

High Speed Rail (Crewe to Manchester)

Background information and data

Agriculture, forestry and soils

BID AG-002-0MA02

MA02: Wimboldsley to Lostock Gralam

Agriculture, forestry and soils baseline data

High Speed Rail (Crewe to Manchester)

Background information and data

Agriculture, forestry and soils

BID AG-002-0MA02

MA02: Wimboldsley to Lostock Gralam

Agriculture, forestry and soils baseline data



Department
for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

High Speed Two (HS2) Limited
Two Snowhill
Snow Hill Queensway
Birmingham B4 6GA

Telephone: 08081 434 434

General email enquiries: HS2enquiries@hs2.org.uk

Website: www.hs2.org.uk

A report prepared for High Speed Two (HS2) Limited:

ARUP+ ERM | FOSTER + PARTNERS | JACOBS
RAMBOLL | TYPESA | COSTAIN

MWJV

Mott MacDonald | WSP

High Speed Two (HS2) Limited has actively considered the needs of blind and partially sighted people in accessing this document. The text will be made available in full on the HS2 website. The text may be freely downloaded and translated by individuals or organisations for conversion into other accessible formats. If you have other needs in this regard, please contact High Speed Two (HS2) Limited.

© High Speed Two (HS2) Limited, 2022, except where otherwise stated.

Copyright in the typographical arrangement rests with High Speed Two (HS2) Limited.

This information is licensed under the Open Government Licence v3.0. To view this licence, visit www.nationalarchives.gov.uk/doc/open-government-licence/version/3 **OGL** or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or e-mail: psi@nationalarchives.gsi.gov.uk. Where we have identified any third-party copyright information you will need to obtain permission from the copyright holders concerned.



Printed in Great Britain on paper containing 100% recycled fibre.

Contents

1	Introduction	2
1.2	Soil data	2
2	References	13
Tables		
	Table 1: Baseline borehole survey records	3

1 Introduction

- 1.1.1 This report presents agriculture, forestry and soils baseline data for the Wimboldsley to Lostock Gralam area (MA02).
- 1.1.2 The following content comprises the individual soil data logs for the soil profiles observed as part of the survey undertaken of those parts of the study area for which published Agricultural Land Classification information was unavailable as referenced in the Environmental Statement (see Volume 5: Appendix AG-001-0MA02)¹.

1.2 Soil data

- 1.2.1 The observed soil profile data are shown below in Table 1 on baseline borehole survey sheets. The location of each survey point is identified by a grid reference.

¹ High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement, MA02 Wimboldsley to Lostock Gralam, Agriculture, forestry and soils assessment*. Volume 5: Appendix AG-001-0MA02. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.

Background Information and Data
 BID AG-002-0M402
 Agriculture, forestry and soils
 M402: Wimboblesley to Lookook Grahm
 Agriculture, forestry and soils baseline data

