Crossfield CONSULTING GEOTECHNICAL ENVIRONMENTAL

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WINVIC CONSTRUCTION LIMITED

MAYLANDS GATEWAY, HEMEL HEMPSTEAD

REMEDIATION VERIFICATION REPORT

1. PROJECT BACKGROUND

A site identified as 'Maylands Gateway', Hemel Hempstead is currently being developed for commercial purposes. The proposed development comprises six warehouses (Unit 1, Units 2 to 3, Unit 4, Unit 5, Unit 6 and Units 7 to 10) together with associated access roads, service yards, car parking areas, an attenuation pond and areas of managed landscaping. The location of the site is shown on Figure 1. A proposed development layout is presented on Figure 2. To enable construction, extensive earthworks were required. A pre-earthworks topographical survey is presented as Figure 3 and an earthworks cut and fill plan is presented as Figure 4.

RPS Group PLC (RPS) has produced a Phase I Environmental Liability Review (February 2016) and a Phase II Geo-environmental Site Investigation and Risk Assessment Report (April 2016). Crossfield Consulting Limited undertook additional ground investigation works in March 2017 and the findings of this investigation, together with a summary of the works undertaken by RPS are presented in the Crossfield Consulting Limited, Supplementary Ground Investigation Report (CCL02935.CD47) that was produced in April 2017. The Supplementary Ground Investigation Report, also contained a risk-based assessment of potential contamination. To aid assessment, the site was divided into three zones (Zones A, B and C) and the different Zones are shown on Figure 3.

Following issue of the Supplementary Ground Investigation Report, a Remediation Statement was issued by Crossfield Consulting in September 2017. The Remediation Statement contained an outline summary of the potential remediation works at the site. Included in the recommendations was a supplementary phase of ground investigation. Crossfield Consulting Limited issued a Phase II Supplementary Ground Investigation Report (CCL02935.CF12) relating to these works in December 2017 prior to commencement of the earthwork operations.

The ground conditions encountered beneath the site during the investigation works typically comprised topsoil overlying Clay-with-Flints and Upper Chalk strata. Across the western half of the site, extensive Made Ground, comprising reworked natural strata, was present to depths of between 0.6 m and 3.0 m. Across the southern and western area of Zone A and the northwestern area of Zone B, thin horizons of ashy Made Ground were encountered to depths of between 0.2 m and 0.5 m. An area of Made Ground with localised hydrocarbon impaction and fragments of tar and asbestos containing materials (ACMs) was encountered across the central area of Zone B to depths of up to 4.5 m.

Following the Phase II ground investigation works, it was considered that the Remediation Statement was still valid. The Remediation Statement and Phase II Supplementary Ground Investigation recommended the following remedial works.

- A Discovery Strategy to be put in place during site development works, such that any unidentified contamination encountered was reported to a geoenvironmental specialist and further investigation undertaken.
- If visible asbestos-containing materials (ACMs) were identified, such materials were to be hand-picked for disposal off site.
- A capping layer to be placed in proposed landscaped areas, if impacted materials remain at the surface following the proposed earthworks.
- Barrier pipes to be installed in areas of hydrocarbon-impacted soils, if such materials were not removed during the earthworks.
- Post-earthworks, ground gas monitoring was recommended to confirm post-earthworks ground gas conditions.
- For geotechnical reasons, it was recommended that the Made Ground below all buildings and the central area of Zone B be dug out and replaced with Engineered Fill. During the Zone B works it was necessary to segregate the impacted Made Ground from materials that could potentially be reused during earthworks. Tar fragments or oil drums were required to be removed for off-site disposal.

This Remediation Verification Report relates to the remedial works undertaken with the Unit 1, Units 2 to 3, Unit 5, Unit 6 and Units 7 to 10 Plots of the development and has been prepared to discharge Planning Condition 18. The Unit 4 works are currently ongoing and are expected to be completed by December 2018. Any remedial works required within the Unit 4 Plot will be reported under separate cover upon completion of the works. It is considered that this Remediation Verification Report complies with published requirements of the Environment Agency.

2. ENABLING WORKS PHASE REMEDIATION WORKS

Prior to building construction, extensive earthworks were required to form the development levels. This involved the excavation and placement of materials in accordance with the Crossfield Consulting Limited, Earthworks Specification. During the works all materials exposed at the surface in areas of proposed fill were inspected prior to filling and all materials exposed in areas of excavation were inspected prior to any construction works. The Earthworks Specification required that all Made Ground materials be excavated from beneath the proposed building footprints and replaced with Engineered Fill. In addition, there was a requirement to dig out and replace an area of Made Ground from Zone B where hydrocarbon impacted soil, oil drums and ACM had been identified. Unsuitable materials were not permitted for use as fill beneath the building platforms.

Based on the assessments contained within the Supplementary Ground Investigation Report, it was considered that no soil or groundwater remediation should be required. Based on the assessments undertaken, the following works have been undertaken during the enabling works phase.

2.1 Asbestos Containing Materials

The earthworks operations for Unit 1, Units 2 to 3, Unit 5, Unit 6 & Units 7 to 10 were undertaken between November 2017 and June 2018. The earthworks for Unit 4 are currently on-going.

During the ground investigation works, traces of asbestos were identified within the ashy Made Ground beneath Zone A. Where these materials were present in proposed external areas these materials were left in-situ and subsequently covered by Engineered Fill. Where these materials were present within the Unit 6

building footprint, these materials were excavated and replaced as Engineered Fill beneath the Unit 6 car park area (to the north of Unit 6) beneath approximately 1.3 m of Engineered Fill.

During the excavation works any visible ACMs were hand-picked and bagged for off-site disposal. Such materials were encountered within the northwestern part of Zone B and these materials were removed in February 2018. Additional ACMs were encountered within the central area of Zone B and removed from site in April 2018 and June 2018.

The visible asbestos identified in the Made Ground in Zone B was handpicked prior to, and during, the excavation works and all hand-picked ACMs removed during the remediation works were bagged before being disposed of off-site as "hazardous" waste. Materials, visually identified as chrysotile and amosite, were removed from site by appropriate permit holders, and were taken to permitted facilities operated by, Carl Wright (Haulage & Plant) Limited and Mick George Limited.

The waste consignment notes associated with the removal off-site of the ACMs are presented in Appendix I.

