

No.	Unit Name
23	National Grid Compound
24	Incoming Scrap Yard Electrical Building
25	Scrap Storage & Processing Yard
26	Overflow Scrapyard
27	Non Ferrous Processing Area
28	Scanning Facilities
29	Railway Weigh Bridge

Outline Scrap - Phase 2		Maximum Dimensions	
Name		W	L
Unit 2	Natural GWC Compound	P	200m 100m
	Incoming Scrap Test Electrical Building	B	35m 25m 1m
	Office	B	40m 20m 20m
Unit 2a	Car Park	E	25m 25m 0m
	Disabled Car Park	E	3.6m 1.5m 0m
	Workshop	B	70m 25m 25m
	Scrap Storage	E	varies varies 7m
	Pre-Shader Feed Stock Pit	E	25m 20m 6m
	Pre-Shader	P	12m 11.3m 5m
	Shader Feed Stock Pit	E	60m 32m 9m
	Shader (Block 1 - Infeed Conveyor)	B	30m 10m 10m
	Shader (Block 2 - Hammer Mill)	B	40m 40m 20m
	Shader (Block 3 - Air Separation)	B	25m 125m 22m
Unit 2b	Shader (Block 4 - Poling & Stack)	B	60m 125m 22m
	Acoustic Mitigation Barrier	B	800m 5m 1m
	Lorry Tipping Area	E	150m 50m 70m
	HRSO Shader	P	50m 50m 70m
	Shed	P	58.7m 53m 70m
	Overflow Scrap Bay 01	E	150m 100m 70m
Unit 2c	Overflow Scrap Bay 02	E	80m 68m 70m
	Existing Reprocessing Building	B	115m 85m 70m
Unit 2d	New Ferrous Processing Area	E	67m 125m 70m
	Scanning Facilities	B	15m 15m 15m
	Railway Weigh Bridge	B	15m 15m 15m

Minimum building dimensions to be 0m to indicate not constructing.

P06	Acoustic Barrier Amended	15/10/2021
P06	Updated following NPT comments	08/09/2021
P04	Issue to RPT	23/08/2021
P03	Revised Boundary following Client Comments	14/08/2021
P02	Updated following comments from Planning	15/07/2021
P01	Planning Issue	27/06/2021
P00	Initial Issue	20/06/2021
REV DESCRIPTION DRAWN BY CHECKED BY APPROVED BY DATE		
RIBA Plan of Work WORKSTAGE		LEVEL OF MODEL DEFINITION (LoD)
Stage 3 - Spatial Coordination		LoD 3 - Approximate Model
PURPOSE OF ISSUE - SUITABLE FOR ...		STATUS OR SUITABILITY
Information		Status S2 - Delivery Team Information



CARDIFF 029 2052 8140
LONDON 0207 138 3560
WREXHAM 01978 357 887
www.lawray.co.uk
CLIENT
Tata Steel UK Ltd.

PROJECT TITLE
EAF PROJECT, PORT TALBOT

DRAWING TITLE
Proposed Site Plan - Indicative Outline Plan - Phase 1

PROJECT No 20007	SCALE @ A0 As indicated
DRAWING No 861218.280 +42326.01 91-28-1027880	REVISION
1102: Project - Originator - Volume - Level - Type - Rule - Number 12002: Project - Originator - Functional - Special - Form - Discipline - Number Division - Discipline	
EAF-LAW-X-X-DR-A-900010	P06
DO NOT SCALE	Any discrepancy or query concerning this drawing should be referred to the Architect Copyright © LAWRY LIMITED Registered Office: Ousemeads/Springville, 1 Caw Cawley, Tongwynlais, CARDIFF CF15 3TA Reg. Co. No. 27247078, VAT Reg. No. 154 2149 8

Appendix C

TECHNICAL BACKGROUND

C 1. Desk Study

Aquifer designation and Source protection zones (England and Wales)

Principal aquifer: layers of rock or drift deposit that have high intergranular and/or fracture permeability (usually providing a high level of water storage). They may support water supply and/or river base flow on a strategic scale.

Secondary A aquifer: permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

Secondary B aquifer: predominantly lower permeability layers that may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering.

Secondary undifferentiated aquifer: it has not been possible to attribute either a category A or B to a rock type. In most cases this means that it was previously designated as both a minor and non-aquifer in different locations owing to the variable characteristics.

Unproductive' strata: low permeability with negligible significance for water supply or river base flow.

The EA generally adopts a three-fold classification of source protection zones (SPZ) surround abstractions for public water supply. The Site is situated in an area defined as follows:

- Zone 1 or the 'inner protection zone' is located immediately adjacent to the groundwater source and is based on a 50-day travel time from any point below the water table to the source. It is designed to protect against the effects of human activity and biological/chemical contaminants that may have an immediate effect on the source
- Zone 2 or the 'outer protection zone' is defined by a 400-day travel time from a point below the water table to the source. The travel time is designed to provide delay and attenuation of slowly degrading pollutants
- Zone 3 or the 'total catchment' is the area around the source within which all groundwater recharge is presumed to be discharged at the source.

Preliminary risk assessment methodology

LCRM outlines the framework to be followed for risk assessment in the UK. The framework is designed to be consistent with UK legislation and policies including planning. An outline conceptual model should be formed at the preliminary risk assessment stage that collates all the existing information pertaining to a site in text, tabular or diagrammatic form. The outline conceptual model identifies potentially complete (termed possible) contaminant linkages (contaminant–pathway–receptor) and is used as the basis for the design of the site investigation. The outline conceptual model is updated as further information becomes available, for example as a result of the site investigation.

Production of a conceptual model requires an assessment of risk to be made. Risk is a combination of the likelihood of an event occurring and the magnitude of its consequences. Therefore, both the

likelihood and the consequences of an event must be taken into account when assessing risk. RSK has adopted guidance provided in CIRIA C552 for use in the production of conceptual models.

The likelihood of an event can be classified on a four-point system using the following terms and definitions based on CIRIA C552:

- highly likely: the event appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution
- likely: it is probable that an event will occur or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term
- low likelihood: circumstances are possible under which an event could occur, but it is not certain even in the long term that an event would occur and it is less likely in the short term
- unlikely: circumstances are such that it is improbable the event would occur even in the long term.

RSK also adopt a 'very unlikely' probability to account for where there may be increased certainty over whether an event is probable in the long term.

The severity can be classified using a similar system also based on CIRIA C552. The terms and definitions relating to severity are:

- severe: short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. Short-term risk to an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000)
- medium: chronic damage to human health ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000), pollution of sensitive water resources, significant change in an ecosystem or organism forming part of that ecosystem
- mild: pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000). Damage to sensitive buildings, structures or the environment
- minor: harm, not necessarily significant, but that could result in financial loss or expenditure to resolve. Non-permanent human health effects easily prevented by use of personal protective clothing. Easily repairable damage to buildings, structures and services.

Once the probability of an event occurring and its consequences have been classified, a risk category can be assigned according to the following table.

		Consequences			
		Severe	Medium	Mild	Minor
Probability	Highly likely	Very high	High	Moderate	Moderate/low
	Likely	High	Moderate	Moderate/low	Low
	Low likelihood	Moderate	Moderate/low	Low	Very low
	Unlikely	Moderate/low	Low	Very low	Very low
	Very Unlikely	Low	Very Low	Negligible	Negligible

Definitions of these risk categories are as follows together with an assessment of the further work that may be required:

- very high: there is a high probability that severe harm could occur or there is evidence that severe harm is currently happening. This risk, if realised, could result in substantial liability; urgent investigation and remediation are likely to be required
- high: harm is likely to occur. Realisation of the risk is likely to present a substantial liability. Urgent investigation is required. Remedial works may be necessary in the short term and are likely over the long term
- moderate: it is possible that harm could arise, but it is unlikely that the harm would be severe and it is more likely that the harm would be relatively mild. Investigation is normally required to clarify the risk and determine the liability. Some remedial works may be required in the longer term
- low: it is possible that harm could occur, but it is likely that if realised this harm would at worst normally be mild
- very low: there is a low possibility that harm could occur and if realised the harm is unlikely to be severe.

H2 Site Investigation Methodology

Note delete this section for a desk study report.

Ground gas monitoring

An infrared gas meter was used to measure gas flow, concentrations of carbon dioxide (CO₂), methane (CH₄) and oxygen (O₂) in percentage by volume, while hydrogen sulphide (H₂S) and carbon monoxide (CO) were recorded in parts per million. Initial and steady state concentrations were recorded. In addition, during the first monitoring round, all wells were screened with a PID to establish if there are any interferences and cross-sensitivity of other hydrocarbons with the infrared gas meter.

Low flow groundwater sampling

Groundwater samples were retrieved using a low-flow purging and sampling methodology

The low-flow method relies on moving groundwater through the well screen at approximately the same rate as it flows through the geological formation. This results in a significant reduction in the volume of water extracted before sampling and significantly reduces the amount of disturbance of the water in the monitoring well during purging and sampling. Drawdown levels in the monitoring well and water quality indicator parameters (pH, temperature, electrical conductivity, redox potential and dissolved oxygen) are monitored during low-flow purging and sampling, with stabilisation indicating that purging is complete and sampling can begin. As the flow rate used for purging, in most cases, is the same or only slightly higher than the flow rate used for sampling, and because purging and sampling are conducted as one continuous operation in the field, the process is referred to as low-flow purging and sampling.

Reuse of suitable materials

The Definition of Waste: Development Industry Code of Practice (CL:AIRE, 2011) (CoP) was developed in consultation with the Environment Agency and development industry to enable the re-use of materials under certain scenarios and subject to demonstrating that specific criteria are met. The current reuse scenarios covered by the CoP comprise

- reuse on the site of origin (with or without treatment)
- direct transfer of clean and natural soils between sites
- use in the development of land other than the site of origin following treatment at an authorised Hub site (including a fixed soil treatment facility).

The importation of made ground soils (irrespective of contamination status) or crushed demolition materials is not permitted currently under the CoP and requires either a standard rules environmental permit or a U1 waste exemption (see below).

In the context of excavated materials used on-sites undergoing development, four factors are considered to be of particular relevance in determining if the material is a waste or when it ceases to be waste:

- the aim of the Waste Framework Directive is not undermined, i.e. if the use of the material will create an unacceptable risk of pollution of the environment or harm to human health it is likely to be waste
- the material is certain to be used
- the material is suitable for use both chemically and geotechnically
- only the required quantity of material will be used.

The CoP requires the preparation of a materials management plan (MMP) that confirms the above factors will be met. This plan needs to be reviewed by a 'Qualified Person' (QP) who will then issue a declaration form to the EA. As the project progresses, data must be collated and on completion a verification report produced that shows the MMP was followed and describes any changes.

The MMP establishes whether specific materials are classified as waste and how excavated materials will be treated and/or reused in line with the CoP. The MMP is likely to form part of the site waste management plan.

Appendix D

EXPLORATORY HOLE RECORDS (INC PROJECT CRONUS)

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH301
Contract Ref: 315531	Start: 16.07.24 End: 22.07.24	Ground Level: ---	National Grid Co-ordinate: E:277248.0 N:186672.0		Sheet: 1 of 3

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
0.50 0.50	1	ES PID	0.0ppm			ASPHALT. MADE GROUND: Greyish brown sandy silty angular fine to coarse GRAVEL of concrete, brick and metal. Sand is fine to coarse. . . . Service located in north end of the inspection pit at 0.25m depth. MADE GROUND: Pale brown and grey gravelly fine to coarse SAND. Frequent boulders (upto 0.5m wide) and cobbles of concrete with rebar and bricks.	0.20 0.50	▲▲▲
2.00 2.00	2	ES PID	0.0ppm				(2.50)	
3.50-4.00 3.50 3.50	1 3	B ES PID	0.0ppm					
4.00-4.45 4.00-4.45	1 2	SPT D	N=10					
4.50-5.00	3	B						
5.00-5.45 5.00-5.45 5.00 5.00-5.50 5.00 5.50-6.00	2 4 4 5 5 6	SPT(c) D ES B PID B	N=14 0.0ppm					
6.00-6.45 6.00-6.45 6.00-6.50	3 7 8	SPT(c) D B	N=11			Medium dense becoming loose dark grey fine to coarse SAND. (BLOWN SAND)	(6.00)	
7.00-7.50	9	B						
7.50-7.95 7.50-7.95	4 10	SPT D	N=4					
8.50-9.00	11	B					9.00	

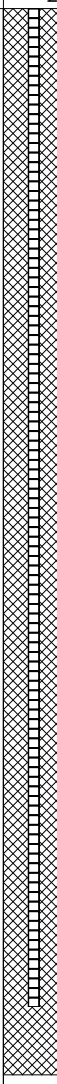
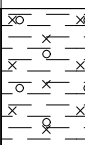
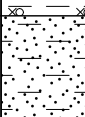
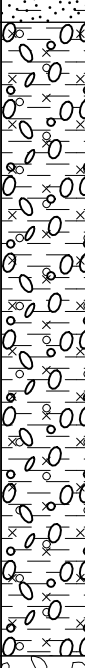
Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit machine dug to 3.0m depth. 300mm diameter pipe installed prior to backfilling to allow cable percussive drilling to commence. 3. Groundwater encountered at 2.5m depth.
Method Used: Inspection pit + Cable Percussion						Plant Used: Dando 3000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Jagan Raj			Checked By:  AGS

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH301
Contract Ref:	Start: 16.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 22.07.24	---	E:277248.0 N:186672.0	2 of 3

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend		
	No	Type	Results							
9.00-9.45 9.00 9.00 9.45-9.60	12 5 13	U ES PID D	0.0ppm			Firm greenish grey sandy silty CLAY. Sand is fine to coarse. (TIDAL FLAT DEPOSITS) ... Frequent pockets of brown pseudo fibrous peat.	(6.00)			
10.00-10.50	14	B	N=11			10.50-10.95 10.50-10.95			5 15	SPT(c) D
11.50-12.00	16	B								
12.00-12.45	17	U								
12.45-12.60	18	D								
13.00-13.50	19	B	N=5			13.50-13.95 13.50-13.95			6 20	SPT(c) D
14.50-15.00	21	B								
15.00-15.45	22	U								
15.45-15.60	23	D								
16.00-16.50	24	B	N=11			16.50-16.95 16.50-16.95			7 25	SPT(c) D
17.50-18.10	26	B								

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks				
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)					
									All dimensions in metres	Scale: 1:50			
Method Used:	Inspection pit + Cable Percussion			Plant Used:	Dando 3000		Drilled By:	CJA	Logged By:	Jagan Raj	Checked By:		

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH301
Contract Ref: 315531	Start: 16.07.24 End: 22.07.24	Ground Level: ---	National Grid Co-ordinate: E:277248.0 N:186672.0		Sheet: 3 of 3

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
	No	Type	Results					
18.10-18.37	8	SPT(c)	5,8/20,30 for 40mm			Firm greyish brown very gravelly silty CLAY. Gravel is subrounded to rounded fine to coarse of mudstone. (TIDAL FLAT DEPOSITS) <i>(stratum copied from 15.00m from previous sheet)</i>	19.00	
18.10-18.36	27	D						
19.00-19.50	28	B	N=20			Recovered as medium dense grey brown clayey fine to coarse SAND and subangular to subrounded fine to coarse GRAVEL of mudstone. (TIDAL FLAT DEPOSITS)	(0.81)	
19.50-19.95	9	SPT(c)						
19.50-19.81	29	D						
			N=31			Firm greyish brown very gravelly silty CLAY with moderate cobble content. Gravel is subrounded to rounded fine to coarse mudstone. Cobbles are subrounded to rounded mudstone (15cm). (Weathered South Wales Middle Coal Measures Formation).	(4.19)	
22.50-22.95	10	SPT(c)						
24.00-24.45	11	SPT(c)	N=32	Dense greyish brown silty subangular to subrounded fine to coarse GRAVEL and subrounded to rounded COBBLES of mudstone. (Weathered South Wales Middle Coal Measures Formation).	(0.60)			
24.00-24.50	37	B						
24.60-24.75	12	SPT(c)	25/50 for 75mm	Recovered as very dense yellowish brown and grey subangular to subrounded fine to coarse GRAVEL of sandstone. (Weathered South Wales Middle Coal Measures Formation).				
24.60-24.63	38	D						
				... Possible BOULDER of sandstone.				
				Groundwater encountered at 2.5m bgl, terminated due to refusal at 25m bgl and installed with combined gas and groundwater monitoring standpipe.				