Company	Date of soil survey	Land parcel reference	CFA Farm ID	Soil Type (T, U, L)	Borehole No	Borehole ID (Auto generated on save)	Survey site name	Borehole Location		Soil						Structure Ped		Soil Nutrients						Stone Content % total	Stone Content % <2cm	Stone Content % <6cm	Stone Lithology	Slowly permeable layer	Witness Class	Limiting Factor (1)	Limiting Factor (2)	Limiting Factor (3)	ALC Grade	Soil Survey category		
								Easting (E) coordinate	Northing (N) coordinate	Lower depth of horizon (cm)	Texture	Colour (Munsell Soil Chart)	Consistency	Subsoil structure	Colcrou s	Average annual rainfall (mm)	Soil handling class	Size	Shape	OM %	pH value	P mg/l	K mg/l												Mg mg/l	total N mg/l
RAC	12/09/2018	L5292	MA02	T	2150	L5292_T_2150	MA02 L5292 H52 PH2B Lot 1	368600	365500	45	mSL - Sandy silty loam (Medium)	10YR3/2	Friable	N/A	No	700-1000mm	Medium resilience	Medium	Granular	4.4	7.8	31.6	116	138	No	8	0	0	Hard	No	Class III	Wetness			3a	Survey type 3
RAC	12/09/2018	L5292	MA02	U	2150	L5292_U_2150	MA02 L5292 H52 PH2B Lot 1	368600	365500	60	C - Clay	5YR5/3	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky	2	8.3	6.4	110	308	Yes	5	0	0	Hard	No	Class III	Wetness			3a	Survey type 3
RAC	12/09/2018	L5292	MA02	L1	2150	L5292_L1_2150	MA02 L5292 H52 PH2B Lot 1	368600	365500	120	C - Clay	5YR5/4	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	1	0	0	Hard	Yes	Class III	Wetness			3a	Survey type 3
RAC	12/09/2018	L5292	MA02	T	2151	L5292_T_2151	MA02 L5292 H52 PH2B Lot 1	368500	365500	28	MZCL - Silty clay loam (Medium)	10YR4/2	Friable	N/A	No	700-1000mm	Medium resilience	Medium	Granular						No	0	0	0	Soft	No	Class III	Wetness			3a	Survey type 3
RAC	12/09/2018	L5292	MA02	U	2151	L5292_U_2151	MA02 L5292 H52 PH2B Lot 1	368500	365500	55	ZC - Silty clay	7.5YR5/3	Firm	Moderate	No	700-1000mm	Medium resilience	Medium	Subangular Blocky						Yes	0	0	0	Soft	No	Class III	Wetness			3a	Survey type 3
RAC	12/09/2018	L5292	MA02	L1	2151	L5292_L1_2151	MA02 L5292 H52 PH2B Lot 1	368500	365500	120	C - Clay	5YR5/4	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Soft	Yes	Class III	Wetness			3a	Survey type 3
RAC	16/05/2018	L5320	MA02	T	2012	L5320_T_2012	68 - HS2 Phase 2b Lot 1 Soil Surv	368600	362300	29	HCL - Clay loam (Heavy)	10YR4/2	Very firm	N/A	Yes	700-1000mm	Low resilience	Very coarse	Subangular Blocky						No	0	0	0	Soft	No	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	L1	2012	L5320_L1_2012	68 - HS2 Phase 2b Lot 1 Soil Surv	368600	362300	47	C - Clay	10YR4/3	Very firm	Moderate	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Soft	No	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	L1	2012	L5320_L1_2012	68 - HS2 Phase 2b Lot 1 Soil Surv	368600	362300	120	C - Clay	5YR4/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Prismatic						Yes	0	0	0	Soft	Yes	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	T	2013	L5320_T_2013	68 - HS2 Phase 2b Lot 1 Soil Surv	368750	362380	29	HCL - Clay loam (Heavy)	10YR4/2	Very firm	N/A	Yes	700-1000mm	Low resilience	Very coarse	Subangular Blocky						No	0	0	0	Soft	No	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	U	2013	L5320_U_2013	68 - HS2 Phase 2b Lot 1 Soil Surv	368750	362380	47	C - Clay	10YR4/3	Very firm	Moderate	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky						No	0	0	0	Soft	No	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	L1	2013	L5320_L1_2013	68 - HS2 Phase 2b Lot 1 Soil Surv	368750	362380	120	C - Clay	5YR4/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Prismatic						Yes	0	0	0	Soft	Yes	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	T	2015	L5320_T_2015	68 - HS2 Phase 2b Lot 1 Soil Surv	368650	362350	29	HCL - Clay loam (Heavy)	10YR4/2	Very firm	N/A	Yes	700-1000mm	Low resilience	Very coarse	Subangular Blocky	9.8	6.8	32.4	179	329	No	0	0	0	Soft	No	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	L1	2015	L5320_L1_2015	68 - HS2 Phase 2b Lot 1 Soil Surv	368650	362350	47	C - Clay	10YR4/3	Very firm	Moderate	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	3.1	7.3	3.4	94	710	Yes	0	0	0	Soft	No	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	L1	2015	L5320_L1_2015	68 - HS2 Phase 2b Lot 1 Soil Surv	368650	362350	120	C - Clay	5YR4/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Prismatic						Yes	0	0	0	Soft	Yes	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	T	2017	L5320_T_2017	68 - HS2 Phase 2b Lot 1 Soil Surv	368700	362400	25	MCL - Clay loam (Medium)	10YR4/1	Firm	N/A	No	700-1000mm	Low resilience	Coarse	Subangular Blocky						Yes	0	0	0	Soft	No	Class IV	Wetness			3b	Survey type 2