The approximate locations of the identified visible asbestos are presented on Figure 3.

2.2 Hydrocarbon Impacted Soils

The area of identified hydrocarbon impaction within the central area of Zone B was excavated between April and May 2018 under the supervision of an experienced geoenvironmental engineer from Crossfield Consulting Limited.

During excavation, the impacted Made Ground materials were segregated from materials that could potentially be reused during the earthworks. Visibly hydrocarbon impacted soils were placed on plastic sheeting together with any identified tar fragments and/or oil drums for off-site removal. The materials that were segregated for potential reuse were placed in two stockpiles and sampled and tested to verify that the materials were suitable for retention and re-use during the earthworks. The test results from the two stockpiles of materials confirmed that the materials were suitable for use and copies of the test results are presented in Appendix I. These materials were placed within the lower layers of a borrow pit excavation, at approximately 3.0 m depth, in the northern car park area of the Unit 4 Plot.

The waste consignment notes associated with the removal off-site of the hydrocarbon impacted materials are presented in Appendix I.

As detailed on the Waste Consignment Notes presented in Appendix I, the impacted materials were taken to a specialist soil treatment facility. Two loads, each of 20,000 kg, were transferred by B.P. Mitchell to Keltbray Environmental Limited and four loads, each of approximately 18,000 kg, were transferred by Collins Earthworks Limited to Augean PLC.

A plan showing the approximate location of the hydrocarbon impacted Made Ground materials is presented on Figure 3.

2.3 Unforeseen Ground Conditions

It is confirmed that, in accordance with the Discovery Strategy presented in the Remediation Statement, no unforeseen ground conditions were encountered during the construction works such that Crossfield Consulting Limited was not requested to attend site to assess potentially contaminated materials that had not previously been identified during the ground investigation works at the site.

3. POST ENABLING WORKS/CONSTRUCTION PHASE REMEDIATION WORKS

With respect to end users, the proposed development includes large areas of hardstanding, which will provide an effective barrier between the end users and the existing ground such that there would be no realistic exposure pathways in these areas following development.

Based on the assessments contained within the Supplementary Ground Investigation Report, it is considered that following the removal of visible ACMs and the identified hydrocarbon impacted materials in Zone B, no soil or groundwater removal or treatment should be required. However, based on the assessments undertaken the following works were recommended during the construction phase.

3.1 Landscaped Areas

Following completion of the earthworks operations, it is understood that no ashy or hydrocarbon impacted Made Ground materials were present at the surface in areas of proposed soft landscaping. On this basis, no capping layer was required.

Notwithstanding the above, a landscaping proposal drawing, detailing the thicknesses of topsoil to be placed within soft landscaping areas is included in Appendix II. As detailed, the majority of the landscaped areas include a topsoil thickness of between 300 mm and 450 mm.

3.2 Water Supply Pipes

The Client has confirmed that potable water supply pipes at the site have been installed in accordance with the requirements of Affinity Water. This has included the use of multi-layer barrier pipe (namely Protecta-Line). Photographs of the installed pipe are presented in Appendix II.

On the basis of the information provided, it is considered that the potable water supply that has been installed at the site complies with the recommendations within the Remediation Strategy.

3.3 Ground Gas Protection Measures

Based on the information available prior to the commencement of the earthworks operations, and with reference to the guidance published in BS 8485:2015, the site could have been classified as a Characteristic Gas Situation 2 (CS 2) site. Following completion of the earthworks operations, all Made Ground materials have been removed from below the building footprints and have been replaced with Engineered Fill. No organic or putrescible materials were permitted within the Engineered Fill materials. In addition, hydrocarbon impacted materials have been removed from the site.

Following completion of the earthworks operations, ground gas monitoring has been undertaken at Unit 1, Units 2 to 3, Unit 5, Unit 6 and Units 7 to 10. Ground gas monitoring will be undertaken at Unit 4 following completion of the Unit 4 earthworks operations. A Ground Gas Assessment for each Unit has been reported under separate cover as Referenced.

Based on the available data, the monitored Units can be classed as a Characteristic Gas Situation CS 1 sites and on this basis no ground gas precautions are required for these Units.

It should be noted that the developers base specification for all of the Units required the installation of a fully lapped and taped 1200 g damp proof membrane.

BRE Document BR 211 – Radon: *Guidance on Protective Measures for New Buildings* (2015) indicates that the site is not within an area where radon precautions are required in new buildings.

4. SUMMARY

A site identified as 'Maylands Gateway', Hemel Hempstead is currently being developed for commercial purposes. The proposed development comprises six warehouse units together with associated access roads, service yards, car parking areas, an attenuation pond and areas of managed landscaping.

Following completion of Phase II supplementary ground investigation, the remedial works recommended within the Remediation Strategy were still considered valid.

During the earthworks operations, any visible ACMs were hand picked and doubled bagged by an appropriate permit holder and disposed of off-site as hazardous waste, as detailed within the Waste Consignment Notes, presented in Appendix I.

During the ground investigation works, traces of asbestos were identified within the ashy Made Gorund beneath Zone A. Where these materials were present in proposed external areas these materials were left in-situ and subsequently covered by Engineered Fill. Where these materials were present within the Unit 6 building footprint, these materials were excavated and replaced as Engineered Fill beneath the Unit 6 car park area.

The area of identified hydrocarbon impaction within the central area of Zone B was excavated under the supervision of an experienced geoenvironmental engineer from Crossfield Consulting Limited. During the excavation, the impacted Made Ground materials were segregated from materials that could potentially be reused during the earthworks. Visibly hydrocarbon impacted soils were placed on plastic sheeting together with any identified tar fragments and/or oil drums for off-site removal. The materials that were segregated for potential reuse were placed in two stockpiles and sampled and tested to verify that the materials were suitable for retention and re-use during the earthworks. The test results from the two stockpiles of materials confirmed that the materials were suitable for use and copies of the test results are presented in Appendix I. The waste consignment notes associated with the removal off-site of the hydrocarbon impacted materials are presented in Appendix I.

No unforeseen ground conditions were encountered during the construction works such that Crossfield Consulting Limited was not requested to attend site to assess potentially contaminated materials that had not previously been identified by ground investigation works at the site.