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)						
									All dimensions in metres	Scale: 1:50				
Method Used:	Inspection pit + Cable Percussion			Plant Used:	Dando 3000		Drilled By:	CJA		Logged By:	Jagan Raj	Checked By:		

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH302
Contract Ref: 315531	Start: 05.08.24 End: 07.08.24	Ground Level: ---	National Grid Co-ordinate: E:277244.0 N:186703.0		Sheet: 1 of 1

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
0.40-0.90 0.50 0.50	B1 ES1	B ES PID	0.0ppm			Grey strong CONCRETE. 75% aggregates of subrounded to subangular fine to medium of mudstone. 1 to 3% small voids. No reinforcement identified.	0.20	
1.00 1.00 1.20-1.65	ES2 1	ES PID SPT(c)	0.0ppm N=35			MADE GROUND. Dense becoing medium dense greyish brown gravelly silty fine to coarse SAND with low cobble content. Gravel is angular to subrounded fine to coarse of slag, mudstone and flint. Cobbles are angular of slag.	(3.40)	
1.50 1.50	ES3	ES PID	0.0ppm					
2.00-2.45	2	SPT(c)	N=21					
2.50-3.10 2.50 2.50	B3 ES4	B ES PID	0.0ppm					
3.00-3.45	3	SPT(c)	N=14					
3.50-4.10 3.60 3.60	B4 ES5	B ES PID	0.0ppm			Medium dense occasionally loose greyish brown silty fine to coarse SAND. (Tidal Flats Deposits)	3.60	
4.00-4.45	4	SPT(c)	N=15					
4.50-5.00	B5	B						
5.00-5.45	5	SPT(c)	N=4			... Becomes greyish brown mottled orangish brown at 5.0m bgl.	(2.90)	
5.50-6.00 5.50 5.50	B6 ES6	B ES PID	0.0ppm					
6.00-6.45	6	SPT(c)	N=8					
6.50	B7	B				Firm greyish brown slightly sandy silty CLAY. Sand is fine to coarse. (Tidal Flats Deposits)	6.50 (0.80)	
						Borehole terminated at 7.30 m bgl due to ferrous anomaly (UXO risk).	7.30	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit hand dug to 1.20 m depth. 3. No groundwater encountered.
Method Used: Inspection pit + Cable Percussion						Plant Used: Dando 4000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Cameron Little			Checked By:  AGS

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH302A
Contract Ref: 315531	Start: 19.09.24	Ground Level: ---	National Grid Co-ordinate: ---	Sheet: 1 of 4	
	End: 25.09.24				

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
0.20		PID	0.0ppm			CONCRETE.	0.20	
0.30-0.90	1	B				MADE GROUND: Dark greyish brown sandy subangular to subrounded fine to coarse GRAVEL of mudstone, slag and concrete. Occasional cobbles and rare boulders of mudstone. Sand is fine to coarse.		
0.50	1	ES						
1.20-1.35	1	SPT(c)	25/50 for 75mm				(2.40)	
1.50-2.00	2	ES						
1.50-2.00	2	B						
2.00-2.23	2	SPT(c)	6,9/50 for 75mm				2.60	
2.60-3.00	3	ES				Loose light greyish brown slightly gravelly silty fine to medium SAND with occasional cobbles of mudstone. Gravel is angular to subrounded mudstone and slag. (Tidal Flat Deposits) ... Possible that gravel and cobbles pushed down from above by drilling process.		
2.60-3.00	3	B					(0.90)	
2.60	3	PID	0.1ppm					
3.00-3.45	3	SPT(c)	N=9				3.50	
3.50-4.00	4	ES				Loose greyish light brown fine to medium SAND. (Tidal Flat Deposits)		
3.50-4.00	4	B					(2.00)	
3.50	4	PID	0.1ppm					
4.00-4.45	4	SPT(c)	N=6					
5.00-5.45	5	SPT(c)	N=5				5.50	
5.50-6.00	6	B				Loose dark greyish brown fine to medium SAND. (Tidal Flat Deposits)		
5.50	6	PID	0.0ppm				(0.90)	
6.00-6.45	6	SPT(c)	N=4				6.40	
6.40-7.00	7	B				Soft to firm light grey silty CLAY. (Tidal Flat Deposits)		
6.40	7	PID	0.0ppm				(2.10)	
7.50-8.00	8	U	14 blows				8.50	
8.50-9.00	9	B				Description on next sheet		
8.50	9	PID	0.0ppm					

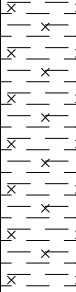
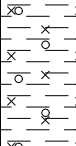
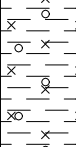
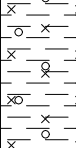
Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Groundwater encountered at 2.18m depth at start of shift 23/09. 3. Concrete cored to 0.20m bgl on 19/09/24 and borehole advanced with cable percussion.
Method Used: Cable Percussion						Plant Used: Dando 4000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Jagan Raj			Checked By:  AGS

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH302A
Contract Ref:	Start: 19.09.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 25.09.24	---	---	2 of 4

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
	No	Type	Results					
9.00-9.45 9.00-9.45	7 10	SPT(c) D	N=4			Very soft to soft light grey slightly sandy silty CLAY with occasional pockets of organic plant matter and petrified wood. Sand is fine. (Tidal Flat Deposits) <i>(stratum copied from 8.50m from previous sheet)</i>	(2.20)	
10.00-10.50 10.00	11	B PID	0.0ppm					
10.50-10.95 10.70	12	U PID	41 blows 0.1ppm					
10.95-11.05 11.10-11.60	13 14	D B				Soft to firm dark brown mottled grey slightly clayey fibrous PEAT. (Tidal Flat Deposits)	(2.30)	
12.00-12.45 12.00-12.45	8 15	SPT(c) D	N=7					
13.00-13.50 13.00	16	B PID	0.1ppm					
13.50-13.95	17	U	24 blows			Very soft grey to dark greyish brown silty CLAY. (Tidal Flat Deposits) ... Rare organic plant matter.	13.00	
13.95-14.05	18	D						
14.50-15.00	19	B						
15.00-15.45 15.00-15.45	9 20	SPT(c) D	N=1				(7.00)	
16.00-16.50	21	B						
16.50-16.95	22	U	31 blows					
17.50-18.00	23	B				... Dark greyish brown below 17.0m bgl.		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									All dimensions in metres	Scale: 1:50
Method Used: Cable Percussion			Plant Used: Dando 4000			Drilled By: CJA		Logged By: Jagan Raj	Checked By: 	

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH302A
Contract Ref:	Start: 19.09.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 25.09.24	---	---	3 of 4

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend			
	No	Type	Results								
18.00-18.45 18.00-18.45	10 24	SPT(c) D	N=4			Very soft grey to dark greyish brown silty CLAY. (Tidal Flat Deposits) . . . Rare organic plant matter.(<i>stratum copied from 13.00m from previous sheet</i>)					
19.00-19.50	25	B	21 blows								
19.50-19.95	26	U									
20.50-21.00	27	B									
21.00-21.45	11	SPT(c)							N=28		
20.50-21.00	27	B				Dark greyish brown silty subrounded to rounded fine to coarse GRAVEL of mudstone. (Weathered South Wales Middle Coal Measures Formation)	(1.00)				
21.00-21.45	11	SPT(c)	N=28								
22.00-22.50	28	B	Very stiff dark greyish brown gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse mudstone. (Weathered South Wales Middle Coal Measures Formation)						21.00		
22.50-22.95	12	SPT(c)									N=40
23.50-24.00	29	B									
24.00-24.38	13	SPT(c)				N=65					
25.00-25.50	30	B									
25.50-25.95	14	SPT(c)	N=65								
											

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									All dimensions in metres	Scale: 1:50
Method Used: Cable Percussion			Plant Used: Dando 4000			Drilled By: CJA		Logged By: Jagan Raj	Checked By: 	

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH302A
Contract Ref:	Start: 19.09.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 25.09.24	---	---	4 of 4

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
	No	Type	Results					
27.00-27.15	15	SPT(c)	25/50 for 75mm			... Probable boulder. Refusal on probable boulder at 27.3m bgl.	27.45	
27.30-27.45	16	SPT(c)	25/100 for 75mm					

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									All dimensions in metres	Scale: 1:50
Method Used: Cable Percussion				Plant Used: Dando 4000		Drilled By: CJA		Logged By: Jagan Raj	Checked By: 	

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH303A
Contract Ref: 315531	Start: 12.08.24	Ground Level: ---	National Grid Co-ordinate: E:277232.0 N:186730.0		Sheet: 1 of 4
End: 22.08.24					

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thick ness)	Material Graphic Legend
	No	Type	Results					
0.00-0.05						ASPHALT	0.05	
0.05-0.55						Strong grey CONCRETE. 75% aggregate of angular to subrounded fine to coarse flint. Approximately 2 to 3% small voids.	(0.50)	
0.55-0.80						MADE GROUND. Very dense dark grey sandy silty angular fine to coarse GRAVEL of concrete and slag with medium cobble content. Cobbles are angular of slag.	0.80	
0.80-1.20	1	ES B					(0.95)	
1.20-1.40	1	SPT(c)	7,18/39,11 for 15mm				1.50	
1.50-2.00	2	B				MADE GROUND. Dark grey yellowish grey angular slightly gravelly COBBLES of slag and concrete. Gravel is angular fine to coarse of slag and concrete.	(0.50)	
2.00-2.17	2	SPT(c)	17,8/50 for 75mm				2.00	
2.00-2.70	3	B				MADE GROUND. Very dense brown angular to subangular fine to coarse GRAVEL of wood with a slight hydrocarbon odour. (Possible railway sleeper)	(0.70)	
2.70-3.00	4	B					2.70	
3.00-3.45	3	SPT(c)	N=4			Loose and occasionally medium dense brown silty fine to medium SAND. (Tidal Flat Deposits)		
3.50-4.00	5	B						
4.00-4.45	4	SPT(c)	N=8					
4.50-5.00	6	B					(4.00)	
5.00-5.45	5	SPT(c)	N=14					
5.50-6.00	7	B						
6.00-6.45	6	SPT(c)	N=7					
6.70-7.50	8	B				Very soft to soft grey sandy silty CLAY. Sand is fine. (Tidal Flat Deposits)	6.70	
7.50-7.95	9	U	10 blows 100% recovery					
8.50-9.00	10	B					(4.10)	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Position concrete cored to 0.55m bgl. Inspection pit hand dug from 0.55m to 0.90m bgl. 3. Borehole advanced with cable percussion from 0.90m bgl.
Method Used: Inspection pit + Cable Percussion						All dimensions in metres			Scale: 1:50
Plant Used: Dando 4000			Drilled By: CJA			Logged By: Cameron Little		Checked By:  AGS	



BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH303A
Contract Ref: 315531	Start: 12.08.24 End: 22.08.24	Ground Level: ---	National Grid Co-ordinate: E:277232.0 N:186730.0		Sheet: 2 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
9.00-9.45 9.00-9.45	7 11	SPT D	N=2			Very soft to soft grey sandy silty CLAY. Sand is fine. (Tidal Flat Deposits) <i>(stratum copied from 6.70m from previous sheet)</i>		
10.00-10.50	12	B						
10.50-10.95	13	U	17 blows 100% recovery				10.80	
10.95-11.05	14	D				Firm orangish brown to dark brown fibrous PEAT with a strong organic odour. (Tidal Flat Deposits)		
11.50-12.00	15	B					(1.65)	
12.00-12.45 12.00-12.45	8 16	SPT D	N=9				12.45	
12.80-13.50	17	B				Soft to firm dark grey silty CLAY. (Tidal Flat Deposits) ... Occasional pockets of pseudo-fibrous peat between 12.45m and 15.0m bgl.		
13.50-13.95	18	U	12 blows 100% recovery					
14.50-15.00	19	B						
15.00-15.45 15.00-15.45	9 20	SPT D	N=2			... Becomes very soft at 15.0m bgl.		
16.00-16.50	21	B						
16.50-16.95	22	U	10 blows 100% recovery					
16.95-17.05	23	D						
17.50-18.00	24	B						

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks				
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)					
									4. Groundwater encountered at 2.64m depth.				
Method Used:		Inspection pit + Cable Percussion		Plant Used: Dando 4000			Drilled By: CJA		Logged By: Cameron Little		Checked By: 		

GINT LIBRARY_V10_01.GLB LibVersion: v8_07 | Log COMPOSITE LOG - A4P | 315531 PORT TALBOT.GPJ - v10_01.
RSK Environment Ltd, The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117 947 1006 Fax: 0117 947 1009 Web: www.rsk.co.uk | 30/01/25 - 14:47 | JB17 |

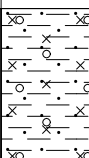
Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH303A
Contract Ref:	Start: 12.08.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 22.08.24	---	E:277232.0 N:186730.0	3 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
18.00-18.45 18.00-18.45	10 25	SPT D	N=4			Soft to firm dark grey silty CLAY. (Tidal Flat Deposits) ... Occasional pockets of pseudo-fibrous peat between 12.45m and 15.0m bgl. <i>(stratum copied from 12.45m from previous sheet)</i>	18.70	
18.70-19.50 19.00-19.45	26 33	B U	21 blows			Very dense multicoloured (dark grey, greyish brown, grey and dark pink) slightly sandy silty subangular to subrounded fine to coarse GRAVEL of mudstone, siltstone and occasional sandstone. Sand is fine to coarse. (Glaciofluvial Deposits)	(3.30)	
19.50-19.88	11	SPT(c)	10,14/26,21,3 for 75mm					
20.50-21.00	27	B						
21.00-21.38	12	SPT(c)	9,12/19,22,9 for 75mm					
22.00-22.50	28	B						
22.50-22.95	13	SPT(c)	N=32			Very stiff to hard dark brownish grey to dark grey slightly sandy very gravelly silty CLAY. Sand is fine. Gravel is subangular to subrounded fine to coarse of mudstone and siltstone. (Weathered South Wales Middle Coal Measures Formation) ... Poor recovery between 22.0m and 22.50m bgl.	22.00	
23.50-24.00	29	B						
24.00-24.30	14	SPT(c)	25/18,19,13 for 75mm					
25.00-25.50	30	B						
26.50-27.00	31	B						

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks		
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)			
										All dimensions in metres	
Method Used:		Inspection pit + Cable Percussion		Plant Used:		Dando 4000		Drilled By:		CJA	
								Logged By:		Cameron Little	
										Checked By:	
										1:50	
										AGS	

BOREHOLE LOG

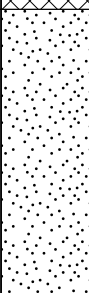
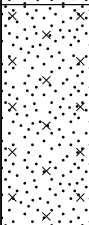
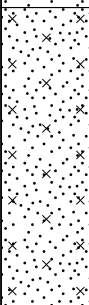
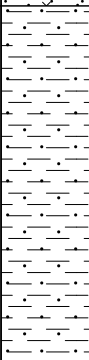
Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH303A
Contract Ref: 315531	Start: 12.08.24 End: 22.08.24	Ground Level: ---	National Grid Co-ordinate: E:277232.0 N:186730.0		Sheet: 4 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
27.00-27.45	15	SPT(c)	N=24			Very stiff to hard dark brownish grey to dark grey slightly sandy very gravelly silty CLAY. Sand is fine. Gravel is subangular to subrounded fine to coarse of mudstone and siltstone. (Weathered South Wales Middle Coal Measures Formation) ... Poor recovery between 22.0m and 22.50m bgl.(stratum copied from 22.00m from previous sheet)	28.10	
28.10-28.50	32	B				MUDSTONE. Recovered as dark grey angular to subangular fine to coarse gravel of mudstone. (South Wales Middle Coal Measures Formation)	(0.85)	
28.50-28.80	16	SPT(c)	6,16/47,53 for 75mm				28.95	
						Groundwater encountered at 2.64m depth. Terminated at 28.50m bgl due to refusal on bedrock. Backfilled with bentonite and reinstated with concrete upon completion.		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									</	

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel			Borehole: BH304		
Contract Ref: 315531		Start: 25.07.24 End: 09.08.24	Ground Level: 8.42		National Grid Co-ordinate: E:277232.9 N:186644.3		Sheet: 1 of 9	

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)						
0.50 0.50	1	ES PID	0.0ppm							ASPHALT MADE GROUND. Dark brown gravelly fine to coarse SAND. Gravel is angular fine to coarse of slag and roadstone.		0.10 (0.50) 0.60	
1.00 1.00	2	ES PID	0.0ppm							Loose yellow brown fine to medium SAND. (Blown Sand)		(1.90)	
1.70-2.00	1	B								... Becomes brown from 1.70m bgl.		2.50	
2.00-2.45	20	SPT(c)	N=6										
2.50-3.00 2.50 2.50	2 3	B ES PID	0.0ppm							Loose brown silty fine to coarse SAND. (Tidal Flat Deposits)		(1.50)	
3.00-3.45 3.20-4.00	21 3	SPT(c) B	N=6							... Becomes greyish brown from 3.50m bgl.		4.00	
4.00-4.45	22	SPT(c)	N=6							Loose dark greenish grey silty fine to coarse SAND. (Tidal Flat Deposits)		(2.00)	
4.50-5.00	4	B										6.00	
5.00-5.45	23	SPT(c)	N=4										
5.50-6.00	5	B											
6.00-6.45	24	SPT(c)	N=2							Very soft greyish brown sandy CLAY. Sand is fine to coarse. (Tidal Flat Deposits)		(2.50)	
7.00-7.50	6	B										8.50	
7.50-7.95	7	U	40 blows									(0.50)	
8.50-9.00	8	B								Soft grey clayey SILT. (Tidal Flat Deposits)		9.00	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit machine dug to 1.60m depth. 300mm diameter pipe installed prior to backfilling to allow cable percussive drilling to commence.
Method Used: Cable Percussion + Rotary Cored						Plant Used: CPT Rig + Dando 2000Fraste			All dimensions in metres
Drilled By: CJA						Logged By: Jagan Raj + KBancroft			Scale: 1:50
Checked By: 						Checked By: 			

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH304
Contract Ref:	Start: 25.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 09.08.24	8.42	E:277232.9 N:186644.3	2 of 9

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instru- mentation	Water	Description of Strata	Fracture Log	Depth (Thick- ness)	Material Graphic Legend	
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)							
9.00-9.45 9.00-9.45	9 25	D SPT	N=7							Loose grey silty fine to medium SAND. (Tidal Flat Deposits)				
10.00-10.50	10	B	17 blows									(2.50)		
10.50-10.95	11	U											11.50	
11.70-12.00	12	B										(0.50)		
12.00-12.45 12.00-12.45	13 26	D SPT	N=21							Firm dark brown fibrous PEAT. Moderate organic odour. (Tidal Flat Deposits)		12.00		
12.80-13.50	14	B	10 blows							Soft to firm grey silty CLAY. Occasional peat fragments. (TIDAL FLAT DEPOSITS)		(2.00)		
13.50-13.95	15	U											14.00	
13.95-14.05	16	D												
14.50-15.00	17	B	N=4							Very soft grey silty CLAY. (TIDAL FLAT DEPOSITS)				
15.00-15.45 15.00-15.45	18 27	D SPT												
16.00-16.50	19	B												
16.50-16.95	20	U	17 blows									(5.70)		
17.50-18.00	21	B												