RAC	16/05/2018	L5320	MA02	U	2017	L5320_U_2017	68 - HS2 Phase 2b Lot 1 Soil Surv	368700	362400	40	C - Clay	5YR4/3	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Soft	Yes	Class IV	Wetness			3b	Survey type 2
RAC	16/05/2018	L5320	MA02	L1	2017	L5320_L1_2017	68 - HS2 Phase 2b Lot 1 Soil Surv	368700	362400	120	C - Clay	5YR4/3	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Prismatic						Yes	0	0	0	Soft	Yes	Class IV	Wetness			3b	Survey type 2
RAC	16/05/2018	L5320	MA02	T	2018	L5320_T_2018	68 - HS2 Phase 2b Lot 1 Soil Surv	368600	362400	29	HCL - Clay loam (Heavy)	10YR4/2	Very firm	N/A	Yes	700-1000mm	Low resilience	Very coarse	Subangular Blocky						No	0	0	0	Soft	No	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	L1	2018	L5320_L1_2018	68 - HS2 Phase 2b Lot 1 Soil Surv	368600	362400	47	C - Clay	10YR4/3	Very firm	Moderate	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Soft	No	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	L1	2018	L5320_L1_2018	68 - HS2 Phase 2b Lot 1 Soil Surv	368600	362400	120	C - Clay	5YR4/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Prismatic						Yes	0	0	0	Soft	Yes	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	T	2020	L5320_T_2020	68 - HS2 Phase 2b Lot 1 Soil Surv	368700	362500	26	HCL - Clay loam (Heavy)	10YR3/2	Very firm	N/A	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky	9.3	6.5	22.2	117	411	No	0	0	0	Soft	No	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	U	2020	L5320_U_2020	68 - HS2 Phase 2b Lot 1 Soil Surv	368700	362500	40	C - Clay	2.5Y6/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky	3.2	6.7	2.6	106	906	Yes	0	0	0	Soft	Yes	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	L1	2020	L5320_L1_2020	68 - HS2 Phase 2b Lot 1 Soil Surv	368700	362500	120	C - Clay	5YR5/3	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Prismatic						Yes	0	0	0	Soft	Yes	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	T	2022	L5320_T_2022	68 - HS2 Phase 2b Lot 1 Soil Surv	368600	362500	25	MCL - Clay loam (Medium)	7.5YR4/1	Firm	N/A	Yes	700-1000mm	Low resilience	Coarse	Subangular Blocky	8.4	6.5	23.4	151	340	Yes	0	0	0	Soft	No	Class IV	Wetness			3b	Survey type 2
RAC	16/05/2018	L5320	MA02	U	2022	L5320_U_2022	68 - HS2 Phase 2b Lot 1 Soil Surv	368600	362500	35	MCL - Clay loam (Medium)	7.5YR4/1	Firm	Moderate	Yes	700-1000mm	Low resilience	Coarse	Angular Blocky	4	6.9	8.8	131	510	Yes	0	0	0	Soft	No	Class IV	Wetness			3b	Survey type 2
RAC	16/05/2018	L5320	MA02	L1	2022	L5320_L1_2022	68 - HS2 Phase 2b Lot 1 Soil Surv	368600	362500	120	C - Clay	5YR4/3	Very firm	Poor	Yes	700-1000mm	Low resilience	Coarse	Prismatic						Yes	0	0	0	Soft	Yes	Class IV	Wetness			3b	Survey type 2
RAC	16/05/2018	L5320	MA02	T	2023	L5320_T_2023	68 - HS2 Phase 2b Lot 1 Soil Surv	368984	362659	29	HCL - Clay loam (Heavy)	10YR4/2	Very firm	N/A	Yes	700-1000mm	Low resilience	Very coarse	Subangular Blocky						No	0	0	0	Soft	No	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	U	2023	L5320_U_2023	68 - HS2 Phase 2b Lot 1 Soil Surv	368984	362659	47	C - Clay	10YR4/3	Very firm	Moderate	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Soft	No	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	L1	2023	L5320_L1_2023	68 - HS2 Phase 2b Lot 1 Soil Surv	368984	362659	120	C - Clay	5YR4/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Prismatic						Yes	0	0	0	Soft	Yes	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	T	2024	L5320_T_2024	68 - HS2 Phase 2b Lot 1 Soil Surv	368700	362600	29	HCL - Clay loam (Heavy)	10YR4/2	Very firm	N/A	Yes	700-1000mm	Low resilience	Very coarse	Subangular Blocky	7.7	6.4	10	86	301	Yes	0	0	0	Soft	No	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	U	2024	L5320_U_2024	68 - HS2 Phase 2b Lot 1 Soil Surv	368700	362600	45	C - Clay	10YR4/3	Very firm	Moderate	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.1	3.6	85	504	Yes	0	0	0	Soft	No	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	L1	2024	L5320_L1_2024	68 - HS2 Phase 2b Lot 1 Soil Surv	368700	362600	120	C - Clay	5YR4/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Prismatic						Yes	0	0	0	Soft	Yes	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	T	2025	L5320_T_2025	68 - HS2 Phase 2b Lot 1 Soil Surv	368600	362600	30	HCL - Clay loam (Heavy)	10YR4/2	Very firm	N/A	Yes	700-1000mm	Low resilience	Very coarse	Subangular Blocky						No	0	0	0	Soft	No	Class IV	Wetness			4	Survey type 2
RAC	16/05/2018	L5320	MA02	U	2025	L5320_U_2025	68 - HS2 Phase 2b Lot 1 Soil Surv	368600	362600	50	C - Clay	10YR4/3	Very firm	Moderate	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Soft	No	Class IV	Wetness			4	