Following completion of the earthworks operations, it is understood that no ashy or hydrocarbon impacted Made Ground materials remained present at the surface in areas of proposed soft landscaping. Notwithstanding the above, based on the landscaping proposals, a topsoil thickness of up to 450 mm has been placed across the majority of the landscaping areas.

Multi-layer barrier potable water supply pipe has been installed at the site in accordance with the requirements of the water supply company.

Following completion of the earthworks operations, gas monitoring has been undertaken for each completed plot and a Ground Gas Assessment has been reported for each Unit under separate cover as Referenced. Based on the available data, no ground gas precautions are required for Unit 1, Units 2 to 3, Unit 5, Unit 6 and Units 7 to 10. Unit 4 will be assessed upon completion of the earthworks.

With reference to the available information, it is noted that identified potential pollutant linkages identified within the Phase II Supplementary Ground Investigation Report have now been effectively eliminated by the removal of ACMs and hydrocarbon impacted materials, the installation of multi-layer barrier potable water supply pipes and provision of topsoil within landscaping areas.

FIGURES

FIGURE 1	-	Site Location Plan
FIGURE 2	-	Proposed Development Plan
FIGURE 3	-	Pre – Earthworks Topographical Site Survey
FIGURE 4	-	Cut & Fill Contours Plan

APPENDICES

APPENDIX I	-	Records of Enabling Works Phase Remediation Works
APPENDIX II	-	Records of Post Enabling Works/Construction Phase Remediation Works

REFERENCES

Site Specific References

RPS Group PLC (February 2016) *Maylands Gateway, Hemel Hempstead, Phase 1: Environmental Liability Review* Report Ref: RCEL38874-00 R

RPS Group PLC (April 2016) *Maylands Gateway, Hemel Hempstead, Phase 2: Geoenvironmental Site Investigation and Risk Assessment* Report Ref: RCEI39093-003 R

Crossfield Consulting Limited (April 2017) *Maylands Gateway, Hemel Hempstead, Hertfordshire – Supplementary Ground Investigation Report.* Report No. CCL02935.CD47

Crossfield Consulting Limited (April 2017) *Maylands Gateway, Hemel Hempstead, Hertfordshire – Earthworks Specification.* Report No. CCL02935.CD48

Crossfield Consulting Limited (September 2017) *Maylands Gateway, Hemel Hempstead, Hertfordshire – Remediation Statement.* Report No. CCL02935.CF01

Crossfield Consulting Limited (December 2017) *Maylands Gateway, Hemel Hempstead, Hertfordshire – Phase II Supplementary Ground Investigation Report.* Report No. CCL02935.CF12

Crossfield Consulting Limited (June 2018) *Unit 2/3 – Maylands Gateway, Hemel Hempstead, Ground Gas Assessment.* Report No. CCL02935.CH06

Crossfield Consulting Limited (June 2018) *Unit 5 – Maylands Gateway, Hemel Hempstead, Ground Gas Assessment.* Report No. CCL02935.CH06

Crossfield Consulting Limited (June 2018) *Unit 6 – Maylands Gateway, Hemel Hempstead, Ground Gas Assessment.* Report No. CCL02935.CH06

Crossfield Consulting Limited (June 2018) *Unit 7-10 – Maylands Gateway, Hemel Hempstead, Ground Gas Assessment.* Report No. CCL02935.CH06

Crossfield Consulting Limited (August 2018) *Unit 1 – Maylands Gateway, Hemel Hempstead, Ground Gas Assessment.* Report No. CCL02935.CH06

Technical References

BRE (2015) *BR211 – Radon: Guidance on protective measures for new buildings* BRE Press

BSI (2015) *BS 8485:2015 Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings* British Standards Institution

Environment Agency (2018) Waste Classification: *Guidance on the Classification and Assessment of Waste (1st Edition v1.1) – Technical Guidance WM3* EA

Environment Agency (2004) *Model Procedures for the Management of Land Contamination CLR11* EA

Environment Agency (2005) *Environment Agency Guidance on Requirements for Land Contamination Reports* EA

GENERAL NOTES

1. This report is provided in the context of the stated development proposals and should not be used in a different context.

2. The accuracy of map extracts cannot be guaranteed and it should be recognised that different conditions on site may have existed between and subsequent to the various map surveys.

3. Any borehole data from the British Geological Survey sources are included on the following basis: "The British Geological Survey accept no responsibility for omissions or misinterpretation of the data from their Data Bank as this may be old or obtained from non-BGS sources and may not represent current interpretation.

4. Where any data supplied by the Client or by other external sources, including previous site investigation data, have been used it has been assumed that the information is correct unless otherwise stated. No responsibility can be accepted by Crossfield Consulting Limited for inaccuracies within the data supplied by others.

5. Exploratory hole locations provided in the report are generally established by tape measurement from existing features or boundaries. Hole locations are not accurately surveyed and ground levels at these locations are not obtained unless specifically requested.

6. Any assessments made in this report are based on the ground conditions indicated by the trial pits and/or boreholes, together with the results of any field or laboratory testing undertaken and, where appropriate, other relevant site data which may have been obtained for the site. Variations in ground conditions may occur between exploratory hole locations and there may be special conditions appertaining to the site which have not been revealed by the investigation and which have not been taken into account in the report. The assessment may be subject to amendment in the light of additional information becoming available.

7. The report is provided for the sole use by the Client or its assignees and is confidential to the Client's professional advisers. No responsibility whatsoever for the contents of this report will be accepted to any person other than the Client or its assignees.

8. New information, improved practices and legislation may necessitate an alteration to the report in whole, or in part, after its submission. Therefore with any change in circumstances or after the expiry of one year from the date of the report, the report should be referred to Crossfield Consulting Limited for re-assessment and, if necessary, re-appraisal.

FIGURES

FIGURE 1

SITE LOCATION PLAN

Scale 1: 50,000

Note: Units 7 to 10 shown on drawing as Unit 7.

