/Grouted                  | <i>24/5/22</i>             |                |
| CASING/WATER LEVEL DETAILS                                       |                         |                           | Drawing No Rev                          |                            |                |
| CASING   |                         | GROUNDWATER               |   |                            |                |
| Type   | Dia                     | Depth                     | Strike                                  | Sealed                     | Rise           |
|  | <i>506</i>              | <i>1m</i>                 |   | <i>N/A</i>                 | <i>100mm</i>   |
|  |                         |                           |   |                            |                |
| PILE CHECKED BY <i>A. LESLIE</i>                                 |                         |                           | CLIENT NAME <i>JMS</i>                  |                            |                |
| POSITION <i>ENGINEER</i>   |                         |                           | SIGNATURE <i>[Signature]</i>            |                            |                |
| DATED <i>25/05/22</i>  |                         |                           |   |                            |                |
| COMMENTS/OBSTRUCTIONS<br><i>cage to pph as instructed by m/c</i> |                         |                           |   |                            |                |

Platform 2

| Site: <i>Wattlewood Station</i>                                  |                         | Job No. <i>220929</i>     |                                      | PILE NO. <i>P19</i>     |              |
|--|-------------------------|---------------------------|--------------------------------------|-------------------------|--------------|
| Rig: <i>Wemmer 704</i>   |                         | Crew: <i>T. Widdowson</i> |                                      | Date: <i>24/5/22</i>    |              |
| Time Commenced Piling:   |                         |                           | Time Finished Piling:                |                         |              |
| Depth  | Strata Description      | Concrete / Grout Pressure | PILE DETAILS                         |                         |              |
|  |                         |                           | Pile Diameter                        | <i>450 (508)</i>        |              |
|  |                         |                           | Spliced Reinforcement                | <i>YES/NO</i>           |              |
| <i>0-3m</i>  | <i>white gravel</i>     |                           | Reinforcement Detail                 | <i>6x316 cage F/D</i>   |              |
|  |                         |                           | Spacer Size                          | <i>75 mm</i>            |              |
| <i>3-5m</i>  | <i>yellow/grey clay</i> |                           | Concrete Cube Ref                    | <i>24/5/22</i>          |              |
|  |                         |                           | Concrete/Grout Mix Details           | <i>C32/40 DCE 10mm</i>  |              |
| <i>5-9.4m</i>  | <i>mudstone</i>         |                           | Concrete/Grout Take                  | <i>1.4m<sup>3</sup></i> |              |
|  |                         |                           | Tremie/SFA                           | <i>Stemmed</i>          |              |
|  |                         |                           | Date Commenced                       | <i>24/5/22</i>          |              |
|  |                         |                           | Date Cased                           | <i>24/5/22</i>          |              |
|  |                         |                           | Date Drilled                         |                         |              |
|  |                         |                           | Depth of Pile from PPL               | <i>9.4m</i>             |              |
|  |                         |                           | Dipped and checked depth/verticality | <i>OK</i>               |              |
|  |                         |                           | Reinforcement Placed                 | <i>24/5/22</i>          |              |
|  |                         |                           | Set out by M.C. Signed by VE Foreman | <i>[Signature]</i>      |              |
|  |                         |                           | Date Concreted/Grouted               | <i>24/5/22</i>          |              |
| CASING/WATER LEVEL DETAILS                                       |                         |                           | Drawing No Rev                       |                         |              |
| CASING   |                         |                           | GROUNDWATER                          |                         |              |
| Type   | Dia                     | Depth                     | Strike                               | Sealed                  | Rise         |
|  | <i>508</i>              | <i>1m</i>                 |                                      | <i>N/A</i>              | <i>100mm</i> |
|  |                         |                           |                                      |                         |              |
| PILE CHECKED BY <i>A. LESLIE</i>                                 |                         |                           | CLIENT NAME <i>JMS</i>               |                         |              |
| SIGNATURE <i>[Signature]</i>                                     |                         |                           | POSITION <i>ENGINEER</i>             |                         |              |
| DATED <i>25/05/22</i>  |                         |                           |                                      |                         |              |
| COMMENTS/OBSTRUCTIONS<br><i>Cage to pph as instructed by m/c</i> |                         |                           |                                      |                         |              |