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks			
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)				
									All dimensions in metres	Scale: 1:50		
Method Used:	Cable Percussion + Rotary Cored			Plant Used:	CPT Rig + Dando 2000Fraste		Drilled By:	CJA	Logged By:	Jagan Raj + KBancroft	Checked By:	 AGS

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH304
Contract Ref:	Start: 25.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 09.08.24	8.42	E:277232.9 N:186644.3	3 of 9

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Depth (Thickness)	Material Graphic Legend	
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)							
18.00-18.45 18.00-18.45	12 22	SPT D	N=4							Very soft grey silty CLAY. (TIDAL FLAT DEPOSITS) <i>(stratum copied from 14.00m from previous sheet)</i>				
18.80-19.50	23	B								... Becomes greyish brown between 18.80m and 19.50m bgl.				
19.50-19.95 19.70-20.20	13 24	SPT(c) B	N=36							Dense grey brown fine to coarse SAND.		19.70 (0.60)		
20.30-21.00	25	B								Dense grey brown subrounded to rounded coarse GRAVEL of mudstone. (Weathered South Wales Middle Coal Measures)		20.30		
21.00-21.45	14	SPT(c)	N=30									(3.10)		
22.00-22.50	26	B												
22.50-22.95	15	SPT(c)	N=38											
23.40-24.00	27	B									Dense brown clayey subrounded COBBLES of mudstone. (Weathered South Wales Middle Coal Measures)		23.40	
24.00-24.45	20	SPT(c)	N=34									(2.10)		
25.00-25.50	28	B												
25.50-25.95	19	SPT(c)	N=44								Dense brown slightly sandy slightly gravelly COBBLES of mudstone. Sand is fine to coarse. Gravel is subrounded fine to coarse of mudstone. (Weathered South Wales Middle Coal Measures)		25.50	
26.50-27.00	29	B												

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH304
Contract Ref:	Start: 25.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 09.08.24	8.42	E:277232.9 N:186644.3	4 of 9

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instru- mentation	Water	Description of Strata	Fracture Log	Depth (Thick- ness)	Material Graphic Legend	
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)							
27.00-27.30	18	SPT(c)	19,6/30,20 for 75mm							Dense brown slightly sandy slightly gravelly COBBLES of mudstone. Sand is fine to coarse. Gravel is subrounded fine to coarse of mudstone. (Weathered South Wales Middle Coal Measures) <i>(stratum copied from 25.50m from previous sheet)</i>		(3.40)		
27.00-27.80	30	B												
27.80-28.30	31	B												
28.30-29.80 28.30-28.45	17	SPT(c)	25/39,11 for 0mm	↑	↑	↑				Medium strong partially unweathered to unweathered dark brownish grey SILTSTONE with very thin pale grey fine sandstone laminations.	1	28.90		
				104	13	0	20 50 90 FI=12							
				↓	↓	↓	↓							
29.80-31.30				↑	↑	↑					2	(4.10)		
				100	83	40	20 40 100 FI=23							
				↓	↓	↓	↓							
31.30-32.80 31.30-31.30	1	SPT(c)	NP	↑	↑	↑				. . . Fossilised organic matter inclusions from 32.20m bgl.	3			
				100	86	33	20 50 110 FI=20							
				↓	↓	↓	↓							
32.80-34.30				↑	↑	↑				. . . Becomes moderately weak and partially unweathered from 32.80m bgl. Moderately weak to medium strong partially unweathered grey and dark grey MUDSTONE. Occasional lenses of carbonaceous mudstone. . . . Lense of extremely weak to very weak distinctly weathered black COAL between 33.60m and 33.70m bgl. . . . Becomes unweathered at 34.30m bgl.		33.00		
				96	64	0	5 80				4	(2.00)		
				↓	↓	↓	↓							
34.30-35.80 34.30-34.30	2	SPT(c)	NP	↑	↑	↑				Weak to moderately weak unweathered to partially unweathered black COAL.	5	35.00		
				92	52	0	40 50 87 FI=12					(0.50)		
				↓	↓	↓	↓					35.50		
35.80-37.30				93	40	13	↑			Description on next sheet				

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks			
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)				
									All dimensions in metres	Scale: 1:50		
Method Used:	Cable Percussion + Rotary Cored			Plant Used:	CPT Rig + Dando 2000Fraste		Drilled By:	CJA	Logged By:	Jagan Raj + KBancroft	Checked By:	 AGS

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH304
Contract Ref:	Start: 25.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 09.08.24	8.42	E:277232.9 N:186644.3	5 of 9

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)						
37.30-38.50 37.30-37.30	3	SPT(c)	NP	93 ↓	40 ↓	13 ↓	12 60 200 FI=16 ↓			Medium strong unweathered brownish grey SILTSTONE/MUDSTONE. Frequent angular fine to coarse fossilised organic matter inclusions. (stratum copied from 35.50m from previous sheet) ... Fossilised organic matter inclusions no longer present below 36.70m bgl.	6		
38.80-40.30				114 ↓	77 ↓	33 ↓	40 1850 ↓			... Becomes moderately weak and distinctly weathered between 37.70m and 38.15m bgl. ... Becomes strong at 38.30m bgl.	7	(6.30)	
40.30-41.80 40.30-40.30	9	SPT(c)	NP	93 ↓	58 ↓	24 ↓	20 75 120 FI=18 ↓			... Becomes weak distinctly weathered to destructured dark grey between 40.30m and 40.75m bgl (carbonaceous). ... Becomes moderately weak to medium strong at 40.75m bgl. ... Becomes strong at 40.90m bgl.	8		
41.80-43.30				91 ↓	52 ↓	16 ↓	30 140 ↓				9	41.80	
43.30-44.80 43.30-43.30	10	SPT(c)	NP	100 ↓	38 ↓	30 ↓	100 250 310 FI=8 ↓			Strong to very strong unweathered brownish grey fine SANDSTONE. Rare angular fine to coarse fossilised organic matter inclusions.	10	(1.50)	
44.80-46.30				93 ↓	56 ↓	24 ↓	5 90 180 FI=10 ↓			Medium strong unweathered dark grey MUDSTONE. ... Becomes moderately weak and partially unweathered from 43.90m bgl.	11	(1.10)	
				97 ↓	16 ↓	16 ↓	↑			Very weak unweathered to partially unweathered black COAL.		44.40	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks			
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)				
									All dimensions in metres	Scale: 1:50		
Method Used:	Cable Percussion + Rotary Cored			Plant Used:	CPT Rig + Dando 2000Fraste		Drilled By:	CJA	Logged By:	Jagan Raj + KBancroft	Checked By:	 AGS

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH304
Contract Ref:	Start: 25.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 09.08.24	8.42	E:277232.9 N:186644.3	6 of 9

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instru- mentation	Water	Description of Strata	Fracture Log	Depth (Thick- ness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)						
46.30-47.80 46.30-46.30	11	SPT(c)	NP	97	16	16	30 240 FI=8		Very weak unweathered to partially unweathered black COAL. (stratum copied from 44.40m from previous sheet)	12	(1.40)		
				100	78	69	30 140 180 FI=12				Moderately weak to medium strong partially weathered to distinctly weathered dark grey MUDSTONE. Frequent angular fine to coarse fossilised organic matter inclusions. Becomes very strong and unweathered from 46.30m bgl. . . . Frequent subrounded to rounded coarse fine sandstone inclusions between 46.80m and 47.40m bgl.		13
47.80-49.30	6	SPT(c)	NP	100	93	84	210 300 FI=8		. . . Becomes very weak to moderately weak at 47.8m bgl.	14[i]			
49.30-50.80 49.30-49.30				92	30	30	38 FI=10				 Becomes moderately strong at 50.2mbgl		15[i]
50.80-52.30	7	SPT(c)	NP	100	83	73	60 400 220 FI=10		Moderately weak unweathered to partially unweathered black organic MUDSTONE.	16[i]			
52.30-53.80 52.30-52.30				100	71	59	10 25 FI=4				Moderately weak to medium strong unweathered to partially unweathered interbedded organic MUDSTONE and fine SANDSTONE/SILTSTONE.		17
53.80-55.30				100	66	45							

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks			
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)				
									All dimensions in metres	Scale: 1:50		
Method Used:	Cable Percussion + Rotary Cored			Plant Used:	CPT Rig + Dando 2000Fraste		Drilled By:	CJA	Logged By:	Jagan Raj + KBancroft	Checked By:	 AGS

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH304
Contract Ref:	Start: 25.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 09.08.24	8.42	E:277232.9 N:186644.3	7 of 9

GINT LIBRARY_V10_01.GLB LibVersion: v8_07_001 PPIVersion: v8_07 | Log COMPOSITE LOG - A4P | 315531 PORT TALBOT GPJ - v10_01.
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Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks			
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)				
									All dimensions in metres	Scale: 1:50		
Method Used:	Cable Percussion + Rotary Cored			Plant Used:	CPT Rig + Dando 2000Fraste		Drilled By:	CJA	Logged By:	Jagan Raj + KBancroft	Checked By:	 AGS

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH304
Contract Ref:	Start: 25.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 09.08.24	8.42	E:277232.9 N:186644.3	8 of 9

GINT LIBRARY_V10_01.GLB LibVersion: v8_07_001 PrjVersion: v8_07 | Log COMPOSITE LOG - A4P | 315531 PORT TALBOT.GPJ - v10_01.
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Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)						
Method Used:		Cable Percussion + Rotary Cored		Plant Used:		CPT Rig + Dando 2000Fraste		Drilled By:	CJA	Logged By:	Jagan Raj + KBancroft	Checked By:		

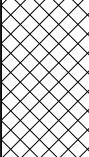
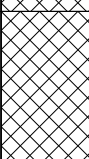
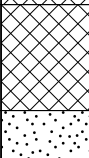
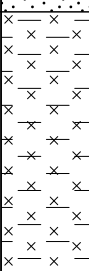
Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH304
Contract Ref:	Start: 25.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 09.08.24	8.42	E:277232.9 N:186644.3	9 of 9

GINIT LIBRARY_V10_01.GLB LibVersion: v8_07_001 PpVersion: v8_07 | Log COMPOSITE.LOG -A4P | 315531 PORT TALBOT.GPJ - v10_01.

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks			
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)				
									All dimensions in metres	Scale: 1:50		
Method Used:	Cable Percussion + Rotary Cored			Plant Used:	CPT Rig + Dando 2000Fraste		Drilled By:	CJA	Logged By:	Jagan Raj + KBancroft	Checked By:	 

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH305
Contract Ref: 315531	Start: 23.08.24 End: 02.09.24	Ground Level: ---	National Grid Co-ordinate: ---	Sheet: 1 of 4	

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
0.50-1.00	1	B				Strong grey CONCRETE. 75% aggregate of angular to subrounded fine to coarse flint. Approximately 2 to 3% small voids.	0.30	
0.50	1	ES				MADE GROUND: dark brownish grey gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse slag, roadstone, mudstone, rare scrap metal, rare glass and rare brick. (Fill Material)	(1.20)	
1.50-2.00	2	B				MADE GROUND: brownish grey silty subangular to subrounded fine to coarse GRAVEL and angular COBBLES of slag. (Fill Material)	1.50	
2.50	2	ES					(1.00)	
2.50-3.00	3	B				MADE GROUND: greyish brown sandy COBBLES of subrounded weak cemented sandstone and slag. Sand is fine to medium. (Fill Material)	2.50	
	3	ES				... Cobble of silver subrounded high density slag recovered at 2.9m bgl.	(0.70)	
3.50	3	ES					3.20	
3.50-4.00	4	B				Loose becoming very loose greyish brown slightly clayey silty SAND. Sand is fine to medium. (Tidal Flat Deposits)		
4.00-4.45	1	SPT(c)	N=7					
4.50-5.00	5	B					(3.50)	
5.00-5.45	2	SPT(c)	N=6					
5.50	4	ES				... Becoming dark grey below 5.5m.		
5.50-6.00	6	B						
6.00-6.45	3	SPT(c)	N=2					
6.50-7.50	7	B					6.70	
7.50-7.95	8	U	14 blows			Soft grey slightly sandy silty organic CLAY with rare veins of reddish brown fibrous plant matter (<2mm thickness). Sand is fine. (Tidal Flat Deposits)	(1.80)	
8.50-9.00	9	B				Soft brownish grey clayey SILT with a moderate organic odour. (Tidal Flat Deposits)	8.50	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Groundwater encountered at 2.43m depth. 3. Concrete cored (23/08/24). Borehole advanced with cable percussion (27/08/24).
Method Used: Cable Percussion						Plant Used: Dando 4000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Jagan Raj			Checked By:  AGS



BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH305
Contract Ref: 315531	Start: 23.08.24 End: 02.09.24	Ground Level: ---	National Grid Co-ordinate: ---		Sheet: 2 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
9.00-9.45 9.00-9.45	4 10	SPT D	N=2			Soft brownish grey clayey SILT with a moderate organic odour. (Tidal Flat Deposits) <i>(stratum copied from 8.50m from previous sheet)</i>	(2.50)	
10.00-10.50	11	B						
10.50-10.95	12	U	11 blows				11.00	
11.30-12.00	13	B				Stiff brown fibrous PEAT with a strong organic odour. (Tidal Flat Deposits) ... Brownish grey rounded cobble of hard sandstone recovered at approximately 11.2m. Possibly pushed down by drilling process.	(1.50)	
12.00-12.45 12.00-12.45	5 14	SPT D	N=27				12.50	
13.00-13.50	15	B				Soft to firm grey to dark grey silty CLAY. (Tidal Flat Deposits) ... Becoming brownish grey below 16m.		
13.50-13.95	7	SPT(c)	N=2					
14.50-15.00	16	B					(4.80)	
15.00-15.45	17	D						
16.00-16.50	18	B						
16.50-16.95	19	U	16 blows					
17.30-18.00	20	B				Description on next sheet	17.30	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks			
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)				
Method Used: Cable Percussion				Plant Used: Dando 4000			Drilled By: CJA		Logged By: Jagan Raj		Checked By: 	

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BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH305
Contract Ref: 315531	Start: 23.08.24 End: 02.09.24	Ground Level: ---	National Grid Co-ordinate: ---		Sheet: 3 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
18.00-18.45	6	SPT(c)	N=32			Dense (from 18.00m) to very dense dark brownish grey slightly sandy silty subrounded to rounded fine to coarse GRAVEL of mudstone. Sand is fine to coarse. (Weathered South Wales Middle Coal Measures) (stratum copied from 17.30m from previous sheet)		
18.50-19.50	21	B						
19.50-19.88	8	SPT(c)	8,13/17,20,13 for 75mm				(6.10)	
20.50-21.00	22	B						
21.00-21.45	9	SPT(c)	N=31					
22.00-22.50	23	B				... No recovery.		
22.50-22.95	10	SPT(c)	N=24					
23.50-24.00	24	B				Stiff dark brownish grey slightly sandy very gravelly silty CLAY. Gravel is subrounded to rounded fine to coarse mudstone. Sand is coarse. (Weathered South Wales Middle Coal Measures)	23.40	
24.00-24.45	11	SPT(c)	N=32					
25.00-25.50	25	B					(3.60)	
26.50-27.00	26	B				... Cobble of subrounded pale brown mudstone recovered between 26.5m and 27.0m bgl.	27.00	

Hole terminated on 02/09/24 due to crane maintenance on 03/09/24 and time constraints

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks			
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)				
Method Used: Cable Percussion				Plant Used: Dando 4000			Drilled By: CJA		Logged By: Jagan Raj		Checked By: 	

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH305
Contract Ref:	Start: 23.08.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 02.09.24	---	---	4 of 4

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
	No	Type	Results					

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks		
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)			
Method Used: Cable Percussion			Plant Used: Dando 4000			Drilled By: CJA		Logged By: Jagan Raj		Checked By: 	
All dimensions in metres									Scale: 1:50		

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH306
Contract Ref: 315531	Start: 08.10.24 End: 15.10.24	Ground Level: ---	National Grid Co-ordinate: ---		Sheet: 1 of 1

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)					
0.90	1	ES								CONCRETE.	(0.90)	
										MADE GROUND: black mottled white sandy angular fine to coarse GRAVEL of various metals including iron and slag. Sand is coarse.	(1.10)	
										CONCRETE with occasional rebar (<2cm). Borehole terminated due to reinforced concrete pile foundation.	2.00	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									1. Position scanned with a CAT, Genny and GPR prior to excavation.	
Method Used: Cable Percussion + Rotary open hole		Plant Used: Dando 3000 + Fraste		Drilled By: CJA		Logged By: Jagan Raj		Checked By: AGS		All dimensions in metres Scale: 1:50

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH306A
Contract Ref: 315531	Start: 17.10.24	Ground Level: ---	National Grid Co-ordinate: ---		Sheet: 1 of 1
	End: 17.10.24				

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
1.00	1	ES				CONCRETE with frequent rebar (<5cm).	(0.90)	
						MADE GROUND: black and grey very gravelly fine to coarse SAND. Gravel is angular to subangular slag and concrete. (Fill Material) No groundwater encountered. Terminated due to probable scrap metal obstruction at 1.1m bgl. Borehole reinstated on termination.	1.10	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Concreted cored to 0.90m bgl. 3. Groundwater not encountered.
Method Used: Cable Percussion						Plant Used: Dando 4000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Jagan Raj			Checked By:  AGS