Background Information and Data
 BID AG-002-0MA02
 Agriculture, forestry and soils
 MA02: Wombolobley to Lotook G'raam
 Agriculture, forestry and soils baseline data

Company	Date of soil survey	Land parcel reference	CFA Farm ID	Soil Type (T, U, L)	Borehole No	Borehole ID (Auto generated on save)	Survey site name	Borehole Location		Soil					Structure Ped		Soil Nutrients							Soil Survey category																		
								Easting (Y) coordinate	Northing (Y) coordinate	Lower depth of horizon (cm)	Texture	Colour (Munsell Soil Colour Chart)	Consistency	Subsoil structure	Colourscore	Average annual rainfall (mm)	Soil handling class	Size	Shape	OM %	pH value	P mg/l	K mg/l		Mg mg/l	total N mg/l	Gley	Stone Content % total	Stone Content % <2cm	Stone Content % <6cm	Stone Lithology	Slowly permeable c layer	Witness Class	Limiting Factor (1)	Limiting Factor (2)	Limiting Factor (3)	ALC Grade					
RAC	15/08/2018	L5410	MA02	L1	2210	L5410_L1_2210	MA02 L5410 HS2 PH2B Lot 1	367850	367300	120	C - Clay	7.5YR4/2	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	5	6.1	31.4	92.3	200	No	0	0	0	Soft	No	Class IV	Witness				3b	Survey type 3					
RAC	15/08/2018	L5410	MA02	T	2215	L5410_U_2215	MA02 L5410 HS2 PH2B Lot 1	367900	367400	35	MCL - Clay loam (Medium)	7.5YR3/3	Firm	N/A	No	700-1000mm	Low resilience	Coarse	Subangular Blocky	2.3	6.7	8.2	50	204	Yes	0	0	0	Soft	No	Class IV	Witness				3b	Survey type 3					
RAC	15/08/2018	L5410	MA02	U	2215	L5410_U_2215	MA02 L5410 HS2 PH2B Lot 1	367900	367400	80	HCL - Clay loam (Heavy)	7.5YR4/2	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky	5	6.7	8.2	50	204	Yes	0	0	0	Soft	No	Class IV	Witness				3b	Survey type 3					
RAC	15/08/2018	L5410	MA02	L1	2215	L5410_L1_2215	MA02 L5410 HS2 PH2B Lot 1	367900	367400	80	C - Clay	7.5YR5/2	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Soft	Yes	Class IV	Witness				3b	Survey type 3					
RAC	15/08/2018	L5410	MA02	L2	2215	L5410_L2_2215	MA02 L5410 HS2 PH2B Lot 1	367900	367400	120	C - Clay	7.5YR5/2	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Prismatic						Yes	0	0	0	Soft	Yes	Class IV	Witness				3b	Survey type 3					
RAC	15/05/2018	L5416	MA02	T	2032	L5416_U_2032	Phase 2b Soil Surveys: MA02 L5	368700	362800	25	HCL - Clay loam (Heavy)	7.5YR4/2	Very firm	N/A	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky						Yes	0	0	0	Hard	No	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	U	2032	L5416_U_2032	Phase 2b Soil Surveys: MA02 L5	368700	362800	30	HCL - Clay loam (Heavy)	7.5YR4/2	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Hard	No	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	L1	2032	L5416_L1_2032	Phase 2b Soil Surveys: MA02 L5	368700	362800	70	C - Clay	5YR4/2	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Hard	Yes	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	L2	2032	L5416_L2_2032	Phase 2b Soil Surveys: MA02 L5	368700	362800	110	C - Clay	5YR5/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Prismatic						Yes	0	0	0	Hard	Yes	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	T	2033	L5416_U_2033	Phase 2b Soil Surveys: MA02 L5	368600	362800	25	HCL - Clay loam (Heavy)	7.5YR4/2	Very firm	N/A	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky						Yes	0	0	0	Hard	No	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	U	2033	L5416_U_2033	Phase 2b Soil Surveys: MA02 L5	368600	362800	35	HCL - Clay loam (Heavy)	7.5YR4/2	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Hard	No	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	L1	2033	L5416_L1_2033	Phase 2b Soil Surveys: MA02 L5	368600	362800	70	C - Clay	5YR4/2	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Hard	Yes	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	L2	2033	L5416_L2_2033	Phase 2b Soil Surveys: MA02 L5	368600	362800	110	C - Clay	5YR5/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Prismatic						Yes	0	0	0	Hard	Yes	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	T	2034	L5416_U_2034	Phase 2b Soil Surveys: MA02 L5	368500	362800	23	HCL - Clay loam (Heavy)	7.5YR4/2	Very firm	N/A	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky						Yes	0	0	0	Hard	No	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	U	2034	L5416_U_2034	Phase 2b Soil Surveys: MA02 L5	368500	362800	30	HCL - Clay loam (Heavy)	7.5YR4/2	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Hard	No	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	L1	2034	L5416_L1_2034	Phase 2b Soil Surveys: MA02 L5	368500	362800	70	C - Clay	5YR4/2	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Hard	Yes	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	L2	2034	L5416_L2_2034	Phase 2b Soil Surveys: MA02 L5	368500	362800	110	C - Clay	5YR5/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Prismatic						Yes	0	0	0	Hard	Yes	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	T	2035	L5416_U_2035	Phase 2b Soil Surveys: MA02 L5	368700	362900	25	HCL - Clay loam (Heavy)	7.5YR4/2	Very firm	N/A	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky						9.7	7.7	3.4	82	553	Yes	0	0	0	Hard	No	Class IV	Witness				4	Survey type 2