Platform 2

| Site: <i>custleard station</i>                                    |                         | Job No. <i>220929</i>       |   | PILE NO. <i>P20</i>              |                |
|---|-------------------------|-----------------------------|---|----------------------------------|----------------|
| Rig: <i>Wemmer 709 9m</i>   |                         | Crew: <i>T. Widelowsson</i> |   | Date: <i>24/5/22</i>             |                |
| Time Commenced Piling:  |                         |                             | Time Finished Piling:                   |                                  |                |
| Depth   | Strata Description      | Concrete / Grout Pressure   | PILE DETAILS                            |                                  |                |
|   |                         |                             | Pile Diameter                           | Spliced Reinforcement YES/NO     |                |
| <i>0-3m</i>   | <i>moist ground</i>     |                             |   | <i>6x16 cage f/d</i>             |                |
|   |                         |                             |   | <i>75mm</i>                      |                |
| <i>3-5m</i>   | <i>yellow/grey clay</i> |                             | Concrete Cube Ref                       | <i>24/5/22</i>                   |                |
|   |                         |                             | Concrete/Grout Mix Details              | <i>C32/40 OC2</i><br><i>10mm</i> |                |
| <i>5-7m</i>   | <i>mudstone</i>         |                             | Concrete/Grout Take                     | <i>1.2 m<sup>3</sup></i>         |                |
|   |                         |                             | Tremie/SFA                              | <i>Tremie used</i>               |                |
|   |                         |                             | Date Commenced                          | <i>24/5/22</i>                   |                |
|   |                         |                             | Date Cased                              | <i>24/5/22</i>                   |                |
|   |                         |                             | Date Drilled                            |                                  |                |
|   |                         |                             | Depth of Pile from PPL                  | <i>7m</i>                        |                |
|   |                         |                             | Dipped and checked depth/verticality    | <i>ok</i>                        |                |
|   |                         |                             | Reinforcement Placed                    | <i>24/5/22</i>                   |                |
|   |                         |                             | Set out by M.C.<br>Signed by VE Foreman | <i>[Signature]</i>               |                |
|   |                         |                             | Date Concreted/Grouted                  | <i>24/5/22</i>                   |                |
| CASING/WATER LEVEL DETAILS  |                         |                             |   |                                  | Drawing No Rev |
| CASING  |                         |                             | GROUNDWATER                             |                                  |                |
| Type  | Dia                     | Depth                       | Strike                                  | Sealed                           | Rise           |
|   | <i>508</i>              | <i>1m</i>                   |   | <i>N/A</i>                       | <i>60mm</i>    |
|   |                         |                             |   |                                  |                |
| PILE CHECKED BY <i>A. LESLIE</i>                                  |                         |                             |   |                                  |                |
| CLIENT NAME <i>JMS</i>  |                         |                             |   |                                  |                |
| POSITION <i>ENGINEER</i>  |                         |                             |   |                                  |                |
| SIGNATURE <i>[Signature]</i>                                      |                         |                             |   |                                  |                |
| DATED <i>25/05/22</i>   |                         |                             |   |                                  |                |
| COMMENTS/OBSTRUCTIONS<br><i>change to DPL as instructed by MK</i> |                         |                             |   |                                  |                |