BOREHOLE LOG

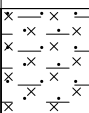
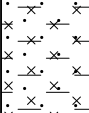
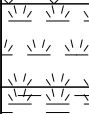
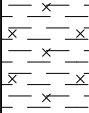
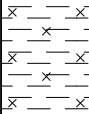
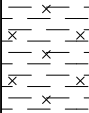
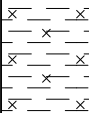
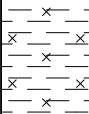
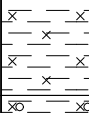
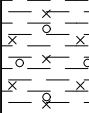
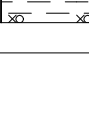
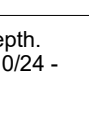
Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH306B
Contract Ref: 315531	Start: 24.10.24 End: 11.11.24	Ground Level: ---	National Grid Co-ordinate: ---	Sheet: 1 of 4	

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)					
1.00	1	ES								CONCRETE with flint aggregate and frequent rebar (5cm).	(0.90)	
										MADE GROUND: dark grey silty SAND and GRAVEL. Gravel is angular to subangular fine to coarse slag, scrap metal and rare red brick. Sand is fine to coarse. (Fill Material)	(1.10)	
										Occasional cobbles of angular slag between 1.7m bgl and 2.0m bgl.	2.00	
										MADE GROUND: Dark grey angular COBBLES and BOULDERS of metallurgic material including scrap metal, steel slabs, plating and slag. (Fill Material)	(1.60)	
										Greyish brown silty fine SAND. (Tidal Flat Deposits)	3.60	
4.50-5.00	1	B										
4.50	2	ES										
5.00-5.45	1	SPT	N=36									
5.00-5.45	2	D										
5.50-6.00	3	B										
6.00-6.45	2	SPT	N=12									
6.00-6.45	4	D										
6.50-7.00	5	B										
7.00-7.15	3	SPT	1/1 for 75mm									
7.00-7.45	6	UT										
7.50-8.00	7	B										
8.00-8.45	4	SPT	N=12									
8.00-8.45	8	D										
8.50-9.30	9	B										

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit machine dug to 3.60m depth (23/10/24 to 01/11/24). Borehole advanced with cable percussion to 24.0m bgl (05/11/24) and then rotary open holed to 30.0m bgl (11/11/24)
Method Used: Inspection pit + Cable Percussion + Rotary open hole						Plant Used: 13 Ton Tracked ExcavatorDando 4000 + Fracto			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Jagan Raj			Checked By: AGS

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH306B
Contract Ref: 315531	Start: 24.10.24	Ground Level: ---	National Grid Co-ordinate: ---		Sheet: 2 of 4
	End: 11.11.24				

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)					
9.30-9.80	11	B								Greyish brown slightly sandy clayey SILT. Sand is fine. (Tidal Flat Deposits) <i>(stratum copied from 8.50m from previous sheet)</i>	(1.95)	
9.80-10.20	12	B										
10.20-10.65	13	UT									10.45	
10.65-10.80	14	D								Dark brown and brown stiff fibrous PEAT with a strong organic odour. (Tidal Flat Deposits)	(0.55)	
11.00-11.50	15	B								Dark grey clayey firm fibrous PEAT. (Tidal Flat Deposits)	11.00	
11.50-11.95	5	SPT	N=7								(1.50)	
11.50-11.95	16	D										
12.50-13.00	17	B								Dark grey silty CLAY. (Tidal Flat Deposits) . . . Occasional pockets of pseudo-fibrous peat.	12.50	
13.00-13.45	18	UT										
13.45-13.60	19	D										
14.00-14.50	20	B										
14.50-14.58	6	SPT	NP								(4.50)	
14.50-14.95	21	D										
15.50-16.00	22	B										
16.00-16.45	23	UT										
16.45-16.60	24	D										
17.00-17.50	25	B								Stiff dark greyish brown gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse mudstone, siltstone and sandstone. (Weathered South Wales Middle Coal Measures)	17.00	
17.50-17.95	7	SPT	N=48								(1.50)	
17.50-17.95	26	D										

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									3. Groundwater encountered at 1.50m depth. Excavation frequently dewatered (30/10/24 - 01/11/24).
Method Used: Inspection pit + Cable Percussion + Rotary open hole						Plant Used: 13 Ton Tracked ExcavatorDando 4000 + Fracto			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Jagan Raj			Checked By:  AGS

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH306B
Contract Ref: 315531	Start: 24.10.24 End: 11.11.24	Ground Level: ---	National Grid Co-ordinate: ---		Sheet: 3 of 4

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)					
18.50-19.00	27	B								Very dense dark grey slightly sandy GRAVEL of subangular to subrounded fine to coarse mudstone, siltstone and sandstone. Sand is fine to coarse. (Weathered South Wales Middle Coal Measures)	18.50	
19.00-19.50	28	B									(0.50)	
19.50-19.95	8	SPT	N=42							Dense to very dense dark greyish brown clayey fine to coarse SAND and subangular to subrounded fine to coarse GRAVEL of mudstone, siltstone and sandstone. (Weathered South Wales Middle Coal Measures Formation)	19.00	
19.50-19.95	29	D										
20.50-21.00	30	B										
21.00-21.45	9	SPT	N=35								(4.60)	
22.00-22.50	32	B										
22.50-22.88	10	SPT	5,5/7,10,33 for 75mm									
23.60-24.10	34	B								Very dense dark greyish brown clayey subangular to subrounded fine to coarse GRAVEL of mudstone, sandstone and siltstone with moderate cobble content. Cobbles are subrounded sandstone. (Weathered South Wales Middle Coal Measures) ... Obstruction of two pale brown subrounded to rounded cobbles of coarse SANDSTONE. Recovered at approximately 24.0m bgl.	23.60	
24.00-24.45	11	SPT(c)	N=43								(4.20)	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH306B
Contract Ref: 315531	Start: 24.10.24 End: 11.11.24	Ground Level: ---	National Grid Co-ordinate: ---		Sheet: 4 of 4

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)					
27.00-27.40	12	SPT(c)	20,11/20,21,9,21 for 21mm								27.80	
										MUDSTONE. Recovered as dark greyish brown angular to subangular fine to coarse GRAVEL. (South Wales Middle Coal Measures Formation)	(2.32)	
29.00-29.23	13	SPT(c)	8,17/36,14 for 23mm									
30.00-30.12	14	SPT(c)	25/38,12 for 31mm							Groundwater encountered at 1.50m bgl. Backfilled with bentonite to 3.50m bgl on completion.	30.12	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
Method Used: Inspection pit + Cable Percussion + Rotary open hole		Plant Used: 13 Ton Tracked ExcavatorDando 4000 + Fracto		Drilled By: CJA		Logged By: Jagan Raj		Checked By: AGS		

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH307
Contract Ref: 315531	Start: 02.09.24 End: 06.09.24	Ground Level: ---	National Grid Co-ordinate: E:277191.2 N:186662.0		Sheet: 1 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
						Concrete	0.40	
						MADE GROUND. Dark brown sandy angular to subangular GRAVEL with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse of mixed lithologies including slag concrete limestone. Cobbles are angular fine to coarse of slag. Very compact.	(0.60) 1.00	
1.50-1.80	Es1	ES				Medium dense (from 3.00m) yellowish brown gravelly fine to coarse SAND. Gravel is angular to subrounded fine to coarse of weak sandstone. (Blown sands)		
2.50-3.00	1	B						
3.00-3.45	1	SPT(c)	N=13					
3.50-4.00	3	B						
4.00-4.45	2	SPT(c)	N=15			. . . Sand darker brown		
4.50-5.00	5	B					(7.00)	
5.00-5.45	3	SPT(c)	N=11					
5.50-6.00	7	B						
6.00-6.45	4	SPT(c)	N=18					
6.50-7.00	9	B						
7.50-7.95	5	SPT(c)	N=13					
8.00-8.50	11	B				Soft to firm grey slightly sandy silty CLAY. Sand is fine to coarse. (Tidal flat deposits)	8.00	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit hand dug to 2.4m depth. 3. Groundwater encountered at 2.40m depth.
Method Used: Cable Percussion			Plant Used: Dando 4000			Drilled By: CJA			All dimensions in metres Scale: 1:50
Logged By: Adam Livesey			Checked By: 						

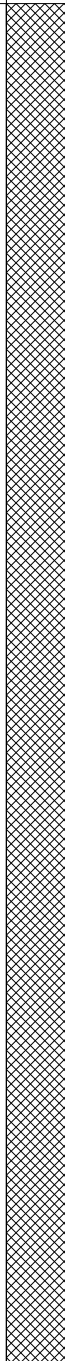
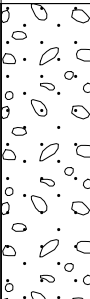
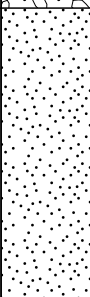
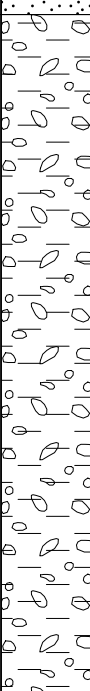
Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH307
Contract Ref:	Start: 02.09.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 06.09.24	---	E:277191.2 N:186662.0	2 of 4

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend				
	No	Type	Results									
9.00-9.45	12	U	21 blows 20% recovery			Soft to firm grey slightly sandy silty CLAY. Sand is fine to coarse. (Tidal flat deposits) <i>(stratum copied from 8.00m from previous sheet)</i>	(3.00)					
9.45-9.50	13	D										
10.50-10.95	6	SPT	N=13									
10.50-10.95	14	D										
11.00-11.50	15	B					Soft to firm grey clayey SILT with medium pseudo fibrous peat content. (Tidal flat deposits)	(0.60)				
							Firm to stiff blackish reddish brown fibrous PEAT. Strong organic odour. (Tidal flat deposits)					
12.00-12.45	16	U	99 blows 11% recovery					(2.20)				
12.45-12.50	17	D										
13.50-13.95	7	SPT	N=13									
13.50-13.95	18	D										
14.50-15.00	19	B					Soft to firm grey clayey SILT with medium pseudo fibrous peat content. (Tidal flat deposits)	(2.00)				
15.00-15.45	20	U	16 blows 22% recovery					15.80				
15.45-15.50	21	D										
16.00-16.35	8	SPT	N=46							Dense becoming medium dense greyish brown slightly sandy clayey silty GRAVEL. Sand is fine to coarse. Gravel is fine to coarse subrounded to rounded of mixed lithologies including mudstone and sandstone. (Tidal flat deposits)	(4.20)	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH307
Contract Ref: 315531	Start: 02.09.24 End: 06.09.24	Ground Level: ---	National Grid Co-ordinate: E:277191.2 N:186662.0		Sheet: 3 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thick ness)	Material Graphic Legend
	No	Type	Results					
18.00-18.45	9	SPT	N=12			Dense becoming medium dense greyish brown slightly sandy clayey silty GRAVEL. Sand is fine to coarse. Gravel is fine to coarse subrounded to rounded of mixed lithologies including mudstone and sandstone. (Tidal flat deposits) <i>(stratum copied from 15.80m from previous sheet)</i>		
19.50-19.95	10	SPT	N=11				20.00	
21.00-21.45	11	SPT	N=1			Very loose becoming dense brown clayey silty fine to coarse SAND. (Blown Sand)	(2.00)	
							22.00	
24.00-24.45	12	SPT	N=41			Very dense brown clayey fine to coarse GRAVEL. Gravel is subrounded to rounded of mixed lithologies including mudstone and sandstone. (Weathered South Wales Middle Coal Measures Formation).	(4.50)	
25.50-25.75	13	SPT	7,9/17,33 for 20mm				26.50	
						Description on next sheet		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH307
Contract Ref:	Start: 02.09.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 06.09.24	---	E:277191.2 N:186662.0	4 of 4

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
	No	Type	Results					
						Brown gravelly CLAY. Gravel is subangular to rounded fine to coarse of weathered mudstone. (Weathered South Wales Middle Coal Measures Formation). <i>(stratum copied from 26.50m from previous sheet)</i>	(1.10)	
						Mudstone. (South Wales Middle Coal Measures)	27.60	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									All dimensions in metres	Scale: 1:50
Method Used: Cable Percussion		Plant Used: Dando 4000		Drilled By: CJA		Logged By: Adam Livesey		Checked By: JB	AGS	

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH308
Contract Ref: 315531	Start: 27.08.24 End: 03.09.24	Ground Level: 8.72	National Grid Co-ordinate: E:277155.2 N:186659.0		Sheet: 1 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
1.30	ES1	ES PID	0.0ppm			CONCRETE.	0.40	
1.30						MADE GROUND. Brown sandy angular fine to coarse GRAVEL of various lithologies including limestone, sandstone and slag with medium cobble content. Sand is fine to coarse. Cobbles are angular of slag. Very compact.	(0.50)	
						MADE GROUND. Black mottled dark brownish grey sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular fine to medium of wood and slag. Slight hydrocarbon odour. (Reworked)	(0.60)	
						Loose (from 3.00m) becoming medium dense yellowish brown slightly gravelly fine to coarse SAND. Gravel is angular fine to coarse of weak sandstone. (Blown Sands)	1.50	
2.50-3.00	1	B						
3.00-3.45	1	SPT(c)	N=9					
3.00-3.50	3	B						
4.00-4.45	2	SPT(c)	N=7				(5.00)	
4.50-5.00	5	B						
5.00-5.45	3	SPT(c)	N=12					
5.50-6.00	7	B				. . . Colour change to dark brown		
6.00-6.45	4	SPT	N=15					
6.00-6.45	8	D					6.50	
6.50-7.00	9	B				Soft to firm grey sandy CLAY. Sand is fine to coarse. (Tidal flat deposits)		
7.50-7.95	10	U	30 blows			. . . Clay becomes silty and soft to very soft	(2.50)	
8.50-9.00	11	B					9.00	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit machine dug to 2.20m depth. 300mm diameter pipe installed prior to backfilling to allow cable percussive drilling to commence. 3. Groundwater encountered at 2.10m depth.
Method Used: Inspection pit + Cable Percussion						Plant Used: Dando 4000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Kieran Bancroft			Checked By:  AGS



BOREHOLE LOG

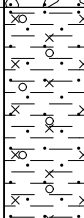
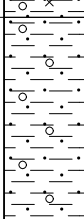
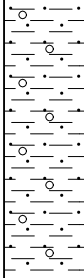
Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH308
Contract Ref: 315531	Start: 27.08.24 End: 03.09.24	Ground Level: 8.72	National Grid Co-ordinate: E:277155.2 N:186659.0		Sheet: 2 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
9.00-9.45 9.00-9.45	5 12	SPT D	N=11			Grey sandy clayey SILT. Sand is fine to medium. (Tidal flat deposits)		
9.50-10.00	13	B						
10.50-10.95	14	U	50 blows				(2.90)	
11.50-12.00	15	B					11.90	
12.00-12.45 12.00-12.45	6 16	SPT D	N=9			Firm reddish brown fibrous PEAT. Moderate organic odour. (Tidal flat deposits)		
12.50-13.00	17	B						
13.00-13.45	7	SPT	N=22				(2.50)	
13.50-13.95	18	D					14.40	
14.50-15.00	18	B				Soft to firm grey silty CLAY with rare evidence of fine peat. (Tidal flat deposits)		
15.00-15.45	19	U	14 blows					
16.00-16.50	20	B					(3.10)	
16.50-16.95 16.50-16.95	8 21	SPT D	N=3				17.50	
17.50-18.00	22	B				Description on next sheet		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
		</								

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RSK Environment Ltd, The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117 947 1006 Fax: 0117 947 1009 Web: www.rsk.co.uk | 30/01/25 - 14:48 | JB17 |

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH308
Contract Ref:	Start: 27.08.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 03.09.24	8.72	E:277155.2 N:186659.0	3 of 4

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
	No	Type	Results					
18.00-18.45	9	SPT(c)	N=32			Very dense becoming medium dense brown slightly sandy clayey silty GRAVEL with low cobble content. Sand is fine to coarse. Gravel is fine to coarse subangular to rounded of mudstone, siltstone and sandstone. Cobbles are subangular to subrounded of mudstone. (Weathered South Wales Middle Coal Measures Formation). <i>(stratum copied from 17.50m from previous sheet)</i> ... Gravels and cobbles very loose, casing occasionally drops.	(2.80)	
19.00-19.50	24	B						
19.50-19.95	10	SPT	N=28					
20.50-21.00	26	B	Firm brown slightly sandy gravelly silty CLAY. Sand is fine. Gravel is subangular to rounded fine to coarse of mudstone siltstone and sandstone. (Weathered South Wales Middle Coal Measures Formation).			(1.50)		
21.00-21.45	11	SPT(c)						N=12
21.50-22.00	28	B						
22.50-22.95	12	SPT(c)	N=28			Stiff brown gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subrounded to rounded fine to coarse of mudstone. (Weathered South Wales Middle Coal Measures Formation). ... Increase in gravel	(3.20)	
23.50-24.00	30	B						
24.00-24.45	13	SPT(c)	N=22					
25.00-25.50	32	B	Dense brown sandy fine to coarse GRAVEL. Sand is fine to coarse. Gravel is subangular to subrounded of mudstone and sandstone. (Weathered South Wales Middle Coal Measures Formation).			(1.00)		
25.50-25.95	14	SPT(c)						N=37
26.50-27.00	34	B						Firm brown gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subrounded to rounded fine to coarse of mudstone. (Weathered South Wales Middle Coal Measures Formation).