RAC	15/05/2018	L5416	MA02	U	2035	L5416_U_2035	Phase 2b Soil Surveys: MA02 L5	368700	362900	30	HCL - Clay loam (Heavy)	7.5YR4/2	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						3.2	6.5	3.2	168	393	Yes	0	0	0	Hard	No	Class IV	Witness				4	Survey type 2
RAC	15/05/2018	L5416	MA02	L1	2035	L5416_L1_2035	Phase 2b Soil Surveys: MA02 L5	368700	362900	70	C - Clay	5YR4/2	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Hard	Yes	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	L2	2035	L5416_L2_2035	Phase 2b Soil Surveys: MA02 L5	368700	362900	110	C - Clay	5YR5/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Prismatic						Yes	0	0	0	Hard	Yes	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	T	2036	L5416_U_2036	Phase 2b Soil Surveys: MA02 L5	368600	362900	25	HCL - Clay loam (Heavy)	7.5YR4/2	Very firm	N/A	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky						Yes	0	0	0	Hard	No	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	U	2036	L5416_U_2036	Phase 2b Soil Surveys: MA02 L5	368600	362900	32	HCL - Clay loam (Heavy)	7.5YR4/2	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Hard	No	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	L1	2036	L5416_L1_2036	Phase 2b Soil Surveys: MA02 L5	368600	362900	70	C - Clay	5YR4/2	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Hard	Yes	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	L2	2036	L5416_L2_2036	Phase 2b Soil Surveys: MA02 L5	368600	362900	110	C - Clay	5YR5/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Prismatic						Yes	0	0	0	Hard	Yes	Class IV	Witness				4	Survey type 2					
RAC	15/05/2018	L5416	MA02	T	2037	L5416_U_2037	Phase 2b Soil Surveys: MA02 L5	368500	362900	25	MCL - Clay loam (Medium)	10YR5/2	Firm	N/A	No	700-1000mm	Low resilience	Coarse	Subangular Blocky						Yes	0	0	0	Hard	No	Class IV	Witness				3b	Survey type 2					
RAC	15/05/2018	L5416	MA02	U	2037	L5416_U_2037	Phase 2b Soil Surveys: MA02 L5	368500	362900	58	C - Clay	10YR5/4	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky						Yes	0	0	0	Hard	No	Class IV	Witness				3b	Survey type 2					
RAC	15/05/2018	L5416	MA02	L1	2037	L5416_L1_2037	Phase 2b Soil Surveys: MA02 L5	368500	362900	120	C - Clay	5YR4/4	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Hard	Yes	Class IV	Witness				3b	Survey type 2					
RAC	15/05/2018	L5416	MA02	T	2038	L5416_U_2038	Phase 2b Soil Surveys: MA02 L5	368400	362900	25	MCL - Clay loam (Medium)	10YR5/2	Firm	N/A	No	700-1000mm	Low resilience	Coarse	Subangular Blocky						Yes	0	0	0	Hard	No	Class IV	Witness				3b	Survey type 2					
RAC	15/05/2018	L5416	MA02	U	2038	L5416_U_2038	Phase 2b Soil Surveys: MA02 L5	368400	362900	55	C - Clay	10YR5/4	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky						Yes	0	0	0	Hard	No	Class IV	Witness				3b	Survey type 2					
RAC	15/05/2018	L5416	MA02	L1	2038	L5416_L1_2038	Phase 2b Soil Surveys: MA02 L5	368400	362900	120	C - Clay	5YR4/4	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Hard	Yes	Class IV	Witness				3b	Survey type 2					
RAC	15/05/2018	L5416	MA02	T	2039	L5416_U_2039	Phase 2b Soil Surveys: MA02 L5	368700	363000	25	MCL - Clay loam (Medium)	10YR5/2	Firm	N/A	No	700-1000mm	Low resilience	Coarse	Subangular Blocky						No	0	0	0	Hard	No	Class IV	Witness				3b	Survey type 2					
RAC	15/05/2018	L5416	MA02	U	2039	L5416_U_2039	Phase 2b Soil Surveys: MA02 L5	368700	363000	58	C - Clay	10YR5/4	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky						Yes	0	0	0	Hard	No	Class IV	Witness				3b	Survey type 2					
RAC	15/05/2018	L5416	MA02	L1	2039	L5416_L1_2039	Phase 2b Soil Surveys: MA02 L5	368700	363000	120	C - Clay	5YR4/4	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky						Yes	0	0	0	Hard	Yes	Class IV	Witness				3b	Survey type 2					
RAC	15/05/2018	L5416	MA02	T	2040	L5416_U_2040	Phase 2b Soil Surveys: MA02 L5	368600	363000	27	MCL - Clay loam (Medium)	10YR5/2	Firm	N/A	No	700-1000mm	Low resilience	Coarse	Subangular Blocky						No	0	0	0	Hard	No	Class IV	Witness				3b	Survey type 2					