Platform 2

| Site: <i>Castlehead Station</i>         |                             | Job No. <i>220292</i>      |                                      | PILE NO. <i>P21</i>                 |      |
|---|-----------------------------|----------------------------|--------------------------------------|-------------------------------------|------|
| Rig: <i>Alman 709</i>                   |                             | Crew: <i>T. Wellhausen</i> |                                      | Date: <i>24/5/22</i>                |      |
| Time Commenced Piling:                  |                             |                            | Time Finished Piling:                |                                     |      |
| Depth                                   | Strata Description          | Concrete / Grout Pressure  | PILE DETAILS                         |                                     |      |
|   |                             |                            | Pile Diameter                        | <i>250 / 508</i>                    |      |
|   |                             |                            | Spliced Reinforcement                | <i>YES / NO</i>                     |      |
| <i>0-3m</i>                             | <i>white gravel</i>         |                            | Reinforcement Detail                 | <i>6x816 cage 6/10</i>              |      |
|   |                             |                            | Spacer Size                          | <i>75mm</i>                         |      |
| <i>3-5m</i>                             | <i>yellow / grey (sand)</i> |                            | Concrete Cube Ref                    | <i>24/5/22</i>                      |      |
|   |                             |                            | Concrete/Grout Mix Details           | <i>C32/40 DC7</i><br><i>Comm</i>    |      |
|   |                             |                            | Concrete/Grout Take                  | <i>1.2 m<sup>3</sup></i>            |      |
| <i>5-7m</i>                             | <i>red slope</i>            |                            | Tremie/SFA                           | <i>Tremmed</i>                      |      |
|   |                             |                            | Date Commenced                       | <i>24/5/22</i>                      |      |
|   |                             |                            | Date Cased                           | <i>24/5/22</i>                      |      |
|   |                             |                            | Date Drilled                         |                                     |      |
|   |                             |                            | Depth of Pile from PPL               | <i>7m</i>                           |      |
|   |                             |                            | Dipped and checked depth/verticality | <i>OK</i>                           |      |
|   |                             |                            | Reinforcement Placed                 | <i>24/5/22</i>                      |      |
|   |                             |                            | Set out by M.C. Signed by VE Foreman | <i>[Signature]</i>                  |      |
|   |                             |                            | Date Concreted/Grouted               | <del>24/5/22</del> <i>24/5/22</i>   |      |
| CASING/WATER LEVEL DETAILS              |                             |                            | Drawing No Rev                       |                                     |      |
| CASING                                  |                             | GROUNDWATER                |                                      |                                     |      |
| Type                                    | Dia                         | Depth                      | Strike                               | Sealed                              | Rise |
|   | <i>508</i>                  | <i>1m</i>                  |                                      | <input checked="" type="checkbox"/> |      |
| PILE CHECKED BY <i>A. LESLIE</i>        |                             |                            | CLIENT NAME <i>JMS</i>               |                                     |      |
| POSITION <i>ENGINEER</i>                |                             |                            | SIGNATURE <i>[Signature]</i>         |                                     |      |
| DATED <i>25/02/22</i>                   |                             |                            |                                      |                                     |      |
| COMMENTS/OBSTRUCTIONS                   |                             |                            |                                      |                                     |      |
| <i>change to ppl as agreed with m/c</i> |                             |                            |                                      |                                     |      |