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									All dimensions in metres	Scale: 1:50
Method Used:	Inspection pit + Cable Percussion			Plant Used:	Dando 4000		Drilled By:	CJA	Logged By:	Kieran Bancroft
									Checked By:	 AGS

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH308
Contract Ref: 315531	Start: 27.08.24 End: 03.09.24	Ground Level: 8.72	National Grid Co-ordinate: E:277155.2 N:186659.0		Sheet: 4 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
27.00-27.45	15	SPT(c)	N=44			Firm brown gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subrounded to rounded fine to coarse of mudstone. (Weathered South Wales Middle Coal Measures Formation). <i>(stratum copied from 26.00m from previous sheet)</i>		
27.90	36	D					27.90	
28.00-28.15	16	SPT(c)	25/50 for 75mm			Mudstone with coal fragments. (Weathered South Wales Middle Coal Measures)	(0.55)	
							28.45	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH309
Contract Ref: 315531	Start: 22.07.24 End: 25.07.24	Ground Level: 9.17	National Grid Co-ordinate: E:277127.5 N:186684.5		Sheet: 1 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
0.50-0.60	1	ES				MADE GROUND: dark greyish brown very sandy GRAVEL with low cobble content. Sand is fine to coarse. Gravel is fine to coarse angular to subangular of mixed lithologies including slag, concrete, clinker brick and rebar. Cobbles are angular to subangular of slag and concrete. ... Concrete slab ... Dense compact slag, concrete	(0.60) 0.60 0.80	
1.70-1.80	2	ES				MADE GROUND: Brown gravelly fine to coarse SAND. Gravel is fine to coarse angular to subrounded of slag.	(0.90)	
2.00-2.20	1	B				MADE GROUND: Brown very gravelly SAND with low cobble content. Sand is fine to coarse. Gravel is fine to coarse angular to subangular of mixed lithologies including slag, concrete, clinker brick. Cobbles are angular to subangular of slag and concrete. ... Dense compact slag, concrete ... No cobbles from 1.4	1.70 2.10	
3.00-3.45	1	SPT D	N=7			NATURAL: Yellow slightly gravelly clayey fine to coarse SAND. Gravel is angular to subrounded of sandstone. (BLOWN SAND)		
3.00-3.45	2					Loose becoming medium dense brown fine to coarse SAND. (BLOWN SAND)		
3.50-4.00	3	B						
4.00-4.45	2	SPT D	N=16					
4.00-4.45	4							
4.50-5.00	5	B						
5.00-5.45	3	SPT D	N=25			... Sand becoming silty and clayey.		
5.00-5.45	6							
5.50-6.00	7	B					(6.90)	
6.00-6.45	4	SPT D	N=24					
6.00-6.45	8							
6.50-7.00	9	B						
7.00-7.50	10	B						
7.50-7.95	5	SPT D	N=6					
7.50-7.95	11							
8.00-8.50	12	B						
							9.00	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
						21.50	22.00	00:45	1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit hand dug to 2.1m depth.
						22.50	22.75	00:45	
						23.10	23.50	00:30	
						27.50	28.30	00:35	
						29.00	30.00	01:00	
Method Used: Inspection pit + Cable Percussion						All dimensions in metres			Scale: 1:50
Plant Used: Dando 3000						Drilled By: CJA	Logged By: Adam Livesey	Checked By: 	

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH309
Contract Ref:	Start: 22.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 25.07.24	9.17	E:277127.5 N:186684.5	2 of 4

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend	
	No	Type	Results						
9.00-9.45	6	SPT	N=5			Soft grey sandy silty CLAY. Sand is fine to coarse. (TIDAL FLAT DEPOSITS) ... Occasional pockets of fibrous peat	(2.00)		
9.50-10.00	14	B							
10.50-10.95	15	D							
11.00-11.50	16	B				Brown fibrous PEAT comprising a soft to firm grey sandy silty CLAY matrix. Sand is fine to coarse. Moderate organic odour. (TIDAL FLAT DEPOSITS)	(1.50)		
12.00-12.50	17	U	42 blows						
12.50-12.65 12.65-13.00	18 19	D B							
13.50-13.95 13.50-13.95	7 20	SPT D	N=7			Grey slightly sandy clayey SILT. Sand is fine to medium. (TIDAL FLAT DEPOSITS)	(3.50)		
14.50-15.00	21	B							
15.00-15.45 15.00-15.45	8 22	SPT D	N=2						
15.50-16.00	23	B				Grey brown slightly gravelly silty CLAY with pockets of fine to medium brown and grey sand. Gravel is subangular to subrounded of mudstone. (Weathered South Wales Middle Coal Measures Formation).	(1.00)		
16.50-17.00	24	U	7 blows						
17.00-17.20 17.20-18.00	25 26	D B							
						Dense greyish brown slightly sandy clayey GRAVEL with low cobble content. Sand is fine to coarse. Gravel is fine to coarse angular to rounded of mudstone and sandstone. (Weathered South Wales Middle Coal Measures Formation).	(1.50)		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									All dimensions in metres	Scale: 1:50
Method Used:	Inspection pit + Cable Percussion			Plant Used: Dando 3000			Drilled By: CJA	Logged By: Adam Livesey	Checked By: 	

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH309
Contract Ref:	Start: 22.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 25.07.24	9.17	E:277127.5 N:186684.5	3 of 4

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend		
	No	Type	Results							
18.00-18.45 18.00-18.45	9 27	SPT D	N=30				18.50			
18.50-19.50	28	B				Stiff brown very gravelly silty CLAY. Gravel is fine to coarse angular to rounded of mudstone, sandstone and coal fragments. (Weathered South Wales Middle Coal Measures Formation).			(4.00)	
19.50-19.95 19.50-19.95	10 29	SPT B	N=33							
20.00-20.50	30	B								
21.00-21.45 21.00-21.45	11 31	SPT D	N=20			. . . Low cobble content of mudstone				
21.50-22.00	32	B								
22.50-22.73	12	SPT	7,9/45,5 for 6mm			Very dense becoming dense grey brown clayey silty subangular to subrounded fine to coarse GRAVEL and subrounded to rounded COBBLES of mudstone and sandstone	22.50	(2.00)		
22.50-22.95	33	B								
23.00-23.50	34	B								
24.00-24.45 24.00-24.45	13 35	SPT B	N=30					24.50	(2.50)	
24.50-25.00	36	B				Very dense grey brown gravelly silty CLAY. Gravel is fine to coarse rounded to subrounded of mudstone. (Weathered South Wales Middle Coal Measures Formation).				
25.50-25.89	14	SPT	7,11/12,16,16,6 for 11mm							
25.50-25.95	37	B								
26.00-26.50	38	B								
									27.00	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									All dimensions in metres	Scale: 1:50
Method Used:	Inspection pit + Cable Percussion			Plant Used:	Dando 3000		Drilled By:	CJA	Logged By:	Adam Livesey
									Checked By:	 AGS

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH309
Contract Ref:	Start: 22.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 25.07.24	9.17	E:277127.5 N:186684.5	4 of 4

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
	No	Type	Results					
27.00-27.35	15	SPT	8,10/15,17,18 for 52mm			MUDSTONE. Recovered as weak grey mudstone. (SOUTH WALES COAL MEASURES).	(3.12)	
27.00-27.45	39	B						
27.50-28.00	40	B						
28.00-28.10	16	SPT	11,14/50 for 8mm					
28.50-29.00	41	B						
29.00-29.80	42	B						
29.80-30.00	43	B						

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks				
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)					
									All dimensions in metres	Scale: 1:50			
Method Used:	Inspection pit + Cable Percussion			Plant Used:	Dando 3000		Drilled By:	CJA	Logged By:	Adam Livesey	Checked By:		

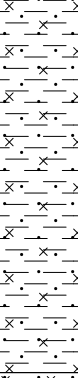
BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH310
Contract Ref: 315531	Start: 03.09.24 End: 05.09.24	Ground Level: 9.34	National Grid Co-ordinate: E:277095.1 N:186653.7		Sheet: 1 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
1.00-1.40	Es1	ES				MADE GROUND. Compact blackish brown sandy clayey GRAVEL. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of mixed lithologies including slag concrete sandstone and occasional metal, rebar and timber. ... Reddish brown buried timber ... Large metal strip MADE GROUND. Soft to firm dark greyish brown gravelly slightly sandy CLAY with rare pockets of light brown fine to coarse sand. Gravel is angular to subangular of mixed lithologies including slag concrete sandstone. ... Concrete boulder	(1.10) 1.10 (1.90)	
3.50-4.00	1	B				Loose (from 3.00m) becoming very dense light brown gravelly fine to coarse SAND. Gravel is fine to coarse subrounded of weak sandstone. (Blown sands)	3.00	
4.00-4.45	1	SPT(c)	N=8					
4.50-5.00	2	B						
5.00-5.45	2	SPT(c)	N=60				(4.00)	
5.00-6.00	3	B						
6.00-6.45	3	SPT(c)	N=66			... Sand becomes a darker brown and clayey.		
7.00-7.50	4	B				Very soft grey sandy silty CLAY with rare evidence of pseudo fibrous peat. Sand is fine to coarse. (Tidal flat deposits)	7.00	
7.50-7.95	5	U	10 blows 22% recovery					
8.50-9.00	6	B						

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit hand dug to 3m depth. 3. Groundwater encountered at 3.31m depth at start of shift 04/09
Method Used: Cable Percussion						Plant Used: Dando 4000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Adam Livesey			Checked By:  AGS

Contract:		Client:		Borehole:	
EAF Meltshop Project		TATA Steel		BH310	
Contract Ref:	Start: 03.09.24	Ground Level:	National Grid Co-ordinate:	Sheet:	
315531	End: 05.09.24	9.34	E:277095.1 N:186653.7	2 of 4	

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
9.00-9.45	4	SPT	N=4			Very soft grey sandy silty CLAY with rare evidence of pseudo fibrous peat. Sand is fine to coarse. (Tidal flat deposits) <i>(stratum copied from 7.00m from previous sheet)</i>	(4.50)	
9.00-9.45	7	D						
10.00-10.50	8	B						
10.50-10.95	9	U	9 blows 22% recovery					
11.00-11.45	5	SPT	N=2					
11.50-12.00	10	B						
12.00-12.50	11	D						
12.60-13.00	12	B						
13.20-13.50	13	B						
13.50-13.95	14	U	13 blows 22% recovery					
13.95-14.05	15	D				Soft to firm sandy silty CLAY. Sand is fine to coarse. (Tidal flat deposits)	(1.30)	
14.50-15.00	16	B						
15.00-15.45	6	SPT	N=2					
15.00-15.45	17	D						
16.00-16.50	18	B						
16.50-16.95	19	U	11 blows 22% recovery					
17.50-18.00	20	B						

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
Method Used: Cable Percussion				Plant Used: Dando 4000			Drilled By: CJA		All dimensions in metres	Scale: 1:50
							Logged By: Adam Livesey		Checked By: 	



BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH310
Contract Ref: 315531	Start: 03.09.24 End: 05.09.24	Ground Level: 9.34	National Grid Co-ordinate: E:277095.1 N:186653.7		Sheet: 3 of 4

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend								
	No	Type	Results													
18.00-18.45 18.00-18.50	7 21	SPT D	N=5			Soft to firm grey clayey SILT with low pseudo fibrous peat content. (Tidal flat deposits) <i>(stratum copied from 14.50m from previous sheet)</i>	(7.30)									
19.00-19.50	22	B	20 blows 22% recovery													
19.50-19.95	23	U														
20.50-21.00	24	B														
21.00-21.45 21.00-21.45	8 25	SPT D	N=5													
21.80-22.50	26	B	Very stiff brown soft to firm gravelly CLAY with medium cobble content. Gravel is fine to coarse subrounded to rounded of mudstone siltstone. Cobbles are rounded of mudstone. (Weathered South Wales Middle Coal Measures Formation).								21.80					
22.50-22.95	9	SPT(c)											N=29			
23.50-24.00	27	B														
24.00-24.45	10	SPT(c)													N=42	
															(7.90)	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
Method Used: Cable Percussion				Plant Used: Dando 4000			Drilled By: CJA		Logged By: Adam Livesey	
									Checked By:  	

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BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH310
Contract Ref: 315531	Start: 03.09.24 End: 05.09.24	Ground Level: 9.34	National Grid Co-ordinate: E:277095.1 N:186653.7		Sheet: 4 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
						Very stiff brown soft to firm gravelly CLAY with medium cobble content. Gravel is fine to coarse subrounded to rounded of mudstone siltstone. Cobbles are rounded of mudstone. (Weathered South Wales Middle Coal Measures Formation). (stratum copied from 21.80m from previous sheet)		
						Rockhead mudstone. (South Wales Middle Coal Measures) ... Very little weathered bedrock before 29.7	29.70	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks			
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)				
Method Used: Cable Percussion				Plant Used: Dando 4000			Drilled By: CJA		Logged By: Adam Livesey		Checked By: 	

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH311
Contract Ref: 315531	Start: 11.07.24 End: 18.07.24	Ground Level: 16.23	National Grid Co-ordinate: E:277024.2 N:186704.4		Sheet: 1 of 5

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
0.50	1	ES				MADE GROUND: Grey brown clayey subangular to subrounded fine to coarse GRAVEL and COBBLES of slag and clinker.	(0.50)	
1.50	2	ES				MADE GROUND: Dark grey brown fine to coarse SAND and GRAVEL of subangular to subrounded slag, clinker and brick. ... Brown angular cobbles of brick on eastern face of excavation.	(3.20)	
2.50	3	ES						
3.50	4	ES				MADE GROUND: Grey brown slightly gravelly clayey SAND. gravel is subangular to subrounded fine to coarse brick and slag.	(0.50)	
4.20	5	ES				MADE GROUND. Greyish brown clayey GRAVEL. Gravel is angular to subrounded of slag, tarmac.	(0.80)	
4.50-5.00	1	B					5.00	
5.00-5.45	1	SPT(c)	N=12			MADE GROUND. Medium dense grey very gravelly CLAY. Gravel is fine to coarse angular to subrounded of tarmac, mudstone and slag comprising clay matrix.		
5.50-6.00	2	B						
6.45-6.50	3	D					(4.00)	
7.50-7.95	2	SPT	N=4			... Becoming very loose at 7.50mbgl.		
8.00-8.50	4	B				... Occassional cobbles of slag.	9.00	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
11/07/24			7.00	N/R		19.50	20.00	01:30	1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit mechanically dug to 4.2m depth on 09/07/24 prior to cable percussion borehole. 3. Accidental cpt instead of spt at 7.5m 4. Borehole collapse and redrilling through sand
12/07/24			18.70	N/R	Dry	30.00	32.00	00:30	
17/07/24	08:00	19.50	19.00	N/R	9.00	34.50	35.00	00:30	
18/07/24			36.50	N/R		35.50	36.70	01:20	
19/07/24	08:30	36.50	36.50	N/R	9.00	36.75	37.00	01:00	
Method Used: Cable Percussion						Plant Used: Dando 3000			All dimensions in metres
Drilled By: CJA						Logged By: Jagan Raj			Scale: 1:50
Checked By: 						Checked By: 			

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH311
Contract Ref: 315531	Start: 11.07.24 End: 18.07.24	Ground Level: 16.23	National Grid Co-ordinate: E:277024.2 N:186704.4		Sheet: 2 of 5

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
9.00-9.94	5	B				Blackish grey sandy clayey GRAVEL with medium cobble content of slag. Gravel is angular to subangular of slag. Cobbles subangular to subrounded.	(1.50)	
10.00-10.50	6	B					10.50	
10.50-10.95	3	SPT	N=41			Dense grey clayey fine to medium SAND. (BLOWN SAND)		
11.50-12.00	7	D				. . . Becoming brown with depth.		
12.00-12.45	4	SPT	N=45				(4.50)	
12.00-12.45	8	D						
13.50-13.95	5	SPT	N=40				15.00	
15.00-15.45	6	SPT	N=36			Dense dark brown clayey fine to medium SAND. (BLOWN SAND)	(3.75)	
16.95-17.40	7	SPT(c)	N=46					

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									from 30m to 33m on 18/07/24.
Method Used: Cable Percussion						Plant Used: Dando 3000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Jagan Raj			Checked By:  AGS



BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH311
Contract Ref: 315531	Start: 11.07.24 End: 18.07.24	Ground Level: 16.23	National Grid Co-ordinate: E:277024.2 N:186704.4		Sheet: 3 of 5

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
18.00-18.45	42	U	99 blows			Dense dark brown clayey fine to medium SAND. (BLOWN SAND) <i>(stratum copied from 15.00m from previous sheet)</i>	18.75	
						Stiff brown fibrous PEAT. (TIDAL FLAT DEPOSITS)	(1.25)	
19.50-19.95	8	SPT D	N=26				20.00	
19.50-19.95	23							
20.00-20.50	24	B				Stiff dark grey sandy silty organic CLAY with occasional pockets of fibrous brown peat (3cm). (TIDAL FLAT DEPOSITS)		
21.00-21.45	9	SPT D	N=34					
21.00-21.45	25							
21.50-22.00	26	B						
22.50-22.95	27	U	28 blows				(6.00)	
24.00-24.45	10	SPT D	N=37					
24.00-24.45	30							
25.00-25.50	31	B						
25.50-25.95	32	U	70 blows					
25.95-26.00	33	D					26.00	
26.00-26.50	34	B				Dense dark grey silty SAND. (TIDAL FLAT DEPOSITS)		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		

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Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH311
Contract Ref: 315531	Start: 11.07.24 End: 18.07.24	Ground Level: 16.23	National Grid Co-ordinate: E:277024.2 N:186704.4		Sheet: 4 of 5