Background Information and Data
 BID AG-002-0MA02
 Agriculture, forestry and soils
 MA02: Wimbobisley to Lottok Grahm
 Agriculture, forestry and soils baseline data

Company	Date of soil survey	Land parcel reference	CFA Farm ID	Soil Type (T, U, L)	Borehole No	Borehole ID (Auto generated on save)	Survey site name	Borehole Location		Soil					Structure Ped		Soil Nutrients					Stone Content % total	Stone Content % <2cm	Stone Content % <6cm	Stone Lithology	Slowly permeable clayey	Witness Class	Limiting Factor (1)	Limiting Factor (2)	Limiting Factor (3)	ALC Grade	Soil Survey category			
								Easting (N) coordinate	Northing (N) coordinate	Texture	Colour (Munsell Soil Colour Chart)	Consistency	Subsoil structure	Colourscore	Average annual rainfall (mm)	Soil handling class	Size	Shape	OM %	pH value	P mg/l												K mg/l	Mg mg/l	total N mg/l
RAC	15/05/2018	L5416	MA02	L1	2055	L5416_L1_2055	Phase 2b Soil Surveys: MA02 L1	368500	363300	55	C - Clay	7.5YR5/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	6.9	7.1	34.2	103	436	Yes	0	0	0	Soft	Yes	Class IV	Witness	4	4	Survey type 3
RAC	15/05/2018	L5416	MA02	L2	2055	L5416_L2_2055	Phase 2b Soil Surveys: MA02 L1	368500	363300	120	C - Clay	5YR3/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	3.6	7.8	4.8	97	749	Yes	0	0	0	Soft	Yes	Class IV	Witness	4	4	Survey type 3
RAC	15/05/2018	L5416	MA02	T	2056	L5416_T_2056	Phase 2b Soil Surveys: MA02 L1	368400	363300	22	HCL - Clay loam (Heavy)	10YR3/2	Very firm	N/A	Yes	700-1000mm	Low resilience	Very coarse	Subangular Blocky	8	7	67.6	173	344	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	U	2056	L5416_U_2056	Phase 2b Soil Surveys: MA02 L1	368400	363300	30	HCL - Clay loam (Heavy)	5YR3/4	Very firm	Moderate	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.7	7.6	4.6	81	546	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	L1	2056	L5416_L1_2056	Phase 2b Soil Surveys: MA02 L1	368400	363300	55	C - Clay	7.5YR5/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.5	4	81	846	Yes	0	0	0	Hard	Yes	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	L2	2056	L5416_L2_2056	Phase 2b Soil Surveys: MA02 L1	368400	363300	120	C - Clay	5YR3/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	7	7.3	15.2	102	451	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	T	2057	L5416_T_2057	Phase 2b Soil Surveys: MA02 L1	368300	363300	20	HCL - Clay loam (Heavy)	10YR3/2	Very firm	N/A	Yes	700-1000mm	Low resilience	Very coarse	Subangular Blocky	2.5	8YR5	-2.5	85	718	Yes	0	0	0	Hard	Yes	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	U	2057	L5416_U_2057	Phase 2b Soil Surveys: MA02 L1	368300	363300	30	HCL - Clay loam (Heavy)	5YR3/4	Very firm	Moderate	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	8.9	6.9	21	127	532	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	L1	2057	L5416_L1_2057	Phase 2b Soil Surveys: MA02 L1	368300	363300	55	C - Clay	7.5YR5/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.5	4	81	846	Yes	0	0	0	Hard	Yes	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	L2	2057	L5416_L2_2057	Phase 2b Soil Surveys: MA02 L1	368300	363300	120	C - Clay	5YR3/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.5	4	81	846	Yes	0	0	0	Hard	Yes	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	T	2058	L5416_T_2058	Phase 2b Soil Surveys: MA02 L1	368700	363400	25	HCL - Clay loam (Heavy)	10YR3/2	Very firm	N/A	Yes	700-1000mm	Low resilience	Very coarse	Subangular Blocky	7	7.3	15.2	102	451	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	U	2058	L5416_U_2058	Phase 2b Soil Surveys: MA02 L1	368700	363400	30	C - Clay	10YR4/1	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.5	8YR5	-2.5	85	718	Yes	0	0	0	Hard	Yes	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	L1	2058	L5416_L1_2058	Phase 2b Soil Surveys: MA02 L1	368700	363400	120	C - Clay	5YR4/4	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky	8.9	6.9	21	127	532	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	T	2059	L5416_T_2059	Phase 2b Soil Surveys: MA02 L1	368600	363400	22	HCL - Clay loam (Heavy)	10YR3/2	Very firm	N/A	No	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	U	2059	L5416_U_2059	Phase 2b Soil Surveys: MA02 L1	368600	363400	30	C - Clay	10YR4/1	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	L1	2059	L5416_L1_2059	Phase 2b Soil Surveys: MA02 L1	368600	363400	120	C - Clay	5YR4/4	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	T	2060	L5416_T_2060	Phase 2b Soil Surveys: MA02 L1	368500	363400	22	MCL - Clay loam (Medium)	10YR3/2	Firm	N/A	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	U	2060	L5416_U_2060	Phase 2b Soil Surveys: MA02 L1	368500	363400	30	C - Clay	10YR5/8	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	L1	2060	L5416_L1_2060	Phase 2b Soil Surveys: MA02 L1	368500	363400	120	C - Clay	5YR4/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	T	2061	L5416_T_2061	Phase 2b Soil Surveys: MA02 L1	368400	363400	23	MCL - Clay loam (Medium)	10YR3/2	Firm	N/A	Yes	700-1000mm	Low resilience	Very coarse	Subangular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	U	2061	L5416_U_2061	Phase 2b Soil Surveys: MA02 L1	368400	363400	30	C - Clay	10YR5/8	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	L1	2061	L5416_L1_2061	Phase 2b Soil Surveys: MA02 L1	368400	363400	120	C - Clay	5YR4/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	T	2062	L5416_T_2062	Phase 2b Soil Surveys: MA02 L1	368300	363400	25	MCL - Clay loam (Medium)	10YR3/2	Firm	N/A	Yes	700-1000mm	Low resilience	Very coarse	Subangular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	U	2062	L5416_U_2062	Phase 2b Soil Surveys: MA02 L1	368300	363400	30	C - Clay	10YR5/8	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	L1	2062	L5416_L1_2062	Phase 2b Soil Surveys: MA02 L1	368300	363400	120	C - Clay	5YR4/4	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	T	2065	L5416_T_2065	Phase 2b Soil Surveys: MA02 L1	368600	363500	33	HCL - Clay loam (Heavy)	10YR3/1	Very firm	N/A	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	U	2065	L5416_U_2065	Phase 2b Soil Surveys: MA02 L1	368600	363500	50	C - Clay	7.5YR4/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	L1	2065	L5416_L1_2065	Phase 2b Soil Surveys: MA02 L1	368600	363500	120	C - Clay	5YR5/2	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	L2	2065	L5416_L2_2065	Phase 2b Soil Surveys: MA02 L1	368600	363500	120	C - Clay	2.5YR4/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	T	2066	L5416_T_2066	Phase 2b Soil Surveys: MA02 L1	368300	363513	33	HCL - Clay loam (Heavy)	10YR3/1	Very firm	N/A	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	U	2066	L5416_U_2066	Phase 2b Soil Surveys: MA02 L1	368300	363513	50	C - Clay	7.5YR4/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	L1	2066	L5416_L1_2066	Phase 2b Soil Surveys: MA02 L1	368300	363513	120	C - Clay	5YR5/2	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	L2	2066	L5416_L2_2066	Phase 2b Soil Surveys: MA02 L1	368300	363513	120	C - Clay	2.5YR4/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	T	2069	L5416_T_2069	Phase 2b Soil Surveys: MA02 L1	368200	363500	35	HCL - Clay loam (Heavy)	10YR3/1	Very firm	N/A	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky	2.8	7.4	3.2	95	919	Yes	0	0	0	Hard	No	Class IV	Witness	4	4	Survey type 2
RAC	15/05/2018	L5416	MA02	U	2069	L5416_U_2069	Phase 2b Soil Surveys: MA02 L1	368200	363500																										

Background Information and Data
 BID AG-002-0MA02
 Agriculture, forestry and soils
 MA02: Wimboblesley to Lostock Gralam
 Agriculture, forestry and soils baseline data