Platform 2

| Site: <u>Centralised Station</u>      |                           | Job No. <u>220929</u>     |                                      | PILE NO. <u>P22</u>    |              |
|---------------------------------------|---------------------------|---------------------------|--------------------------------------|------------------------|--------------|
| Rig: <u>Himm 704</u>                  |                           | Crew: <u>T. Whelan/Sm</u> |                                      | Date: <u>25/5/22</u>   |              |
| Time Commenced Piling:                |                           |                           | Time Finished Piling:                |                        |              |
| Depth                                 | Strata Description        | Concrete / Grout Pressure | PILE DETAILS                         |                        |              |
|                                       |                           |                           | Pile Diameter                        | <u>450 / 508</u>       |              |
|                                       |                           |                           | Spliced Reinforcement                | <u>YES/NO</u>          |              |
| <u>0-3m</u>                           | <u>made ground</u>        |                           | Reinforcement Detail                 | <u>6x816 cage to</u>   |              |
|                                       |                           |                           | Spacer Size                          | <u>75mm</u>            |              |
| <u>3-5m</u>                           | <u>yellow / grey clay</u> |                           | Concrete Cube Ref                    | <u>24/5/22</u>         |              |
|                                       |                           |                           | Concrete/Grout Mix Details           | <u>C32/40 DC2 10mm</u> |              |
| <u>5-5.5m</u>                         | <u>med stone</u>          |                           | Concrete/Grout Take                  | <u>1m<sup>3</sup></u>  |              |
|                                       |                           |                           | Tremie/SFA                           | <u>Tremied</u>         |              |
|                                       |                           |                           | Date Commenced                       | <u>24/5/22</u>         |              |
|                                       |                           |                           | Date Cased                           | <u>24/5/22</u>         |              |
|                                       |                           |                           | Date Drilled                         |                        |              |
|                                       |                           |                           | Depth of Pile from PPL               | <u>5.5m</u>            |              |
|                                       |                           |                           | Dipped and checked depth/verticality | <u>OK</u>              |              |
|                                       |                           |                           | Reinforcement Placed                 | <u>24/5/22</u>         |              |
|                                       |                           |                           | Set out by M.C. Signed by VE Foreman | <u>J. Whelan</u>       |              |
|                                       |                           |                           | Date Concreted/Grouted               | <u>24/5/22</u>         |              |
| CASING/WATER LEVEL DETAILS            |                           |                           | Drawing No Rev                       |                        |              |
| CASING                                |                           | GROUNDWATER               |                                      |                        |              |
| Type                                  | Dia                       | Depth                     | Strike                               | Sealed                 | Rise         |
|                                       | <u>506</u>                | <u>1m</u>                 |                                      | <u>NA</u>              | <u>100mm</u> |
|                                       |                           |                           |                                      |                        |              |
| COMMENTS/OBSTRUCTIONS                 |                           |                           | PILE CHECKED BY <u>A. LESLIE</u>     |                        |              |
| <u>cage to pph as agreed with m/c</u> |                           |                           | CLIENT NAME <u>JMS</u>               |                        |              |
|                                       |                           |                           | POSITION <u>ENGINEER</u>             |                        |              |
|                                       |                           |                           | SIGNATURE <u>[Signature]</u>         |                        |              |
|                                       |                           |                           | DATED <u>25/05/22</u>                |                        |              |

Platform 2

| Site: <i>Cashford Station</i>                                  |                         | Job No. <i>220929</i>      |                                      | PILE NO. <i>P23</i>   |      |
|--|-------------------------|----------------------------|--------------------------------------|-----------------------|------|
| Rig: <i>Heimann 704</i>  |                         | Crew: <i>T. Stebbowson</i> |                                      | Date: <i>24/5/22</i>  |      |
| Time Commenced Piling:   |                         |                            | Time Finished Piling:                |                       |      |
| Depth  | Strata Description      | Concrete / Grout Pressure  | PILE DETAILS                         |                       |      |
|  |                         |                            | Pile Diameter                        | <i>450/508</i>        |      |
|  |                         |                            | Spliced Reinforcement                | <i>YES/NO NO</i>      |      |
| <i>0-3m</i>  | <i>made ground</i>      |                            | Reinforcement Detail                 | <i>6xR16 cage F10</i> |      |
|  |                         |                            | Spacer Size                          | <i>75mm</i>           |      |
| <i>3-5m</i>  | <i>yellow/grey clay</i> |                            | Concrete Cube Ref                    | <i>24/5/22</i>        |      |
|  |                         |                            | Concrete/Grout Mix Details           | <i>C32/40 DC20mm</i>  |      |
| <i>5-5.5m</i>  | <i>mudstone</i>         |                            | Concrete/Grout Take                  | <i>1m<sup>3</sup></i> |      |
|  |                         |                            | Tremie/SFA                           | <i>Tremie</i>         |      |
|  |                         |                            | Date Commenced                       | <i>24/5/22</i>        |      |
|  |                         |                            | Date Cased                           | <i>24/5/22</i>        |      |
|  |                         |                            | Date Drilled                         |                       |      |
|  |                         |                            | Depth of Pile from PPL               | <i>5.5m</i>           |      |
|  |                         |                            | Dipped and checked depth/verticality | <i>OK</i>             |      |
|  |                         |                            | Reinforcement Placed                 | <i>24/5/22</i>        |      |
|  |                         |                            | Set out by M.C.                      | <i>T. Stebbowson</i>  |      |
|  |                         |                            | Signed by VE Foreman                 | <i>[Signature]</i>    |      |
|  |                         |                            | Date Concreted/Grouted               | <i>24/5/22</i>        |      |
| CASING/WATER LEVEL DETAILS                                     |                         |                            | Drawing No Rev                       |                       |      |
| CASING   |                         | GROUNDWATER                |                                      |                       |      |
| Type   | Dia                     | Depth                      | Strike                               | Sealed                | Rise |
|  | <i>508</i>              | <i>1m</i>                  | <i>N/A</i>                           |                       |      |
| PILE CHECKED BY <i>A. LESLIE</i>                               |                         |                            | CLIENT NAME <i>JMS</i>               |                       |      |
| POSITION <i>ENGINEER</i>                                       |                         |                            | SIGNATURE <i>[Signature]</i>         |                       |      |
| DATED <i>25/05/22</i>  |                         |                            |                                      |                       |      |
| COMMENTS/OBSTRUCTIONS<br><i>case to PPL as agreed with m/c</i> |                         |                            |                                      |                       |      |