PROPOSED DEVELOPMENT PLAN
Scale 1:2000

Plan based on Drg No. 30830-Fe-71-F by Michael Sparks Associates, dated Feb 2017

FIGURE 3

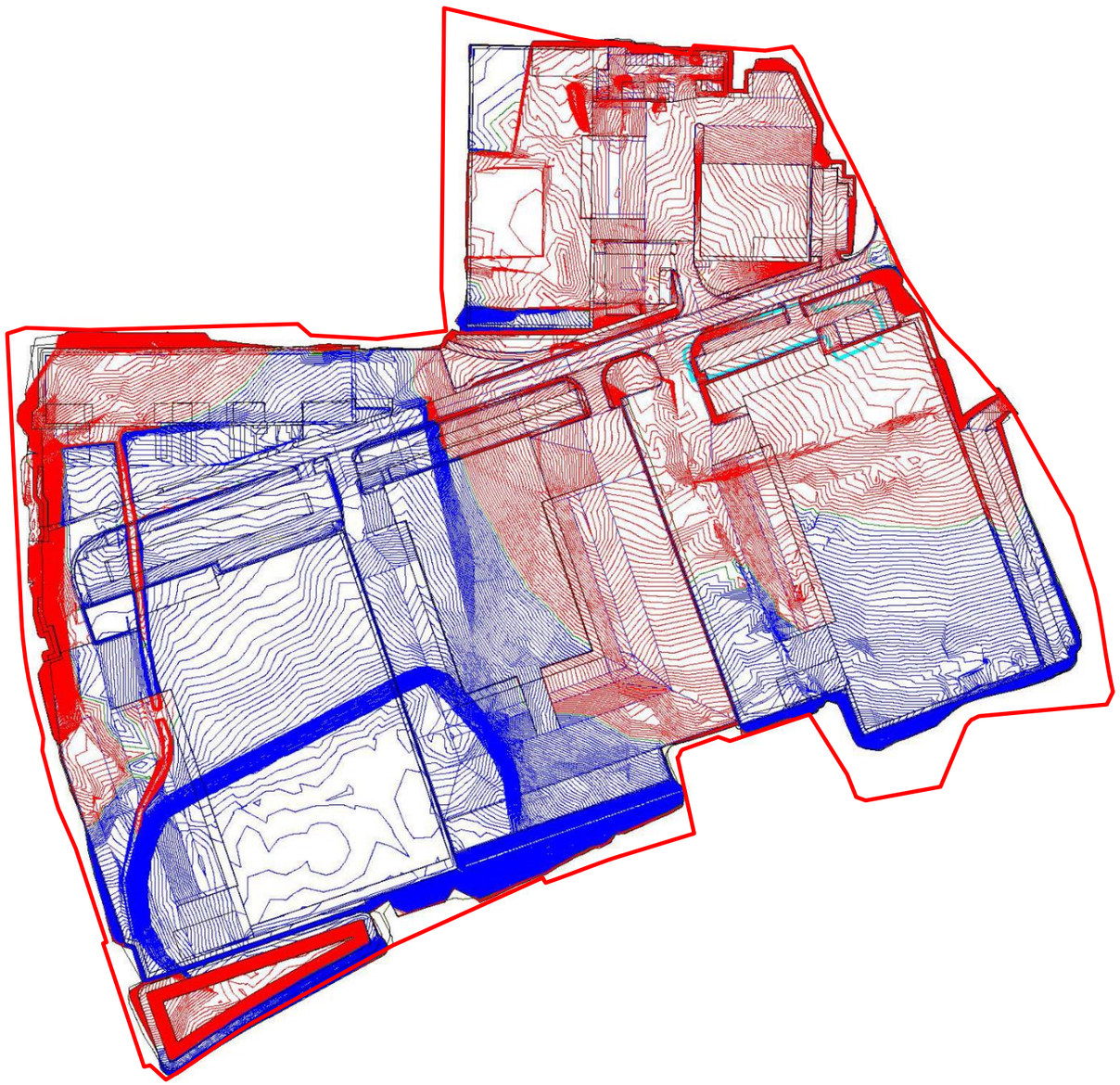
PRE-EARTHWORKS TOPOGRAPHICAL SITE SURVEY

Scale 1:2000

Plan based on the Topographical Survey drawing by Greenhatch Group, dated January 2016. Drawing No. 22846_T. Rev. 1

Notes

1. The cut/fill contours do not reflect any requirement to over excavate any Made Ground materials from beneath the proposed building footprints.



N

Key

- Overall Development Site Boundary
- Cut Contours (0.1 m intervals)
- Fill Contours (0.1 m intervals)

CUT & FILL CONTOURS PLAN

Scale 1:2500

Reproduced from the Collins Earthworks, Cut/Fill drawing, dated August 2018. Drawing No. CCN0116.1a

APPENDIX I

APPENDIX I – RECORDS OF ENABLING WORKS PHASE REMEDIATION WORKS

Introduction

During the earthworks operations any visible ACMs encountered in areas of excavation were hand-picked and bagged for off-site disposal.

The hydrocarbon impacted soils identified within Zone B were excavated between April and May 2018 under the supervision of an experienced geoenvironmental engineer from Crossfield Consulting Limited. During the excavation works, materials that were not visibly impacted were segregated into separate stockpiles, sampled and tested to confirm their suitability for retention and re-use on site.

All samples for analytical testing were collected in appropriate containers, stored in cool boxes (where appropriate) and sent to the testing laboratory overnight. The sample containers, storage and handling procedures were all compatible with the relevant recommendations of the UKAS accredited testing laboratory for the specific testing proposed, as outlined below.

Analytical Laboratory Testing

Samples of the segregated stockpiled materials for potential retention and reuse were submitted for analysis of the following determinands:

- Arsenic (Total)
- Chromium (Total)
- Lead (Total)
- Nickel (Total)
- Selenium (Total)
- Cyanide (Total)
- Sulphate (Water soluble)
- pH
- Asbestos (Fibres & ACM)
- Cadmium (Total)
- Copper (Total)
- Mercury (Total)
- Zinc (Total)
- Boron (Water soluble)
- Sulphide (Total)
- Phenols (Total-monohydric)
- Total Organic Carbon
- Asbestos (Quantification)

- Total Petroleum Hydrocarbons – aromatic/aliphatic split and carbon number banding, using GC-FID techniques
- Volatile Organic Compounds – using GC-MS techniques
- Polyaromatic Hydrocarbons – using GC-MS techniques

The analyses were carried out by i2 Analytical Limited, a UKAS accredited laboratory, and the results are presented in this Appendix. Soil testing was undertaken in accordance with the Environment Agency's Monitoring Certification Scheme (MCERTS), where applicable, and the results are included in this Appendix.