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend			
	No	Type	Results								
27.00-27.45 27.00-27.45 27.45-28.00	11 35 36	SPT D B	N=49			Dense dark grey silty SAND. (TIDAL FLAT DEPOSITS) <i>(stratum copied from 26.00m from previous sheet)</i>	(3.50)				
28.50-28.95 28.50-28.95	12 37	SPT D	N=41								
29.00-29.50	28	D									
29.50-30.00	29	B					Very stiff dark grey very gravelly CLAY. Gravel is subangular to subrounded fine to coarse siltstone and mudstone with some cobble content of subangular to subrounded mudstone and siltstone. (Weathered South Wales Middle Coal Measures Formation) ... BOULDER encountered at 29.5m bgl.		29.50 (0.50)		
30.00-30.23	13	SPT	11,16/50 for 75mm				Very dense dark grey sandy fine to coarse GRAVEL of mudstone, sandstone and siltstone. (Weathered South Wales Middle Coal Measures Formation)		30.00		
30.00-30.20	30	D									
30.50-31.00	31	B									
32.00-32.50	32	D							(2.50)		
32.50-33.00	33	B					Dark grey brown fine to coarse SAND and subrounded to rounded fine GRAVEL of siltstone, mudstone and sandstone.		32.50 (0.50)		
33.00-33.50	34	B					Dense grey brown clayey subangular to subrounded coarse GRAVEL and subangular to subrounded COBBLES of mudstone. (Weathered South Wales Middle Coal Measures Formation)		33.00		
33.50-33.95 33.50-33.95	14 35	SPT D	N=31								
34.00-34.50	36	B									(3.00)
35.00-35.35	37	D									
35.50-36.00	38	B									
										36.00	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									All dimensions in metres	Scale: 1:50
Method Used: Cable Percussion				Plant Used: Dando 3000			Drilled By: CJA		Logged By: Jagan Raj	Checked By:  



BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH311
Contract Ref: 315531	Start: 11.07.24 End: 18.07.24	Ground Level: 16.23	National Grid Co-ordinate: E:277024.2 N:186704.4		Sheet: 5 of 5

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
	No	Type	Results					
36.50-36.73	15	SPT	10,13/50 for 75mm			MUDSTONE. Recovered as dark grey brown angular to subangular fine to coarse GRAVEL of mudstone. (SOUTH WALES COAL MEASURES)	(1.45)	
36.50-36.75	39	D	NP					
36.75-37.00	40	D						
37.00-37.08	16	SPT(c)						
37.00-37.20	41	B						
Borehole terminated on refusal at 37.2m bgl upon reaching bedrock.							37.45	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		

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BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel			Borehole: BH312		
Contract Ref: 315531		Start: 08.07.24 End: 16.07.24		Ground Level: 15.86		National Grid Co-ordinate: E:277040.9 N:186643.8		Sheet: 1 of 5

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)					
0.50	1	ES								MADE GROUND: grey clayey GRAVEL with some cobble content. Gravel is subangular to subrounded fine to coarse metal, slag, clinker, concrete and rare brick. Cobbles are subrounded slag.	(1.20)	
1.50	2	ES								MADE GROUND: grey brown clayey fine to coarse SAND and subangular to subrounded fine to coarse GRAVEL of concrete, brick and slag with moderate ash content.	(1.50)	
2.70	3	ES								MADE GROUND: brown gravelly CLAY. Gravel is subangular to subrounded fine to coarse slag.	(1.00)	
3.00-3.50	1	B										
3.50-4.00	2	B										
3.70	4	ES										
4.00-4.50	3	B								MADE GROUND: dark green grey slightly gravelly CLAY with a slight organic odour. Gravel is subangular to subrounded fine to coarse slag, rubber, plastic, brick. . . . Remains of rubber tyre recovered approximately 1m in diameter.	4.00	
5.00-5.45	1	SPT	N=9							MADE GROUND: Loose (from 5.00m) dark grey clayey fine to coarse SAND and subangular to subrounded fine to coarse GRAVEL of brick, clinker and slag with moderate ash content.	(2.00)	
5.00-5.45	5	D										
5.00-5.50	6	B										
5.50-6.00	7	B								. . . Band of dark grey slightly sandy clay. sand is fine to coarse.	6.00	
6.00-6.38	2	SPT	5,6/13,18,19 for 75mm							Very dense yellow brown SAND. (BLOWN SAND)	(0.50)	
6.00	5	ES										
6.00-6.38	8	D								Very dense yellow brown poorly cemented subrounded to rounded coarse GRAVEL of sandstone with some cobble content of like material.	(1.00)	
7.00-7.18	3	SPT	8,17/50 for 45mm									
7.50-7.68	11	D								Very dense yellow brown fine to coarse SAND. (BLOWN SAND)	7.50	
8.50-9.20	12	B										

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks		
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)			
09/07/24	16:00	12.00	12.00	N/R	10.00	6.50	6.80	00:30	1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit mechanically dug to 4.1m depth on 08/07/24 prior to cable percussion.		
10/07/24	08:30	10.52	12.00	N/R	8.71	7.10	7.30	00:45			
10/07/24	16:00	18.50	18.00	N/R	8.00	8.20	8.30	00:15			
11/07/24	08:30	16.60	18.00	N/R	13.30	30.20	30.50	01:00			
11/07/24	16:00	30.50	30.50	N/R	23.00	30.50	31.50	03:00			
12/07/24	08:30	28.53	30.50	N/R	16.52	31.50	32.20	03:00			
12/07/24	14:00	32.20	32.20	N/R	15.40						
Method Used: Inspection pit + Cable Percussion + Rotary open hole				Plant Used: Dando 3000 + Beretta T.51		Drilled By: CJA		Logged By: Jagan Raj		Checked By: 	

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH312
Contract Ref:	Start: 08.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 16.07.24	15.86	E:277040.9 N:186643.8	2 of 5

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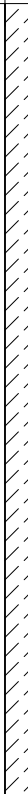
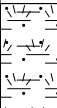
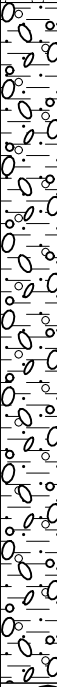
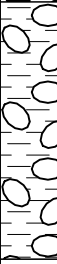
Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
Method Used:		Inspection pit + Cable Percussion +		Plant Used:		Dando 3000 + Beretta T.51		Drilled By:		CJA
								Logged By:		Jagan Raj
								Checked By:		ZB AGS

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH312
Contract Ref:	Start: 08.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 16.07.24	15.86	E:277040.9 N:186643.8	3 of 5

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend	
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)						
18.00-18.45	9	SPT	N=34							Stiff brown fibrous PEAT. (TIDAL FLAT DEPOSITS)			
													(1.50)
19.00-19.50	26	B											
19.50-19.95	27	U	27 blows 22% recovery								Stiff grey peaty clayey SILT. Moderate organic odour. (TIDAL FLAT DEPOSITS)	19.50	
19.95-20.10	28	D											
20.50-21.00	29	B											
20.50-21.00	33	B											
21.00-21.45	10	SPT	N=6								. . . Becoming soft at 21.0mbg		
21.00-21.45	30	D											
22.00-22.50	31	B											
22.50-22.95	32	U	16 blows 22% recovery										
22.95-23.10	33	D										(7.50)	
24.00-24.45	11	SPT	N=4										
24.00-24.45	34	D											
25.00-25.50	35	B											
25.50-25.95	36	U	36 blows 22% recovery										
25.95-26.10	37	D											
26.50-27.00	38	B											
											27.00		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									All dimensions in metres	Scale: 1:50
Method Used:	Inspection pit + Cable Percussion +		Plant Used:	Dando 3000 + Beretta T.51			Drilled By:	CJA	Logged By:	Jagan Raj
									Checked By:	 AGS

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH312
Contract Ref:	Start: 08.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 16.07.24	15.86	E:277040.9 N:186643.8	4 of 5

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)					
27.00-27.45 27.00-27.45	12 39	SPT D	N=14							Firm greyish brown sandy clayey silty PEAT.	(0.70) 27.70	
28.00-28.50	40	B	25,33/17 for 75mm							Firm greyish brown very gravelly sandy silty CLAY with low cobble content. Sand is fine to medium. Gravel is fine to coarse subangular to subrounded of Mudstone siltstone. Cobbles are subangular to subrounded of mudstone siltstone. (Weathered South Wales Middle Coal Measures Formation).	(4.50)	
28.50-29.00	41	D										
31.00-31.50	50	B										
31.50-31.73 31.50-31.73	13 51	SPT D										
										BOULDER of sandstone. (Weathered South Wales Middle Coal Measures Formation).	(0.80) 33.00	
										Clay. (Drillers Description) (Weathered South Wales Middle Coal Measures Formation).	(1.70) 34.70	
35.00-35.08	14	SPT(c)	25,33/17/100 for 75mm							Mudstone. (Drillers Description) (SOUTH WALES COAL MEASURES)		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									All dimensions in metres	Scale: 1:50
Method Used:	Inspection pit + Cable Percussion + Electric Auger			Plant Used:	Dando 3000 + Beretta T.51		Drilled By:	CJA	Logged By:	Jagan Raj
									Checked By:	ZB AGS



BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH312
Contract Ref: 315531	Start: 08.07.24 End: 16.07.24	Ground Level: 15.86	National Grid Co-ordinate: E:277040.9 N:186643.8		Sheet: 5 of 5

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)					
38.00-38.08	15	SPT(c)	25.33/17/100/100 for 75mm							Mudstone. (Drillers Description) (SOUTH WALES COAL MEASURES) (stratum copied from 34.70m from previous sheet)	(3.75)	
											38.45	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
Method Used: Inspection pit + Cable Percussion + Rotary open hole		Plant Used: Dando 3000 + Beretta T.51		Drilled By: CJA		Logged By: Jagan Raj		Checked By: AGS		All dimensions in metres Scale: 1:50

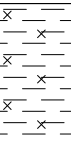
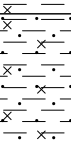
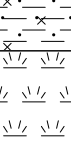
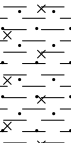
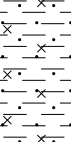
BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH313
Contract Ref: 315531	Start: 19.09.24 End: 25.09.24	Ground Level: ---	National Grid Co-ordinate: E:277293.0 N:186650.0		Sheet: 1 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
0.20-0.80	1	B				CONCRETE	0.20	
0.50	Es1	ES				MADE GROUND : Dark brownish grey to black silty sandy angular fine to coarse GRAVEL of slag, tarmac, brick, concrete. Sand is fine to coarse. Rare angular cobbles of sandstone.	(1.00)	
0.80-1.20	2	B					1.20	
1.00	Es2	ES						
1.20-1.65	1	SPT(c)	N=11			MADE GROUND: Medium dense yellow brown slightly gravelly fine to coarse SAND. Gravel is angular fine to coarse of slag and sandstone. (Reworked natural).		
1.20-1.60	3	B					(1.80)	
1.60-2.00	4	B						
2.00-2.45	2	SPT(c)	N=16					
2.00-2.50	5	B						
2.50-3.00	6	B					3.00	
3.00-3.45	3	SPT(c)	N=7			Loose yellow brown fine to coarse SAND. (BLOWNSAND).		
3.60-4.10	8	B						
4.10-4.55	4	SPT(c)	N=7			... Becomes greyish brown at 4.0m bgl		
4.10-4.55	9	D						
4.60-5.10	10	B					(4.00)	
5.10-5.60	11	B						
5.60-6.10	12	B						
6.10-6.55	6	SPT	N=28			... Becomes medium dense at 6.1m bgl.		
6.10-6.60	13	B						
							7.00	
7.00-7.50	14	B				Firm greyish brown silty CLAY. (TIDAL FLAT DEPOSITS)		
7.50-7.95	7	SPT	N=12			... Because firm at 7.5m bgl.		
7.50-7.95	15	D						
							(3.00)	
8.40-8.85	8	SPT	N=12					
8.50-9.00	16	B						

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit hand dug to 1.2m depth. 3. Groundwater encountered at 5.6m depth. 4. Chiselling 26.80-27.00m for 1 hour, Chiselling 27.50-27.80m for 1 hour 15mins.
Method Used: Cable Percussion						Plant Used: Dando 3000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Rachael Lockyer			Checked By:  AGS

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH313
Contract Ref:	Start: 19.09.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 25.09.24	---	E:277293.0 N:186650.0	2 of 4

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
	No	Type	Results					
9.00-9.45	17	UT	25 blows 100% recovery			Firm greyish brown silty CLAY. (TIDAL FLAT DEPOSITS) <i>(stratum copied from 7.00m from previous sheet)</i>	10.00	
9.45-9.60	18	D						
10.00-10.75	19	B						
10.70-11.15	20	D				Soft to firm greyish brown slightly sandy silty CLAY with frequent shells. Sand is fine. (TIDAL FLAT DEPOSITS)	(1.60)	
11.60-12.10	21	B						
12.10-12.55	22	UT	46 blows 100% recovery			Firm to stiff dark brown mottled orange brown fibrous PEAT. (TIDAL FLAT DEPOSITS).	(0.80)	
12.55-12.70	23	D				Soft to firm greyish brown slightly sandy silty CLAY with frequent shells. Sand is fine. (TIDAL FLAT DEPOSITS)	12.40	
13.00-13.60	24	B						
13.60-14.05	9	SPT	N=5			... Becomes soft at 13.6m bgl		
13.60-14.05	25	D						
14.50-15.00	26	B						
15.00-15.45	27	UT	8 blows 70% recovery				(5.60)	
15.45-15.60	28	D						
16.00-16.50	29	B						
16.50-16.95	11	SPT	N=8					
16.50-16.95	30	D						
17.50-18.00	31	B						

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
Method Used: Cable Percussion				Plant Used: Dando 3000		Drilled By: CJA		All dimensions in metres		Scale: 1:50
								Logged By: Rachael Lockyer		Checked By:  AGS



BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH313
Contract Ref: 315531	Start: 19.09.24 End: 25.09.24	Ground Level: ---	National Grid Co-ordinate: E:277293.0 N:186650.0		Sheet: 3 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
18.00-18.45	32	UT	40 blows 100% recovery			Dense brown subangular to subrounded fine to coarse GRAVEL of mudstone and sandstone. (GLACIOFLUVIAL DEPOSITS)		
18.45-18.60	33	D						
19.00-19.50	34	B					(2.50)	
19.50-19.89	10	SPT	5,7/11,14,16,9 for 15mm					
19.50-19.95	35	D						
20.50-21.00	36	B				Greyish brown clayey slightly sandy subangular to subrounded fine to coarse GRAVEL of mudstone and sandstone. (GLACIOFLUVIAL DEPOSITS).	(0.50)	
21.00-21.45	12	SPT	N=27			Medium dense becoming dense and very dense grey clayey angular fine to coarse GRAVEL and COBBLES of siltstone and mudstone. (Weathered South Wales Middle Coal Measures Formation) ... Becomes medium dense at 21.0m bgl.	21.00	
21.00-21.45	37	D						
22.00-22.50	38	B						
22.50-22.95	13	SPT	N=24					
22.50-22.95	39	D						
23.50-24.00	40	B				... Becomes brown with occasional boulders between 26.30-27.7mbgl.		
24.00-24.45	14	SPT	N=45					
24.00-24.45	41	D					(6.70)	
25.00-25.50	42	B						
25.50-25.95	15	SPT	N=46					
25.50-25.95	43	B						
26.50-27.00	44	B						

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks			
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)				
Method Used: Cable Percussion				Plant Used: Dando 3000			Drilled By: CJA		Logged By: Rachael Lockyer		Checked By: JB	AGS

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BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH313
Contract Ref: 315531	Start: 19.09.24 End: 25.09.24	Ground Level: ---	National Grid Co-ordinate: E:277293.0 N:186650.0		Sheet: 4 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
27.00-27.30	16	SPT	25,13/14,23 for 75mm			Medium dense becoming dense and very dense grey clayey angular fine to coarse GRAVEL and COBBLES of siltstone and mudstone. (Weathered South Wales Middle Coal Measures Formation)		
27.00-27.30	45	D				. . . Becomes medium dense at 21.0m bgl.(stratum copied from 21.00m from previous sheet)	27.70	
27.30-27.80	46	B				Greyish brown SILTSTONE.	27.80	x x x x
27.80	47	D				Terminated at 27.8mbgl		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks			
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)				
Method Used: Cable Percussion				Plant Used: Dando 3000			Drilled By: CJA		Logged By: Rachael Lockyer		Checked By: JB	AGS

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH314
Contract Ref: 315531	Start: 17.07.24 End: 14.08.24	Ground Level: 7.90	National Grid Co-ordinate: E:277380.4 N:186542.3		Sheet: 1 of 3

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
0.25 0.25	ES1	ES PID	0.0ppm			ASPHALT recovered as gravel and cobbles. MADE GROUND. Medium dense dark greyish brown sandy angular fine to coarse GRAVEL of various lithologies including limestone and slag. Sand is fine to coarse. ... Layer of compacted slag at 0.30m bgl.	0.10	
2.20-2.65	1	SPT(c)	N=10					
2.50-3.00 2.50 2.50	B1 ES2	B ES PID	0.0ppm					
3.00-3.45	2	SPT(c)	N=6				(6.20)	
3.50-4.00	B2	B						
4.00-4.45	3	SPT(c)	N=17					
4.50-5.00	B3	B						
5.00-5.45	4	SPT(c)	N=9					
5.50-6.00 5.50 5.50	B4 ES3	B ES PID	0.0ppm				6.30	
6.00-6.45	5	SPT(c)	N=8					
6.30-6.90 6.30 6.30	B5 ES4	B ES PID	0.0ppm			Firm dark greyish brown black slightly sandy silty CLAY with frequent organic matter. Sand is fine to coarse. Organic matter is angular to subangular fine to coarse pseudo-fibrous to amorphous. Moderate organic odour.	(1.50)	
7.50-7.95	6	SPT	N=4				7.80	
8.50-9.00	B6	B				Soft brownish grey slightly sandy silty CLAY. Sand is fine. Occasional relict rootlets. Slight organic odour.	(1.30)	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit machine dug to 2.20m depth. 300mm diameter pipe installed prior to backfilling to allow cable percussive drilling to commence. 3. Groundwater encountered at 1.20m depth.
Method Used: Inspection pit + Cable Percussion						Plant Used: Dando 3000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Kieran Bancroft			Checked By:  AGS