Platform 2

| Site: <u>Cashford Drakon</u>                                     |                         | Job No. <u>220929</u>     |   | PILE NO. <u>P32</u>     |              |
|--|-------------------------|---------------------------|---|-------------------------|--------------|
| Rig: <u>Wimmer 709</u>   |                         | Crew: <u>T. Widdowson</u> |   | Date: <u>24/5/22</u>    |              |
| Time Commenced Piling:   |                         |                           | Time Finished Piling:                   |                         |              |
| Depth  | Strata Description      | Concrete / Grout Pressure | PILE DETAILS                            |                         |              |
|  |                         |                           | Pile Diameter                           | <u>450/508</u>          |              |
|  |                         |                           | Spliced Reinforcement                   | <u>YES/NO</u>           |              |
| <u>0-3m</u>  | <u>made ground</u>      |                           | Reinforcement Detail                    | <u>6x16 cage fp</u>     |              |
|  |                         |                           | Spacer Size                             | <u>75mm</u>             |              |
| <u>3-5m</u>  | <u>yellow/grey clay</u> |                           | Concrete Cube Ref                       | <u>24/5/22</u>          |              |
|  |                         |                           | Concrete/Grout Mix Details              | <u>C82/40 DC2 10mm</u>  |              |
| <u>5-5.5m</u>  | <u>hardstone</u>        |                           | Concrete/Grout Take                     | <u>1.1m<sup>3</sup></u> |              |
|  |                         |                           | Tremie/SFA                              | <u>Tremie</u>           |              |
|  |                         |                           | Date Commenced                          | <u>24/5/22</u>          |              |
|  |                         |                           | Date Cased                              | <u>24/5/22</u>          |              |
|  |                         |                           | Date Drilled                            |                         |              |
|  |                         |                           | Depth of Pile from PPL                  | <u>5.5m</u>             |              |
|  |                         |                           | Dipped and checked depth/verticality    | <u>OK</u>               |              |
|  |                         |                           | Reinforcement Placed                    | <u>24/5/22</u>          |              |
|  |                         |                           | Set out by M.C.<br>Signed by VE Foreman |                         |              |
|  |                         |                           | Date Concreted/Grouted                  | <u>24/5/22</u>          |              |
| CASING/WATER LEVEL DETAILS                                       |                         |                           | Drawing No Rev                          |                         |              |
| CASING   |                         | GROUNDWATER               |   |                         |              |
| Type   | Dia                     | Depth                     | Strike                                  | Sealed                  | Rise         |
| <u>Soft</u>  | <u>1m</u>               | <u>3m</u>                 | <u>NA</u>                               | <u>NA</u>               | <u>100mm</u> |
|  |                         |                           |   |                         |              |
| PILE CHECKED BY <u>A. LESLIE</u>                                 |                         |                           | CLIENT NAME <u>JMS</u>                  |                         |              |
| POSITION <u>ENGINEER</u>   |                         |                           | SIGNATURE                               |                         |              |
| DATED <u>25/05/22</u>  |                         |                           |   |                         |              |
| COMMENTS/OBSTRUCTIONS<br><u>Cage to ppl as instructed by M.C</u> |                         |                           |   |                         |              |