Waste Removal

All hand-picked ACMs obtained during the remediation works were bagged before being disposed of off-site as "hazardous" waste. As detailed in the Waste Consignment Notes presented in this Appendix, these materials, visually identified as chrysotile and amosite, were doubled bagged and removed from site by appropriate permit holders, and were taken to permitted facilities, Carl Wright (Haulage & Plant) Limited and Mick George Limited.

As detailed on the Waste Consignment Notes presented in this Appendix, the hydrocarbon impacted materials were taken to a specialist soil treatment facility. Two loads, each of 20,000 kg, were transferred by B.P. Mitchell to Keltbray Environmental Limited. Four loads, each of approximately 18,000 kg, were transferred by Collins Earthworks Limited to Augean PLC.

Copies of the available waste Consignment Notes (as provided by the Client) are presented in this Appendix.

Form HWCN01v112

The Hazardous Waste Regulations 2005: Consignment Note

Environment Agency

PRODUCER'S/HOLDER'S/CONSIGNOR'S COPY (Delete as appropriate)

PART A Notification details

1 Consignment note code: COLLIN/00871/21

2 The waste described below is to be removed from (name, address, postcode, telephone, e-mail, facsimile):

BUNCEFIELD LANE.
HEMEL HEMPSTEAD.
HP2 4UA

3 The waste will be taken to (name, address and postcode):

CARL WRIGHTS
GEORGIA LANE.
WIGWAM LANE HUCKNALL NG15 7SZ

4 The waste producer was (if different from 2) (name, address, postcode, telephone, e-mail, facsimile):

COLLINS DEMOLITION LTD -
UNIT 2B. PARK LANE NG17 9LF.

PART B Description of the waste

If continuation sheet used, tick here ☐

1 The process giving rise to the waste(s) was: ASBESTOS DISPOSAL

2 SIC (2007) for the process giving rise to the waste: 43.11/

3 WASTE DETAILS (where more than one waste type is collected all of the information given below must be completed for each EWC identified)

Description of waste	List of wastes (EWC code)(6 digits)	Quantity (kg)	The chemical/biological components in the waste and their concentrations are:		Physical form (gas, liquid, solid, powder, sludge or mixed)	Hazard code(s)	Container type, number and size
			Component	Concentration (% or mg/kg)			
BONDED CEMENT ASBESTOS	170605	100kg	CHRYSOTILE	2%	SOLID.	HP5 HP7	PICK UP TRUCK

The information given below is to be completed for each EWC identified

EWC code	UN identification number(s)	Proper shipping name(s)	UN class(es)	Packing group(s)	Special handling requirements

PART C Carrier's certificate

(If more than one carrier is used, please attach schedule for subsequent carriers. If schedule of carriers is attached tick here. ☐)

I certify that I today collected the consignment and that the details in A2, A3 and B3 are correct and I have been advised of any specific handling requirements.

Where this note comprises part of a multiple collection the round number and collection number are: /

1 Carrier name: ADRIAN HODGSON

On behalf of (name, address, postcode, telephone, e-mail, facsimile):

AS AG

Carrier registration no./reason for exemption: CBDM3484KR

3 Vehicle registration no. (or mode of transport, if not road): YP16 DKN

Signature

Date 12-02-2018 Time 0516

PART D Consignor's certificate

I certify that the information in A, B and C has been completed and is correct, that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.

1 Consignor name:

On behalf of (name, address, postcode, telephone, e-mail, facsimile):

COLLINS DEMOLITION LTD,
UNIT 2B, PARK LN,
NG17 9LF

Signature

Date DD MM YYYY Time HH MM

PART E Consignee's certificate (where more than one waste type is collected all of the information given below must be completed for each EWC)

Individual EWC code(s) received	Quantity of each EWC code received (kg)	EWC code accepted/rejected	Waste management operation (R or D code)
170605		ACC	D15

1 I received this waste at the address given in A3 on: Date 12022018 Time 0806

2 Vehicle registration no. (or mode of transport if not road):

3 Where waste is rejected please provide details: YP16 DKN

I certify that waste permit/exempt waste operation number:

LP3790VC

authorises the management of the waste described in B at the address given in A3.

Where the consignment forms part of a multiple collection, as identified in Part C, I certify that the total number of 1

Name:

On behalf of (name, address, postcode, telephone, e-mail, facsimile):

Carl Wright (Haulage & Plant) Ltd
Georgia House
Wigwam Lane, Hucknall
Nottingham, NG15 7SZ

Signature

Date Time

(2)

WEIGHBRIDGE TICKET/WASTE TRANSFER NOTE
CUSTOMER COPY

Carl Wright (Haulage & Plant) Ltd
Plot 14, Baker Brook Ind Est, Wigwam Lane
Hucknall, Nottingham NG15 7SZ
Tel: **01159 640224** Fax: **01159 640505**

Site Licence: EPR/LP3790VC WCL: CB/TN5517DS VAT Reg No: 457 327041 Company Reg No: 3875528 England

Customer O/N	Date	Ticket No	Vehicle Reg	Haulier WCL	Direction	Account
	12/02/2018	39693	YP16 DKN		INWARD	COLLDA1

Site Address: Collins Earthworks Limited
BUNCEFIELD LANE
HEMEL HEMSTEAD HP2 4UA

SIC 43.11

Site Contact No:

Invoice Address: Collins Earthworks Limited
Unit 2B
Park lane
Kirkby In Ashfield
Nottinghamshire
NG17 9LE

Office Contact No: 01623 750002

Comments:

Extra Items:

Weighing Information

Gross	2,840	kg	12/02/18 07:50:22
Tare	2,680	kg	
Deductions		kg	
Nett	160	kg	

Pricing:

Price	£0.00
Items	
VAT	£0.00
Total	£0.00

Product	5 BONDED	Asbestos	Priced	Per
EWC	17 06 05			

Customer Print: _____ **Weighman Print:** _____

Customer Sign: _____ **Weighman Sign:** _____

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by regulation 12 of the Waste (England and Wales) Regulations 2011