Company	Date of soil survey	Land parcel reference	CFA Farm ID	Unique Borehole ID		Borehole ID (Auto generated on save)	Survey site name	Borehole Location		Soil						Structure Ped		Soil Nutrients						Stone Content % total	Stone Content %>2cm	Stone Content %>6cm	Stone Lithology	Slowly permeable layer	Wetness Class	Limiting Factor (1)	Limiting Factor (2)	Limiting Factor (3)	ALC Grade	Soil survey category					
				Soil Type (T, U, L)	Borehole No			Easting (X) coordinate	Northing (Y) coordinate	Lower depth of horizon (cm)	Texture	Colour (Munsell Soil Colour Chart)	Consistency	Subsoil structure	Colcaresou s	Average annual rainfall (mm)	Soil handling class	Size	Shape	OM %	pH value	P mg/l	K mg/l												Mg mg/l	total N mg/l			
RAC	15/08/2018	L17915	MA02	L1	2286	L17915_L1_2286	MA02.L17915.HS2.PH2B.Lot.1	368700	372600	120	C - Clay	10YR5/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Prismatic									Yes	1	0	0	Hard	Yes	Class IV	Wetness			3b	Survey type 3
RAC	15/08/2018	L17915	MA02	T	2287	L17915_T_2287	MA02.L17915.HS2.PH2B.Lot.1	368800	372600	30	MCL - Clay loam (Medium)	10YR4/2	Firm		No	700-1000mm	Low resilience	Coarse	Subangular Blocky									No	1	2	0	Hard	No	Class III	Wetness			3a	Survey type 3
RAC	15/08/2018	L17915	MA02	U	2287	L17915_U_2287	MA02.L17915.HS2.PH2B.Lot.1	368800	372600	52	C - Clay	10YR5/2	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky									Yes	1	0	0	Hard	Yes	Class III	Wetness			3a	Survey type 3
RAC	15/08/2018	L17915	MA02	L1	2287	L17915_L1_2287	MA02.L17915.HS2.PH2B.Lot.1	368800	372600	120	C - Clay	10YR5/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Prismatic									Yes	1	0	0	Hard	Yes	Class III	Wetness			3a	Survey type 3
RAC	15/08/2018	L17915	MA02	T	2288	L17915_T_2288	MA02.L17915.HS2.PH2B.Lot.1	368601	372600	28	MCL - Clay loam (Medium)	10YR4/2	Firm		No	700-1000mm	Low resilience	Coarse	Subangular Blocky									No	4	2	0	Hard	No	Class IV	Wetness			3b	Survey type 3
RAC	15/08/2018	L17915	MA02	U	2288	L17915_U_2288	MA02.L17915.HS2.PH2B.Lot.1	368601	372600	120	C - Clay	10YR5/2	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky									Yes	1	0	0	Hard	Yes	Class IV	Wetness			3b	Survey type 3
RAC	15/08/2018	L17915	MA02	L1	2288	L17915_L1_2288	MA02.L17915.HS2.PH2B.Lot.1	368601	372600	120	C - Clay	10YR5/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Prismatic									Yes	1	0	0	Hard	Yes	Class IV	Wetness			3b	Survey type 3
RAC	15/08/2018	L17915	MA02	T	2289	L17915_T_2289	MA02.L17915.HS2.PH2B.Lot.1	368700	372700	32	MCL - Clay loam (Medium)	10YR4/2	Firm		No	700-1000mm	Low resilience	Coarse	Subangular Blocky									No	4	2	0	Hard	No	Class IV	Wetness			3b	Survey type 3
RAC	15/08/2018	L17915	MA02	U	2289	L17915_U_2289	MA02.L17915.HS2.PH2B.Lot.1	368700	372700	43	C - Clay	10YR5/2	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky									Yes	1	0	0	Hard	Yes	Class IV	Wetness			3b	Survey type 3
RAC	15/08/2018	L17915	MA02	L1	2289	L17915_L1_2289	MA02.L17915.HS2.PH2B.Lot.1	368700	372700	120	C - Clay	10YR5/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Prismatic									Yes	1	0	0	Hard	Yes	Class IV	Wetness			3b	Survey type 3
RAC	15/08/2018	L17915	MA02	T	2290	L17915_T_2290	MA02.L17915.HS2.PH2B.Lot.1	368800	372700	25	MCL - Clay loam (Medium)	10YR4/2	Firm		No	700-1000mm	Low resilience	Coarse	Subangular Blocky			5.8	6.6	76	190	261		No	1	2	0	Hard	No	Class III	Wetness			3a	Survey type 3
RAC	15/08/2018	L17915	MA02	U	2290	L17915_U_2290	MA02.L17915.HS2.PH2B.Lot.1	368800	372700	45	C - Clay	10YR5/2	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky			5.7	6.9	62.2	170	282		Yes	1	0	0	Hard	Yes	Class III	Wetness			3a	Survey type 3
RAC	15/08/2018	L17915	MA02	L1	2290	L17915_L1_2290	MA02.L17915.HS2.PH2B.Lot.1	368800	372700	120	C - Clay	10YR5/1	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Prismatic									Yes	1	0	0	Hard	Yes	Class III	Wetness			3a	Survey type 3
RAC	28/11/2018	L17926	MA02	T	2308	L17926_T_2308	MA02.L17926.HS2.PH2B.Lot.1	369000	373500	25	MCL - Clay loam (Medium)	7.5YR3/2	Firm	N/A	No	700-1000mm	Low resilience	Coarse	Subangular Blocky			5.1	6.3	9.2	233	199		No	1	0	0	Hard	Yes	Class III	Wetness			3a	Survey type 3
RAC	28/11/2018	L17926	MA02	U	2308	L17926_U_2308	MA02.L17926.HS2.PH2B.Lot.1	369000	373500	50	SCL - Sandy clay loam	7.5YR4/2	Firm	Moderate	No	700-1000mm	Medium resilience	Medium	Subangular Blocky			1.4	7	2.6	108	162		Yes	1	0	0	Hard	No	Class III	Wetness			3a	Survey type 2
RAC	28/11/2018	L17926	MA02	L1	2308	L17926_L1_2308	MA02.L17926.HS2.PH2B.Lot.1	369000	373500	60	SCL - Sandy clay loam	5YR4/4	Firm	Moderate	No	700-1000mm	Medium resilience	Medium	Subangular Blocky									Yes	1	0	0	Hard	No	Class III	Wetness			3a	Survey type 2