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH314
Contract Ref: 315531	Start: 17.07.24 End: 14.08.24	Ground Level: 7.90	National Grid Co-ordinate: E:277380.4 N:186542.3		Sheet: 2 of 3

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
9.00-9.45	U1	U	14 blows			Loose brownish grey clayey fine to coarse SAND.	9.10	
9.45-9.50	D2	D					(1.80)	
10.00-10.50	B7	B						
10.50-10.95	7	SPT	N=12			... Becomes medium dense at 10.50m bgl.	10.90	
11.50-12.00	B8	B				Firm dark greyish brown black clayey fibrous PEAT. Strong organic odour.		
12.00-12.45	U2	U	14 blows				(2.30)	
12.45-12.50	D4	D						
13.00-13.50	B9	B					13.20	
13.50-13.95	8	SPT	N=18			Firm to stiff brownish grey silty CLAY.	(1.70)	
14.50-14.90	B10	B					14.90	
15.00-15.45	U3	U	14 blows			Very soft dark grey silty slightly sandy CLAY. Sand is fine to coarse.	(1.60)	
15.45-15.90	D6	D						
16.00-16.50	B11	B					16.50	
17.20-17.70	B12	B				Dense becoming very dense dark brownish grey slightly sandy clayey subangular to rounded fine to coarse GRAVEL of sandstone and mudstone with medium cobble content. Sand is fine. Cobbles are subrounded to rounded of sandstone.(Weathered South Wales Middle Coal Measures Formation). ... Becomes brownish grey at 17.20m bgl.		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									4. SPT hammer 19-5-2023 ($E_r = 74.00\%$) used.
Method Used: Inspection pit + Cable Percussion						Plant Used: Dando 3000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Kieran Bancroft			Checked By:  AGS

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH314
Contract Ref: 315531	Start: 17.07.24 End: 14.08.24	Ground Level: 7.90	National Grid Co-ordinate: E:277380.4 N:186542.3		Sheet: 3 of 3

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
18.00-18.45	9	SPT(c)	N=48			Dense becoming very dense dark brownish grey slightly sandy clayey subangular to rounded fine to coarse GRAVEL of sandstone and mudstone with medium cobble content. Sand is fine. Cobbles are subrounded to rounded of sandstone.(Weathered South Wales Middle Coal Measures Formation). <i>(stratum copied from 16.50m from previous sheet)</i>		
18.50-19.00	B13	B						
19.50-19.95	10	SPT(c)	N=41					
20.50-21.00	B14	B						
21.00-21.17	11	SPT(c)	10,15/50 for 70mm				(8.84)	
21.50-22.00	B15	B						
22.50-22.65	12	SPT(c)	16,9/50 for 45mm					
24.00-24.23	13	SPT(c)	25/26,24 for 70mm					
25.00-25.34	14	SPT(c)	14,9/17,20,13 for 55mm				25.34	
Borehole terminated at 25.0m bgl due to refusal.								

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH315
Contract Ref: 315531	Start: 24.07.24 End: 30.07.24	Ground Level: 7.76	National Grid Co-ordinate: E:277381.4 N:186461.5		Sheet: 1 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
0.80-0.90	ES1	ES PID	0.0ppm			ASPHALT.	0.20	▲▲▲
0.80						MADE GROUND. Greyish brown sandy angular fine to coarse GRAVEL of various lithologies including slag and concrete with low cobble content. Sand is fine to coarse. Cobbles are angular to subrounded of slag and concrete.	0.60	
1.50-2.00	1	B				MADE GROUND. Yellowish brown slightly gravelly clayey fine to medium SAND. Gravel is angular to subrounded fine to coarse of sandstone.	(1.40)	
2.00-2.50	2	B					2.00	
2.00	2	ES PID	0.0ppm			MADE GROUND. Dark brown black sandy angular fine to coarse GRAVEL of various lithologies including red brick and slag. Sand is fine to coarse. Strong hydrocarbon/creosote and sulphurous odour. Oil sheen present.		
2.50-3.00	3	B					(2.00)	
3.00-3.45	1	SPT(c)	N=1			... Becoming very loose at 3.0mbgl.		
3.00	3	ES B					4.00	
3.00-3.50	4	B PID	0.0ppm					
3.50-4.00	5	B						
4.00	4	ES PID	0.0ppm			Medium dense brownish grey clayey fine to coarse SAND. Slight hydrocarbon odour. (TIDAL FLAT DEPOSITS)		
4.00							(3.50)	
4.50-5.00	6	B						
5.00	5	ES B						
5.00-5.50	7	B PID	0.0ppm					
5.00								
6.00-6.45	4	SPT(c)	N=22					
6.00-6.50	8	B						
7.00-7.50	9	B						
7.50-7.95	5	SPT(c)	N=4			Soft greyish brown slightly sandy silty CLAY. Sand is fine to medium. (TIDAL FLAT DEPOSITS)		
7.50-8.00	10	B						
7.50	6	ES PID	0.0ppm					
7.50								
8.50-9.00	11	B				... Sand becomes fine at 8.50m bgl.		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit machine dug to 1.50m depth. 300mm diameter pipe installed prior to backfilling to allow cable percussive drilling to commence. 3. Groundwater encountered at 1.50m depth.
Method Used: Inspection pit + Cable Percussion						Plant Used: Dando 3000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Adam Livesey			Checked By: AGS

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH315
Contract Ref:	Start: 24.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 30.07.24	7.76	E:277381.4 N:186461.5	2 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
9.00-9.45	1	U	17 blows			Soft greyish brown slightly sandy silty CLAY. Sand is fine to medium. (TIDAL FLAT DEPOSITS) <i>(stratum copied from 7.50m from previous sheet)</i>	(3.30)	
9.45-9.60	1	D						
10.00-10.50	12	B				. . . Becomes brownish grey at 10.0m bgl. Occasional relict rootlets and slight organic odour.		
10.50-10.95	2	D						
10.50-10.95	6	SPT	N=12				10.80	
						Soft to firm dark brownish grey slightly sandy silty CLAY with frequent organic matter. Sand is fine. Organic matter is angular fine to coarse fibrous. Moderate organic odour. (TIDAL FLAT DEPOSITS)		
12.00-12.45	2	U	64 blows					
12.45-12.60	3	D						
13.00-13.50	13	B				. . . Becomes brownish grey with occasional organic matter from 13.0m bgl. Organic matter is angular fine to medium pseudo-fibrous to amorphous.		
13.50-13.95	7	SPT	N=5				(6.00)	
14.50-15.00	14	B						
15.00-15.45	3	U	21 blows					
15.45-15.60	4	D						
16.60-17.05	5	D						
16.60-17.05	8	SPT	N=17				16.80	
						Medium dense becoming dense greyish brown sandy clayey angular to subrounded fine to coarse GRAVEL of sandstone and mudstone with high cobble content. Sand is fine to coarse. Cobbles are angular to subrounded of sandstone. (Weathered South Wales Middle Coal Measures)		
17.50-18.00	15	B						

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks		
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)			
Method Used:		Inspection pit + Cable Percussion		Plant Used:		Dando 3000		Drilled By:		CJA	
Logged By:		Adam Livesey		Checked By:							

Contract:		Client:		Borehole:	
EAF Meltshop Project		TATA Steel		BH315	
Contract Ref:	Start: 24.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:	
315531	End: 30.07.24	7.76	E:277381.4 N:186461.5	3 of 4	

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
18.00-18.45 18.00-18.45	6 9	D SPT	N=39			Medium dense becoming dense greyish brown sandy clayey angular to subrounded fine to coarse GRAVEL of sandstone and mudstone with high cobble content. Sand is fine to coarse. Cobbles are angular to subrounded of sandstone. (Weathered South Wales Middle Coal Measures) <i>(stratum copied from 16.80m from previous sheet)</i> ... Becomes more clayey between 19.0m and 22.0m bgl.	(8.20)	
19.00-19.50	16	B						
19.50-19.95 19.50-19.92	7 10	D SPT	3,10/16,9,11,14 for 45mm					
20.50-21.00	17	B						
21.00-21.45 21.00-21.20	8 11	D SPT	14,11/35,15 for 10mm					
22.00-22.50	18	B						
22.50-22.74	12	SPT	11,16/36,14 for 10mm					
25.50-25.73	13	SPT	12,12/50 for 75mm		Very dense brown clayey slightly sandy GRAVEL of fine to coarse mudstone and sandstone with high cobble content. Sand is fine to coarse. Cobbles are angular to subrounded sandstone. (Weathered South Wales Middle Coal Measures)	25.00		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									All dimensions in metres	Scale: 1:50
Method Used:	Inspection pit + Cable Percussion			Plant Used:	Dando 3000		Drilled By:	CJA	Logged By: Adam Livesey	Checked By:  AGS

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH315
Contract Ref:	Start: 24.07.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 30.07.24	7.76	E:277381.4 N:186461.5	4 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
27.00-27.10	14	SPT	20,5/50 for 9mm			Very dense brown clayey slightly sandy GRAVEL of fine to coarse mudstone and sandstone with high cobble content. Sand is fine to coarse. Cobbles are angular to subrounded sandstone. (Weathered South Wales Middle Coal Measures) <i>(stratum copied from 25.00m from previous sheet)</i> ... Becomes more clayey between 27.5m and 28.0m bgl.	(5.10)	
28.50-28.75	15	SPT	16,11/15,35 for 29mm					
30.00-30.05	16	SPT	25/50 for 27mm					
Terminated at 30.10m depth.							30.10	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									All dimensions in metres	Scale: 1:50
Method Used:	Inspection pit + Cable Percussion			Plant Used:	Dando 3000		Drilled By:	CJA	Logged By: Adam Livesey	Checked By:  AGS

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH316
Contract Ref: 315531	Start: 15.07.24 End: 16.07.24	Ground Level: 7.39	National Grid Co-ordinate: E:277450.4 N:186389.0		Sheet: 1 of 1

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
0.60 0.60	ES1	ES PID	0.0ppm			MADE GROUND. Dark brown sandy angular fine to coarse GRAVEL of various lithologies including limestone and slag. Sand is fine to coarse.	(0.70) 0.70	
						CONCRETE with void below to 3.0m bgl. Water within inspection chamber.	(2.30) 3.00	
						Inspection pit terminated at 0.70mbgl due to void.		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit machine dug to 0.70m depth. Void encountered at 0.70m bgl.
Method Used: Inspection pit + Cable Percussion						Plant Used: Dando 4000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Kieran Bancroft			Checked By:  AGS

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH316a
Contract Ref: 315531	Start: 16.07.24 End: 24.07.24	Ground Level: 7.39	National Grid Co-ordinate: E:277450.4 N:186389.0		Sheet: 1 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
1.70 1.70	ES1	ES PID	0.0ppm			MADE GROUND. Dark brown sandy angular fine to coarse GRAVEL of various lithologies including limestone and slag. Sand is fine to coarse. ... Layer of compacted slag at 0.90m bgl. Recovered as cobbles and boulders.	(1.50) 1.50	
2.60-3.00 2.60 2.60	B1 ES2	B ES PID	0.0ppm N=11			MADE GROUND. Dark brownish grey slightly gravelly clayey fine to coarse SAND. Gravel is angular fine to coarse of red brick and slag. Slight hydrocarbon odour.	(1.80)	
3.00-3.45 3.30 3.30	1 ES3	SPT(c) B ES PID	0.0ppm			... Becoming medium dense at 3.00mbgl. Loose greyish brown silty fine to medium SAND. (BLOWN SAND)	3.30	
4.50-5.00 5.00-5.45	B3 3	B SPT(c)	N=10			... Becoming loose at 5.00mbgl.	(4.40)	
5.50-6.00 5.50 5.50	B4 ES4	B ES PID	0.0ppm N=5			... Becomes dark grey fine at 7.0m bgl. Slight organic odour.	7.70	
6.00-6.45 7.00-7.50	4 B5	SPT(c) B	N=2			... Becoming very loose at 7.50mbgl.	8.00	
7.50-7.95 7.70-8.00	5 B6	SPT(c) B				Very soft dark brownish grey mottled black brown slightly sandy silty CLAY. Sand is fine. Frequent relict rootlets and organic matter. Slight organic odour. (TIDAL FLAT DEPOSITS)	8.40	
8.40-9.00	B7	B				Greyish brown fine to coarse SAND. (TIDAL FLAT DEPOSITS) <i>Description on next sheet</i>		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit machine dug to 2.20m depth. 300mm diameter pipe installed prior to backfilling to allow cable percussive drilling to commence. 3. Groundwater encountered at 2.10m depth.
Method Used: Inspection pit + Cable Percussion						Plant Used: Dando 4000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Kieran Bancroft			Checked By:  AGS

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH316a
Contract Ref: 315531	Start: 16.07.24 End: 24.07.24	Ground Level: 7.39	National Grid Co-ordinate: E:277450.4 N:186389.0		Sheet: 2 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
9.00-9.45	U1	U	11 blows 100% recovery			Very soft brownish grey sandy silty CLAY. Sand is fine to medium. (TIDAL FLAT DEPOSITS) (stratum copied from 8.40m from previous sheet)	(2.90)	
9.45-9.55	D1	D						
10.00-10.50	B8	B						
10.50-10.95	6	SPT	N=2			Very soft brownish grey dark brown sandy silty CLAY with frequent organic matter. Sand is fine to coarse. Organic matter is angular fine to coarse fibrous. Moderate organic odour. (TIDAL FLAT DEPOSITS)	11.30	
11.30-12.00	B9	B						
12.00-12.45	U2	U	28 blows 100% recovery					
12.45-12.55	D3	D				. . . Organic matter becomes rare and pseudo-fibrous to amorphous from 12.50.	(4.70)	
13.00-13.50	B10	B						
13.50-13.95	7	SPT	N=2					
14.50-15.00	B11	B					16.00	
15.00-15.45	U3	U	9 blows 100% recovery					
15.45-15.55	D5	D						
16.00-16.50	B12	B				Dense greyish brown sandy clayey angular to subrounded fine to coarse GRAVEL of mudstone/siltstone and sandstone with high cobble content. Sand is fine to coarse. Cobbles are angular to subrounded of mudstone/siltstone and sandstone. (Weathered South Wales Middle Coal Measures)		
16.50-16.95	8	SPT(c)	N=31					
17.50-18.00	B13	B						

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									4. Upon completion borehole backfilled with bentonite pellets.

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH316a
Contract Ref: 315531		Start: 16.07.24 End: 24.07.24	Ground Level: 7.39	National Grid Co-ordinate: E:277450.4 N:186389.0	Sheet: 3 of 4

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
	No	Type	Results					
18.00-18.45	9	SPT(c)	N=35			Dense greyish brown sandy clayey angular to subrounded fine to coarse GRAVEL of mudstone/siltstone and sandstone with high cobble content. Sand is fine to coarse. Cobbles are angular to subrounded of mudstone/siltstone and sandstone. (Weathered South Wales Middle Coal Measures) <i>(stratum copied from 16.00m from previous sheet)</i>	(12.22)	
19.00-19.50	B14	B						
19.50-19.95	10	SPT(c)	N=36					
20.50-21.00	B15	B						
21.00-21.45	11	SPT(c)	N=30					
22.00-22.50	B16	B						
22.50-22.95	12	SPT(c)	N=59			. . . Becomes very dense between 22.5m and 24.0m bgl.		
23.50-24.00	B17	B						
24.00-24.45	13	SPT(c)	N=50					
25.00-25.50	B18	B						
25.50-25.95	14	SPT(c)	N=33			. . . Becoming dense at 25.50mbgl		
26.50-27.00	B19	B						

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		



BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH316a
Contract Ref: 315531	Start: 16.07.24 End: 24.07.24	Ground Level: 7.39	National Grid Co-ordinate: E:277450.4 N:186389.0		Sheet: 4 of 4

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
27.50-28.00	B20	B				Dense greyish brown sandy clayey angular to subrounded fine to coarse GRAVEL of mudstone/siltstone and sandstone with high cobble content. Sand is fine to coarse. Cobbles are angular to subrounded of mudstone/siltstone and sandstone. (Weathered South Wales Middle Coal Measures) (stratum copied from 16.00m from previous sheet)		
28.00-28.22	16	SPT(c)	25/45,38,17 for 32mm			Borehole terminated at 28.0m bgl.	28.22	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH317
Contract Ref: 315531	Start: 07.06.24	Ground Level: 6.76	National Grid Co-ordinate: E:277542.9 N:186261.9		Sheet: 1 of 8
End: 27.06.24					