Form HWCN01v112

The Hazardous Waste Regulations 2005: Consignment Note

Environment Agency

CONSIGNEE'S COPY

PART A Notification details

1 Consignment note code: COLLIN/87136

2 The waste described below is to be removed from (name, address, postcode, telephone, e-mail, facsimile):

CUNCHELD LANE
PENCE HENSTEAD
HP2 4LA

3 The waste will be taken to (name, address and postcode):

COLLINS DEMOLITION
GEORGIA HOUSE
HUCKNALL

4 The waste producer was (if different from 2) (name, address, postcode, telephone, e-mail, facsimile):

COLLINS DEMOLITION
UNIT 2B PARK LANE

PART B Description of the waste

If continuation sheet used, tick here ☐

1 The process giving rise to the waste(s) was: ASBESTOS REMOVAL

2 SIC (2007) for the process giving rise to the waste: 43.11 /

3 WASTE DETAILS (where more than one waste type is collected all of the information given below must be completed for each EWC identified)

Description of waste	List of wastes (EWC code)(6 digits)	Quantity (kg)	The chemical/biological components in the waste and their concentrations are:		Physical form (gas, liquid, solid, powder, sludge or mixed)	Hazard code(s)	Container type, number and size
			Component	Concentration (% or mg/kg)			
UNDER [illegible]	170605	100	ASBESTOS	7.51.	SOLID	HP5	SEALED BAGS

The information given below is to be completed for each EWC identified

EWC code	UN identification number(s)	Proper shipping name(s)	UN class(es)	Packing group(s)	Special handling requirements
170605		Asbestos	9	III	Bagged

PART C Carrier's certificate

(If more than one carrier is used, please attach schedule for subsequent carriers. If schedule of carriers is attached tick here. ☐)

I certify that I today collected the consignment and that the details in A2, A3 and B3 are correct and I have been advised of any specific handling requirements.

Where this note comprises part of a multiple collection the round number and collection number are: /

1 Carrier name:

On behalf of (name, address, postcode, telephone, e-mail, facsimile):

2 Carrier registration no./reason for exemption: CB/KM 3484 KR

3 Vehicle registration no. (or mode of transport, if not road): YP63 PZC

Signature

Date 12042018 Time [illegible]

PART D Consignor's certificate

I certify that the information in A, B and C has been completed and is correct, that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.

1 Consignor name:

On behalf of (name, address, postcode, telephone, e-mail, facsimile):

Collins Demolition
UNIT 2B
PARK LN
NG17 9LF

Signature

Date 12042018 Time [illegible]

PART E Consignee's certificate

Individual EWC code(s) received	Quantity of each EWC code received (kg)	EWC code accepted/rejected	Waste management operation (R or D code)
170605	100KG.	ACC	D15

1 I received this waste at the address given in A3 on: Date 12042018 Time 0835

2 Vehicle registration no. (or mode of transport if not road):

3 Where waste is rejected please provide details: YP63 PZC

Name: R. Wyatt

On behalf of (name, address, postcode, telephone, e-mail, facsimile):

Carl Wright (Haulage & Plant) Ltd
Georgia House
Wigwam Lane, Hucknall
Nottingham, NG15 7SZ

I certify that waste permit/exempt waste operation number: LP3790VC

authorises the management of the waste described in B at the address given in A3.

Where the consignment forms part of a multiple collection

Signature

IICK GEORGE ®

Waste transfer note 4

icket Number : 1282101
ate : 16/05/2018 Time : 08:00

MGL Carrier No : CBDU87105
Order No : J1298/3010
Cust Carrier No :
Job Type : Delivery
Payment : ACCOUNT

ustomer : SURE ENVIRONMENTAL LIMITED

Skip : 40 YARD RORO ENCLOSED x 1
Waste :FIBROUS ASBESTOS
EWC Code :17 06 01
Vehicle Reg : KX17PWU
SIC Code: 43.12

ite : WINVIC SITE
BUNCEFIELD LANE

HEMEL HAMPSTEAD

HP2 4UA
el No : 01214394290
obile :
river's Name: T.KOLODZIEJCZYK

ot : CONS NOTE / ALLAN 07808868564
AN'T

%	Bagged Waste	%	Metals	Boston TS Nursery Road PE21 7TN EPR/DB3708GV	Mountsorrel TS Granite Way LE12 7TZ EPR/GP3290LF	Rushton LFS Oakley Road NN14 1RS EPR/CP3536XG
%	Card / Paper	%	Plastic			
%	Contaminated Packaging	%	Plasterboard	Cambridge TS Cowley Road CB4 0WZ EPR/AP3495EC	Northampton TS Great Billing II NN3 5HQ EPR/SP3935AX	Rushton TS Oakley Road NN14 1RS EPR/CP3995SN
%	Electrical / WEEE	%	Polythene			
%	Food	%	Soils	Ellington TS Thrapston Road Ellington PE28 0AE EPR/EP3038VB	Peterborough TS Dogsthorpe PE1 3TD EPR/EP3493SS	St. Ives TS Meadow Lane PE27 4YQ EPR/PP3399NA
	Green Waste	%	Tarmac			
%	Hardcore /Brick	%	Wood	Milton Keynes TS Tongwell Street MK15 9PA EPR/CB3300HV	Other	

By signing this Duty of Care Waste Transfer Note the producer/holder of the waste confirms that they have fulfilled their duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.

CUSTOMER DETAILS:		MICK GEORGE LTD DETAILS:	
horised Signatures ONLY nature:		Signature:	
me: te in BLOCK CAPITALS)	A. Jones	Name: (write in BLOCK CAPITALS)	T.KOLODZIEJCZYK
te of transfer:	16/5/18	Date of transfer:	16/5/18

es :
→ Office
→ Transfer Station/Landfill
→ Customer

Queries relating to this ticket must be made in writing to our office within 7 days of receipt.