RAC	28/11/2018	L17926	MA02	L2	2308	L17926_L2_2308	MA02.L17926.HS2.PH2B.Lot.1	369000	373500	100	C - Clay	5YR3/4	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Angular Blocky									Yes	1	0	0	Hard	Yes	Class III	Wetness			3a	Survey type 2
RAC	28/11/2018	L17926	MA02	L3	2308	L17926_L3_2308	MA02.L17926.HS2.PH2B.Lot.1	369000	373500	120	C - Clay	5YR3/4	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Prismatic									Yes	1	0	0	Hard	Yes	Class III	Wetness			3a	Survey type 3
RAC	28/11/2018	L17926	MA02	T	2310	L17926_T_2310	MA02.L17926.HS2.PH2B.Lot.1	368950	373600	35	MCL - Clay loam (Medium)	7.5YR3/3	Firm	N/A	No	700-1000mm	Low resilience	Coarse	Subangular Blocky								No	1	0	0	Hard	No	Class III	Wetness			3a	Survey type 3	
RAC	28/11/2018	L17926	MA02	U	2310	L17926_U_2310	MA02.L17926.HS2.PH2B.Lot.1	368950	373600	60	HCL - Clay loam (Heavy)	5YR4/4	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Subangular Blocky									Yes	1	0	0	Hard	No	Class III	Wetness			3a	Survey type 3
RAC	28/11/2018	L17926	MA02	L1	2310	L17926_L1_2310	MA02.L17926.HS2.PH2B.Lot.1	368950	373600	100	C - Clay	5YR4/4	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Angular Blocky									Yes	1	0	0	Hard	Yes	Class III	Wetness			3a	Survey type 3
RAC	28/11/2018	L17926	MA02	L2	2310	L17926_L2_2310	MA02.L17926.HS2.PH2B.Lot.1	368950	373600	120	C - Clay	5YR4/4	Very firm	Moderate	No	700-1000mm	Low resilience	Very coarse	Prismatic									Yes	1	0	0	Hard	Yes	Class III	Wetness			3a	Survey type 3
RAC	28/11/2018	L17926	MA02	T	2118	L5189_T_2118	MA02.L5189.HS2.PH2B.Lot.1	368600	364500	20	C - Clay	10YR4/2	Very firm	N/A	No	700-1000mm	Low resilience	Coarse	Subangular Blocky									No	1	0	0	Hard	No	Class IV	Wetness	N/A	N/A	4	Survey type 2
RAC	16/10/2019	L5189	MA02	U	2118	L5189_U_2118	MA02.L5189.HS2.PH2B.Lot.1	368600	364500	48	C - Clay	10YR5/6	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky									Yes	1	0	0	Hard	Yes	Class IV	Wetness	N/A	N/A	4	Survey type 2
RAC	16/10/2019	L5189	MA02	L1	2118	L5189_L1_2118	MA02.L5189.HS2.PH2B.Lot.1	368600	364500	120	C - Clay	10YR6/2	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky									Yes	1	0	0	Hard	Yes	Class IV	Wetness	N/A	N/A	4	Survey type 2
RAC	16/10/2019	L5189	MA02	T	2119	L5189_T_2119	MA02.L5189.HS2.PH2B.Lot.1	368500	364500	21	C - Clay	10YR4/2	Very firm	N/A	Yes	700-1000mm	Low resilience	Coarse	Subangular Blocky									No	1	0	0	Hard	No	Class IV	Wetness	N/A	N/A	4	Survey type 2
RAC	16/10/2019	L5189	MA02	U	2119	L5189_U_2119	MA02.L5189.HS2.PH2B.Lot.1	368500	364500	50	C - Clay	10YR5/6	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky									Yes	1	0	0	Hard	Yes	Class IV	Wetness	N/A	N/A	4	Survey type 2
RAC	16/10/2019	L5189	MA02	L1	2119	L5189_L1_2119	MA02.L5189.HS2.PH2B.Lot.1	368500	364500	120	C - Clay	10YR6/2	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky									Yes	1	0	0	Hard	Yes	Class IV	Wetness	N/A	N/A	4	Survey type 2
RAC	16/10/2019	L5189	MA02	T	2122	L5189_T_2122	MA02.L5189.HS2.PH2B.Lot.1	368600	364700	19	C - Clay	10YR4/2	Very firm	N/A	Yes	700-1000mm	Low resilience	Coarse	Subangular Blocky									No	1	0	0	Hard	No	Class IV	Wetness	N/A	N/A	4	Survey type 2
RAC	16/10/2019	L5189	MA02	U	2122	L5189_U_2122	MA02.L5189.HS2.PH2B.Lot.1	368600	364700	48	C - Clay	10YR5/6	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky									Yes	1	0	0	Hard	Yes	Class IV	Wetness	N/A	N/A	4	Survey type 2
RAC	16/10/2019	L5189	MA02	L1	2122	L5189_L1_2122	MA02.L5189.HS2.PH2B.Lot.1	368600	364700	120	C - Clay	10YR6/2	Very firm	Poor	Yes	700-1000mm	Low resilience	Very coarse	Angular Blocky									Yes	1	0	0	Hard	No	Class IV	Wetness	N/A	N/A	4	Survey type 2
RAC	16/10/2019	L5333	MA02	T	2134	L5333_T_2134	MA02.L5333.HS2.PH2B.Lot.1	368300	365000	18	C - Clay	10YR4/2	Very firm	N/A	No	700-1000mm	Low resilience	Coarse	Subangular Blocky									No	1	0	0	Hard	No	Class IV	Wetness	N/A	N/A	4	Survey type 2
RAC	16/10/2019	L5333	MA02	U	2134	L5333_U_2134	MA02.L5333.HS2.PH2B.Lot.1	368300	365000	52	C - Clay	10YR5/6	Very firm	Poor	No	700-1000mm	Low resilience	Very coarse	Angular Blocky									Yes	1	0	0	Hard	Yes	Class IV	Wetness	N/A	N/A	4	Survey type 4
RAC	16/10/2019	L5333	MA02																																				

2 References

High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Environmental Statement, MA02 Wimboldsley to Lostock Gralam, Agriculture, forestry and soils assessment*. Volume 5: Appendix AG-001-0MA02. Available online at:
<https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement>.