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)						
0.50-1.00	1	B								MADE GROUND. Dark brown sandy angular fine to coarse GRAVEL of various lithologies including red brick, limestone, slag and wood.			
0.70	1	ES											
0.70		PID	0.0ppm									(2.20)	
1.40-1.70	1	SPT(c)	7,12/25,25 for 75mm							. . . Frequent angular cobbles of slag at 1.70m bgl.			
1.50	2	ES											
1.50-2.00	2	B										2.20	
1.50		PID	0.0ppm							MADE GROUND. Medium dense yellowish greyish brown slightly gravelly clayey fine to coarse SAND. Gravel is angular fine to coarse of slag.			
2.00-2.45	2	SPT(c)	N=18										
2.20	3	ES										(0.90)	
2.20-2.70	3	B								MADE GROUND. Loose dark brownish grey sandy clayey angular fine to coarse GRAVEL of various lithologies including red brick, slag and coal.			
2.20		PID	0.0ppm									3.10	
3.00-3.45	3	SPT(c)	N=8									(0.60)	
3.30	4	ES								MADE GROUND. Dark brownish grey gravelly fine to coarse SAND. Gravel is angular fine to coarse of various lithologies including red brick, slag and coal.			
3.30		PID	0.0ppm									3.70	
4.00-4.45	4	SPT(c)	N=21									4.10	
4.00-4.50	4	B								Firm to stiff brownish grey sandy silty CLAY with pockets of grey clayey fine to coarse sand. Sand is fine to coarse. Frequent rootlets/organic matter. Slight organic odour. (TIDAL FLAT DEPOSITS) . . . Becomes brownish grey mottled black at 5.45m bgl. Rare rootlets/organic matter.			
4.10	5	ES											
4.10		PID	0.0ppm										
5.00-5.45	1	U	11 blows 33% recovery							. . . Becomes slightly sandy at 7.95m bgl. Sand is fine.			
5.45-5.50	1	D											
6.00-6.45	2	D											
6.00-6.45	6	SPT	N=1									(4.80)	
6.50-7.00	5	B											
6.50	6	ES											
6.50		PID	0.0ppm										
7.50-7.95	2	U	12 blows 60% recovery										
7.95-8.00	3	D											

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit machine dug to 1.20m depth. 3. Rotary coring commenced at 27.50m bgl.
Method Used: Inspection pit + Cable Percussion + Rotary Corer						Plant Used: Dando 2000 + Fraste			All dimensions in metres
Drilled By: CJA						Logged By: Kieran Bancroft			Scale: 1:50
						Checked By: JB			AGS

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH317
Contract Ref: 315531		Start: 07.06.24 End: 27.06.24	Ground Level: 6.76	National Grid Co-ordinate: E:277542.9 N:186261.9	Sheet: 2 of 8

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Depth (Thickness)	Material Graphic Legend	
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)							
9.00-9.45	4	D								Very soft dark brown PEAT. Strong organic odour. (TIDAL FLAT DEPOSITS) <i>(stratum copied from 8.90m from previous sheet)</i>		9.20		
9.00-9.45	7	SPT	N=0								(1.00)			
10.00-10.50	6	B								Soft brownish grey clayey fine to coarse SAND. Moderate organic matter content. Slight organic odour. (TIDAL FLAT DEPOSITS)		10.20		
10.00		PID	1.0ppm											
10.50-10.95	3	U	0 blows 0% recovery							Very soft to soft grey mottled brown and black slightly sandy slightly organic silty CLAY. Sand is fine to coarse. Slight organic odour. Organic matter is fibrous to pseudo-fibrous. (TIDAL FLAT DEPOSITS)				
10.50	7	ES												
10.50-11.00	7	B												
10.50		PID	0.0ppm											
11.50-12.00	8	B												
12.00-12.45	5	D												
12.00-12.45	8	SPT	N=4									(3.70)		
12.50-13.00	9	B								Organic matter becomes pseudo-fibrous to amorphous from 12.50m bgl.				
13.50-13.95	4	U	9 blows 100% recovery										13.90	
13.95-14.00	10	D								Soft greyish brown mottled dark brown and black slightly sandy slightly gravelly slightly organic silty CLAY. Sand is fine to coarse. Gravel is subangular to rounded fine to coarse of sandstone. Organic matter is fibrous to pseudo-fibrous including relict rootlets. Slight organic odour. (TIDAL FLAT DEPOSITS)		14.00		
14.00-14.50	10	B											(1.50)	
14.00	8	ES												
14.00		PID	0.4ppm											
15.00-15.45	9	SPT	N=39								Dense greyish brown sandy clayey angular to rounded fine to coarse GRAVEL of sandstone and mudstone with medium cobble content. Sand is fine to coarse. Cobbles are subrounded to rounded of sandstone. (Weathered South Wales Middle Coal Measures Formation).		15.50	
15.50-16.00	11	B									Dense greyish brown silty/clayey fine to medium SAND. (Weathered South Wales Middle Coal Measures Formation). Blowing sands rising up the casing to 13.5m bgl.		(2.70)	
17.50-18.00	12	B												
17.50	9	ES												
17.50		PID	0.2ppm											

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks		
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)			
Method Used:		Inspection pit + Cable Percussion +		Plant Used:		Dando 2000 + Fraste		Drilled By:		CJA	
								Logged By:		Kieran Bancroft	
								Checked By:		JB AGS	

Contract:		Client:		Borehole:
EAF Meltshop Project		TATA Steel		BH317
Contract Ref:	Start: 07.06.24	Ground Level:	National Grid Co-ordinate:	Sheet:
315531	End: 27.06.24	6.76	E:277542.9 N:186261.9	3 of 8

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Depth (Thickness)	Material Graphic Legend				
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)										
18.00-18.45	10	SPT	N=30							Very dense dark brownish grey sandy clayey angular to subrounded fine to coarse GRAVEL and COBBLES of sandstone. Sand is fine to coarse. (Weathered South Wales Middle Coal Measures Formation).		18.20					
19.00-19.50	13	B	8,7/16,19,15 for 75mm												(4.40)		
19.50-19.88	11	SPT															
19.50-20.00	14	B															
21.00-21.45	12	SPT														N=35	
22.00-22.50	15	B	N=36														22.60
22.50-22.95	13	SPT															
23.00-23.50	16	B															
															Dense multicoloured (red, grey and brown) sandy angular to rounded fine to coarse GRAVEL and COBBLES of sandstone and mudstone. Sand is fine to coarse.		(0.90)
															Multicoloured (red, grey and brown) sandy angular to rounded fine to coarse GRAVEL and COBBLES of sandstone and mudstone. Sand is fine to coarse. (Weathered South Wales Middle Coal Measures Formation).		23.50
												(4.00)					

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
Method Used: Inspection pit + Cable Percussion +		Plant Used: Dando 2000 + Fraste		Drilled By: CJA		Logged By: Kieran Bancroft		Checked By: JB		AGS

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel			Borehole: BH317	
Contract Ref: 315531		Start: 07.06.24	Ground Level: 6.76		National Grid Co-ordinate: E:277542.9 N:186261.9		Sheet: 4 of 8
		End: 27.06.24					

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)						
27.50-29.00				93	31	0	8 35 90 FI=21			Medium strong to strong dark grey unweathered fine SANDSTONE/SILTSTONE. Rare subrounded to rounded coarse sandstone inclusions. Occasional very thin laminations of coal/organic mudstone.		27.50	
29.00-30.50				60	36	36	60 170 230 FI=5						
30.50-32.00 30.50-30.58	14	SPT	NP	75	75	46	60 150 210 FI=7			Inclusions no longer present from 32.0m bgl.		(7.50)	
32.00-33.50				96	56	19	35 80 200 FI=12						
33.50-35.00 33.50-33.58	15	SPT	NP	93	77	31	15 75 150 FI=17			Becomes thinly laminated with strong pale grey medium to coarse grained sandstone from 34.40m bgl.			
35.00-36.00				95	37	32						35.00	
										Weak black partially unweathered COAL.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
								</		

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel			Borehole: BH317		
Contract Ref: 315531		Start: 07.06.24 End: 27.06.24		Ground Level: 6.76		National Grid Co-ordinate: E:277542.9 N:186261.9		Sheet: 5 of 8

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)						
36.50-38.00 36.50-36.73	16	SPT	11,12/100 for 75mm	40	0	0				Weak black partially unweathered COAL. (stratum copied from 35.00m from previous sheet) ... Becomes destructured at 36.5m bgl (potentially carbonaceous mudstone)		(3.00)	
38.00-39.50				100	27	27	50 100 220 FI=11			Medium strong brownish grey unweathered MUDSTONE. Frequent angular fine to coarse fossilised organic matter inclusions. ... Fossilised organic matter inclusions no longer present from 38.4m bgl. ... Becomes laminated with fine sandstone/siltstone between 38.9m and 39.4m bgl ... Becomes weak and partially unweathered at 39.10m bgl.	[i]	(2.10)	
39.50-41.00 39.50-39.58	17	SPT	NP	92	47	32	15 140 260 FI=10			Weak to moderately weak black unweathered to partially unweathered COAL.		(0.50)	
41.00-42.50				97	97	97	160 300 450 FI=5			Strong grey unweathered SILTSTONE. Frequent angular fine to coarse fossilised organic matter inclusions.		(2.30)	
42.50-44.00 42.50-42.58	18	SPT	NP	68	46	30	30 100 200 FI=8			... Becomes medium strong at 42.50m bgl. Weak black partially unweathered to destructured COAL.		42.90 43.10	
44.00-45.50				90	90	70	25 130 310 FI=10			Strong brownish grey unweathered fine SANDSTONE/SILTSTONE. Occasional subrounded fine to coarse medium sandstone inclusions and lenses. Frequent angular fine to coarse fossilised organic matter inclusions.	[i]	(2.80)	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH317
Contract Ref: 315531	Start: 07.06.24	Ground Level: 6.76	National Grid Co-ordinate: E:277542.9 N:186261.9		Sheet: 6 of 8
End: 27.06.24					

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)						
45.50-47.00 45.50-45.58	19	SPT	NP	90	90	70						45.90	
				80	58	32	25 80 200 FI=14			Medium strong dark brownish grey unweathered to distinctly weathered MUDSTONE. occasional subrounded fine to coarse inclusions of fine to medium sandstone. ... Frequent angular fossilised organic matter inclusions between 45.95-46.10m bgl.			
47.00-48.50				71	0	0	80			... Becomes extremely weak to weak distinctly weathered at 47.3m bgl. Frequent laminations of organic mudstone/coal		(4.10)	
48.50-50.00 48.50-48.58	20	SPT	NP	100	0	0	20 175					50.00	
50.00-51.50				98	51	36	30 100 190 FI=8			Medium strong to strong brownish grey partially unweathered fine SANDSTONE. Occasional fossilised organic matter inclusions.		(1.60)	
51.50-53.00 51.50-51.58	21	SPT	NP	53	12	0				Weak black unweathered COAL. ... Becomes dark grey destructured (potentially carbonaceous mudstone).		51.60 52.00	
53.00-54.50				60	0	0				Strong to very strong pale grey unweathered fine to medium SANDSTONE. Occasional veins of quartzite. Medium strong dark brownish grey unweathered to partially unweathered SILTSTONE with thin laminations of fine sandstone and carbonaceous mudstone ... Laminations no longer present at 53.5m bgl.		(1.00) 53.00	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH317
Contract Ref: 315531	Start: 07.06.24	Ground Level: 6.76	National Grid Co-ordinate: E:277542.9 N:186261.9		Sheet: 7 of 8
End: 27.06.24					

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)						
54.50-56.00 54.50-54.65	22	SPT	NP	60	0	0				Medium strong dark brownish grey unweathered to partially unweathered SILTSTONE with thin laminations of fine sandstone and carbonaceous mudstone (<i>stratum copied from 53.00m from previous sheet</i>)			x x x x
				0	0	0	40 70 130 FI=14			Becomes fine SANDSTONE/SILTSTONE.	[i]	(4.50)	x x x x
56.00-57.50				33	0	0							x x x x
57.50-59.00 57.50-57.73	23	SPT	25,20/100 for 75mm	40	0	0				Medium strong brownish grey partially unweathered fine SANDSTONE. Frequent very thin laminations of carbonaceous mudstone. . . . Frequent very thin laminations of organic mudstone at 57.5m bgl.		57.50	x x x x
59.00-60.50				0	0	0				Medium strong brownish grey partially unweathered fine SANDSTONE. Frequent very thin laminations of carbonaceous mudstone.		59.00	x x x x
60.50-62.00 60.50-60.58	24	SPT	NP	0	0	0				Medium strong brownish grey partially unweathered fine SANDSTONE. Frequent very thin laminations of carbonaceous mudstone.		60.50	x x x x
62.00-63.50				0	0	0				COAL. (Drillers description)		62.00	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel			Borehole: BH317		
Contract Ref: 315531		Start: 07.06.24 End: 27.06.24		Ground Level: 6.76		National Grid Co-ordinate: E:277542.9 N:186261.9		Sheet: 8 of 8

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Fracture Log	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)						
63.50-65.00 63.50-63.95	25	SPT	N=75	0	0	0				COAL. (Drillers description) (stratum copied from 62.00m from previous sheet)		(3.00)	
65.00-66.50				0	0	0				Medium strong brownish grey partially unweathered fine SANDSTONE. Frequent very thin laminations of carbonaceous mudstone.		65.00 (1.63)	
66.50-66.58	26	SPT	NP							Terminated at 66.63m bgl		66.63	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
Method Used: Inspection pit + Cable Percussion + Rotary Corer		Plant Used: Dando 2000 + Fraste		Drilled By: CJA		Logged By: Kieran Bancroft		Checked By: JB		Scale: 1:50

BOREHOLE LOG

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH318
Contract Ref: 315531	Start: 29.08.24 End: 02.09.24	Ground Level: 6.77	National Grid Co-ordinate: E:277579.4 N:186007.2		Sheet: 1 of 3

Depth (m)	Samples & Testing			Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
	No	Type	Results					
0.30 0.30	ES1	ES PID	0.0ppm			Grass over dark grey black sandy silty clay TOPSOIL. Sand is fine to medium. MADE GROUND. Dark brown black gravelly clayey coarse SAND. Gravel is angular to subrounded fine to coarse of various lithologies including red brick, coal, concrete and slag. ... Becomes reddish brown dark brown black with medium cobble content at 0.70m bgl. Cobbles are angular of red brick and slag. ... Becomes light brown to dark brown at 0.90m bgl.	0.20 (1.10)	
0.90 0.90	ES2	ES PID	0.0ppm			MADE GROUND. Loose yellowish brown coarse SAND. (Fill)	1.30	
1.50 1.50	ES3	ES PID	0.0ppm				(2.30)	
2.50-3.00	1	B						
3.00-3.45 3.00-3.45	1 2	SPT D	N=11				3.60	
3.60-4.10	3	B				MADE GROUND. Medium dense becoming dense dark grey slightly sandy angular to subangular fine to coarse GRAVEL of slag with high cobble content. Cobbles are angular of slag.	(2.40)	
4.10-4.55 4.10-4.55	2 4	SPT D	N=20				6.00	
4.60-5.00	5	B						
5.00-5.45 5.00-5.45	3 6	SPT D	N=38					
5.50-6.00	7	B						
6.00-6.45 6.00-6.45	4 8	SPT D	N=12			Firm grey sandy slightly gravelly silty CLAY. Sand is fine. Gravel is angular fine to coarse of mudstone. (Tidal Flat Deposits)	(2.20)	
7.00-7.50	9	B				... Becomes very soft at 7.50m bgl.	8.20	
7.50-7.95 7.50-7.95	5 10	SPT D	N=2			... Gravel no longer present from 8.0m bgl.		
8.50-9.00	11	B				Firm brown PEAT. (Driller's description) (Tidal Flat Deposits)	(1.50)	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									1. Position scanned with a CAT, Genny and GPR prior to excavation. 2. Inspection pit machine dug to 2.50m depth. 300mm diameter pipe installed prior to backfilling to allow cable percussive drilling to commence. 3. Groundwater encountered at 3.0m depth.
Method Used: Inspection pit + Cable Percussion						Plant Used: Dando 3000			All dimensions in metres Scale: 1:50
Drilled By: CJA						Logged By: Kieran Bancroft			Checked By:  AGS

Contract: EAF Meltshop Project			Client: TATA Steel		Borehole: BH318
Contract Ref: 315531		Start: 29.08.24 End: 02.09.24	Ground Level: 6.77	National Grid Co-ordinate: E:277579.4 N:186007.2	Sheet: 2 of 3

Depth (m)	Samples & Testing			Backfill & Instru- mentation	Water	Description of Strata	Depth (Thick- ness)	Material Graphic Legend		
	No	Type	Results							
9.00-9.07	6	SPT	25/50 for 45mm			Firm brown PEAT. (Driller's description) (Tidal Flat Deposits) <i>(stratum copied from 8.20m from previous sheet)</i>	9.70	 		
9.00-9.06	12	D								
9.00-9.50	13	B								
10.00-10.50	14	B	N=2			Very soft grey silty CLAY. Occasional brown dark brown fine to medium fragments of relict rootlets and organic matter. Slight organic odour. (Tidal Flat Deposits)	(6.30)	                                         		
10.50-10.95	7	SPT								
10.50-10.95	15	D								
11.50-12.00	16	B								
12.00-12.45	8	SPT	N=2							
12.00-12.45	17	D								
13.00-13.50	18	B								
13.50-13.95	9	SPT	N=4							
13.50-13.95	19	D								
14.50-15.00	20	B								
15.00-15.45	10	SPT	N=5			... Becomes soft at 15.0m bgl.			16.00	       
15.00-15.45	21	D								
16.00-16.50	22	B								
16.50-16.95	11	SPT	N=23			Stiff greyish brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular to rounded fine to coarse of sandstone. (Tidal Flat Deposits)			(2.81)	       
16.50-16.95	23	D								
17.50-18.00	24	B								
						... Becomes sandy gravelly at 17.50m bgl.				       

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks	
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)		
									All dimensions in metres	Scale: 1:50
Method Used:	Inspection pit + Cable Percussion			Plant Used:	Dando 3000		Drilled By:	CJA	Logged By:	Kieran Bancroft
									Checked By:	 AGS