E&OE

sales@mickgeorge.co.uk
www.mickgeorge.co.uk
T 01480 498 099
F 01480 498 077

6 Lancaster Way
Ermine Business Park
Huntingdon
Cambs
PE29 6XU

VAT GB 550 6329 53
Registered no. 2417831 (England)

Weighbridge ticket

sales@mickgeorge.co.uk
www.mickgeorge.co.uk

T 01480 498 099
F 01480 498 077

6 Lancaster Way
Ermine Business Park
Huntingdon
Cambs
PE29 6XU

Ticket Number : 685711
WTN Number : 1287529

Date In: 23/05/2018 Time In: 11:22
Date Out: 23/05/2018Time Out: 11:22

Customer : SURE ENVIRONMENTAL LIMITED
UNIT 13
STIRCHLEY TRADING ESTATE
HAZELWELL ROAD
BIRMINGHAM
B30 2PF

Drivers Name : T. DABROWSKI

Vehicle Reg : KR16VAO

Site Address :WINVIC SITE
BUNCEFIELD LANE

HEMEL HAMPSTEAD

HP2 4UA

SIC Code : 43.12
Waste Type : FA
Waste Description : FIBROUS ASBESTOS FA

EWC Code : 17 06 01

Origin Code :
Destination Code : MEPAL
Disposal Address : MICK GEORGE LTD
WITCHAM MEADLANDS LANDFILL
BLOCK FEN DROVE
MEPAL
CB6 2AY
LICENCE NUMBER CHATTERIS

Gross : 17.960
Tare : 16.740
Net : 1.220

Disposal Site

Signed _____

Printed _____

Date 23.05.18

Haulier

Signed _____

Printed T. Dabrowski

Date 23.05.18

Mick George Limited
Witcham Meadlands Landfill Site
Block Fen Drove,
Mepal,
Cambridgeshire,
CB6 2AY
Permit Number EPR/LP3996ND

ies :
te → Office
ow → Site
→ Customer

TERMS & CONDITIONS
Subject to Mick George Limited standard terms and conditions on reverse of pink customer copy.

VAT GB 550 6329 53
Mick George Ltd
Registered no. 2417831 (Englan

MICK GEORGE

6

The hazardous waste regulations 2005: Consignment note

sales@mickgeorge.co.uk
www.mickgeorge.co.uk
www.mickgeorgeskips.co.uk
T 01480 498 099
F 01480 498 077

Mick George Limited
6 Lancaster Way
Ermine Business Park
Huntingdon
Cambridgeshire PE29 6XU

PART A - NOTIFICATION DETAILS

1. Consignment note code: WINVIC/ 00002

2. The waste described is to be removed from (name, address, postcode, telephone, email, facsimile):

WINVIC SITE BUNCEFIELD LANE HEMEL HAMPSTEAD HP2 4UA

3. Premises code (where applicable) WINVIC

4. The waste will be taken to (name, address and postcode):

MICK GEORGE LTD WITCHAM MEADLANDS LANDFILL BLOCK FEN DROVE MEPAL CHATTERIS CB6 2AY

5. The waste producer was (if different from 2) (name, address, postcode, telephone, email, facsimile)
AS A2

PART B - DESCRIPTION OF THE WASTE

If continuation sheet used, tick here ☐

1. The process giving rise to the waste(s) was: **Demolition**

2. SIC for the process giving rise to the waste: 43.12/
Ticket Number: 1287529

3. WASTE DETAILS (where more than one waste type is collected all of the information given below must be completed for each EWC identified)

Description of waste	List of wastes (EWC Code) (6 digits)	Quantity (kg)	The chemical/biological components of the waste and their concentrations are: Component / Concentration (% or mg/kg)	Physical form (gas, liquid, solid, powder, sludge or	Hazard code(s)	Container type, number and size
FIBROUS ASBESTOS	170601		Amosite 10-15%	SOLID	HP5, HP7	40 YARD RORO ENCLOSED
The information below is to be completed for each EWC identified				WAF:2451		Collection

EWC code	Packing group(s)	UN Identification number(s)	Proper shipping name(s)	UN class(es)	Special handling requirements
170601	II	2212	WASTE ASBESTOS AMPHIBOLE	9	E

PART C - CARRIER'S CERTIFICATE

(If more than one carrier is used, please attach schedule for subsequent carriers. If a schedule of carriers is attached tick here.) ☐

I certify that I today collected the consignment and that the details in A2, A4 and B3 are correct, and I have been advised of any specific handling requirements.

1. Carrier Name TOMASZ DABROWSKI
On behalf of **Mick George Ltd**
6 Lancaster Way,Ermine Business Park,Huntingdon, PE29 6XU 01480 498099
2. Carrier registration no. /reason for exemption
CB/DU87105
3. Vehicle registration no. (or mode of transport if not road)
KR16 VAO

Signature T. Dabrowski

Date 23/05/2018 Time 08:00

PART D - CONSIGNOR'S CERTIFICATE

I certify that the information in A B and C above is correct, that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

1. Consignor name Braydon Braswell
On behalf of (name, address, postcode, telephone, email, facsimile)

Signature B. Braswell

HAZELWELL ROAD B30 2DF

Date 23/05/2018 Time 09:00

By signing this Duty of Care Waste Transfer Note the producer/holder of the waste confirms that they have fulfilled their duty to apply the waste hierarchy as required by Regulation 12 of the waste (England and Wales) Regulations 2011

PART E - CONSIGNEE'S CERTIFICATE (where more than one waste type is collected all of the information given below must be completed for each EWC)

Individual EWC code(s) received	Quantity of each EWC code received (kg)	EWC code accepted / rejected	Waste management operation (R or D code)
170601	1220	ACCEPTED	D05

1. I received the waste at the address given in A4 on Date 23/05/2018 Time 11:20

2. Vehicle Registration no. (or mode of transport if not road) KR16VAO

3. Where waste is rejected please provide details

I Certify that waste management licence/permit/authorised exemption no(s) EPR/LP3996MD authorise the management of the waste described in B at the address given in A4.