Platform 2

|  |                           |                            |   |                            |      |
|--|---------------------------|----------------------------|---|----------------------------|------|
| Site: <i>Cushlewood Station</i>                                  |                           | Job No. <i>220929</i>      |   | PILE NO. <i>P24</i>        |      |
| Rig: <i>Heimann 700g</i>   |                           | Crew: <i>T. Wicklowson</i> |   | Date: <i>24/5/22</i>       |      |
| Time Commenced Piling:   |                           |                            | Time Finished Piling:                   |                            |      |
| Depth  | Strata Description        | Concrete / Grout Pressure  | PILE DETAILS                            |                            |      |
|  |                           |                            | Pile Diameter                           | <i>450 / 508</i>           |      |
|  |                           |                            | Spliced Reinforcement                   | <i>YES/NO</i>              |      |
| <i>0-3m</i>  | <i>made ground</i>        |                            | Reinforcement Detail                    | <i>6x816 cage #10</i>      |      |
|  |                           |                            | Spacer Size                             | <i>75mm</i>                |      |
| <i>3-5m</i>  | <i>yellow / grey clay</i> |                            | Concrete Cube Ref                       | <i>24/5/22</i>             |      |
|  |                           |                            | Concrete/Grout Mix Details              | <i>C32/40<br/>DC2 10mm</i> |      |
| <i>5-5.5m</i>  | <i>mudstone</i>           |                            | Concrete/Grout Take                     | <i>1 m<sup>3</sup></i>     |      |
|  |                           |                            | Tremie/SFA                              | <i>removed</i>             |      |
|  |                           |                            | Date Commenced                          | <i>24/5/22</i>             |      |
|  |                           |                            | Date Cased                              | <i>24/5/22</i>             |      |
|  |                           |                            | Date Drilled                            |                            |      |
|  |                           |                            | Depth of Pile from PPL                  | <i>5.5m</i>                |      |
|  |                           |                            | Dipped and checked depth/verticality    | <i>OK</i>                  |      |
|  |                           |                            | Reinforcement Placed                    | <i>24/5/22</i>             |      |
|  |                           |                            | Set out by M.C.<br>Signed by VE Foreman | <i>[Signature]</i>         |      |
|  |                           |                            | Date Concreted/Grouted                  | <i>24/5/22</i>             |      |
| CASING/WATER LEVEL DETAILS                                       |                           |                            | Drawing No Rev                          |                            |      |
| CASING   |                           | GROUNDWATER                |   |                            |      |
| Type   | Dia                       | Depth                      | Strike                                  | Sealed                     | Rise |
|  | <i>508</i>                | <i>1m</i>                  | <i>W/A</i>                              |                            |      |
| PILE CHECKED BY <i>A. LESLIE</i>                                 |                           |                            |   |                            |      |
| CLIENT NAME <i>JMS</i>   |                           |                            |   |                            |      |
| POSITION <i>ENGINEER</i>   |                           |                            |   |                            |      |
| SIGNATURE <i>[Signature]</i>                                     |                           |                            |   |                            |      |
| DATED <i>25/05/22</i>  |                           |                            |   |                            |      |
| COMMENTS/OBSTRUCTIONS<br><i>cage to PPL as instructed by m/c</i> |                           |                            |   |                            |      |