Name
On behalf of (name, address, postcode, telephone, email and facsimile)
Mick George Ltd, Witcham Meadlands Landfill Site Block Fen Drove, Mepal, Cambridgeshire, CB6 2AY Permit EPR/LP3996ND

Date 23/05/2018 Time 11:40

(7)

orm HWCN01v112

The Hazardous Waste Regulations 2005: Consignment Note

Environment Agency

PRODUCER'S/HOLDER'S/CONSIGNOR'S COPY (Delete as appropriate)

PART A Notification details

1 Consignment note code: COLL1N/00001

2 The waste described below is to be removed from (name, address, postcode, telephone, e-mail, facsimile):
COLLINS EARTHWORKS
MAYLANDS AVENUE
HEMEL HEMPSTEAD
HERTS, HP2

3 The waste will be taken to (name, address and postcode):
KELTBRAY ENVIRONMENTAL LTD
THAMES WHARF, BRADFIELD RD
SILVERTOWN, E16 1AF

4 The waste producer was (if different from 2) (name, address, postcode, telephone, e-mail, facsimile):
AS D

PART B Description of the waste

If continuation sheet used, tick here ☐

1 The process giving rise to the waste(s) was: CONSTRUCTION SIC (2007) for the process giving rise to the waste: 41.20/1

3 WASTE DETAILS (where more than one waste type is collected all of the information given below must be completed for each EWC identified)

Description of waste	List of wastes (EWC code)(6 digits)	Quantity (kg)	The chemical/biological components in the waste and their concentrations are:		Physical form (gas, liquid, solid, powder, sludge or mixed)	Hazard code(s)	Container type, number and size
			Component	Concentration (% or mg/kg)			
OIL	170503	20000	HYDROCARBONS	70-10%	SOLID	HP7	TIPPER

The information given below is to be completed for each EWC identified

EWC code	UN identification number(s)	Proper shipping name(s)	UN class(es)	Packing group(s)	Special handling requirements

PART C Carrier's certificate

(If more than one carrier is used, please attach schedule for subsequent carriers. If schedule of carriers is attached tick here. ☐)

I certify that I today collected the consignment and that the details in A2, A3 and B3 are correct and I have been advised of any specific handling requirements.

Where this note comprises part of a multiple collection the round number and collection number are:

/

1 Carrier name: * ANDY JOHNS

On behalf of (name, address, postcode, telephone, e-mail, facsimile):
BP MITCHELL LTD, BURNSIDE, HERTFORD RD
HATFIELD, HERTS, AL9 5RB

2 C[illegible] registration no./reason for exemption:
CBDU 72487

3 Vehicle registration no. (or mode of transport, if not road): EU66 WYF.

Signature * A.J.S.

Date 18/06/2018 Time 1340

PART D Consignor's certificate

I certify that the information in A, B and C has been completed and is correct, that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.

1 Consignor name: * Scott Allsop

On behalf of (name, address, postcode, telephone, e-mail, facsimile): COLLINS EARTHWORKS
UNIT 2B, PARK LANE
KIRKBY IN ASHFIELD
NOTTINGHAM, NG17 9LE

Signature * S Allsop

Date 18/06/2018 Time 1340

PART E Consignee's certificate (where more than one waste type is collected all of the information given below must be completed for each EWC)

Individual EWC code(s) received	Quantity of each EWC code received (kg)	EWC code accepted/rejected	Waste management operation (R or D code)

1 I received this waste at the address given in A3 on: Date D D M M Y Y Y Y Time H H M M

2 Vehicle registration no. (or mode of transport if not road):

3 Where waste is rejected please provide details:

I certify that waste permit/exempt waste operation number:

authorises the management of the waste described in B at the address given in A3.

Where the consignment forms part of a multiple collection, as identified in Part C, I certify that the total number of consignments forming the collection are:

Name:

On behalf of (name, address, postcode, telephone, e-mail, facsimile):

Signature

Date D D M M Y Y Y Y Time H H M M

(8)

Form HWCN01v112

The Hazardous Waste Regulations 2005: Consignment Note

Environment Agency

PRODUCER'S/HOLDER'S/CONSIGNOR'S COPY (Delete as appropriate)

PART A Notification details

1 Consignment note code: COLL4IN/00002

2 The waste described below is to be removed from (name, address, postcode, telephone, e-mail, facsimile):
COLLINS EARTHWORKS
MAYLANDS AVENUE
HEMEL HEMPSTEAD
HERTS, HP2

3 The waste will be taken to (name, address and postcode):
KELTBRAY ENVIRONMENTAL LTD
THAMES WHARF, BRADFIELD RD
SILVERTOWN, E16 1AF

4 The waste producer was (if different from 2) (name, address, postcode, telephone, e-mail, facsimile):
AS D

PART B Description of the waste

If continuation sheet used, tick here ☐

1 The process giving rise to the waste(s) was: CONSTRUCTION 2 SIC (2007) for the process giving rise to the waste: 41.20/1

3 WASTE DETAILS (where more than one waste type is collected all of the information given below must be completed for each EWC identified)

Description of waste	List of wastes (EWC code)(6 digits)	Quantity (kg)	The chemical/biological components in the waste and their concentrations are: Component	Concentration (% or mg/kg)	Physical form (gas, liquid, solid, powder, sludge or mixed)	Hazard code(s)	Container type, number and size
SOIL	170503	20000	HYDROCARBONS	70.1%	SOLID	HP7	TIPPER

The information given below is to be completed for each EWC identified

EWC code	UN identification number(s)	Proper shipping name(s)	UN class(es)	Packing group(s)	Special handling requirements

PART C Carrier's certificate

(If more than one carrier is used, please attach schedule for subsequent carriers. If schedule of carriers is attached tick here. ☐)

I certify that I today collected the consignment and that the details in A2, A3 and B3 are correct and I have been advised of any specific handling requirements.

Where this note comprises part of a multiple collection the round number and collection number are:

/

1 Carrier name: * WESTLEYS OF ALCESTER.

On behalf of (name, address, postcode, telephone, e-mail, facsimile):
B P MITCHELL LTD, BURNSIDE, HERTFORD RD
HATFIELD, HERTS, AL4 8RB

2 Carrier registration no./reason for exemption:
CBDU 72987

3 Vehicle registration no. (or mode of transport, if not road): EU65 WZS

Signature * WJOALCESTER

Date * 18-6-18 Time * 1340

PART D Consignor's certificate

I certify that the information in A, B and C has been completed and is correct, that the carrier is registered or exempt and was advised of the appropriate precautionary measures. All of the waste is packaged and labelled correctly and the carrier has been advised of any special handling requirements.

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011.

1 Consignor name: *

On behalf of (name, address, postcode, telephone, e-mail, facsimile): COLLINS EARTHWORKS
UNIT 2B, PARK LANE
KIRKBY IN ASHFIELD
NOTTINGHAM, NG17 9LE

Signature * SAllison

Date * 18062018 Time 1351

PART E Consignee's certificate (where more than one waste type is collected all of the information given below must be completed for each EWC)

Individual EWC code(s) received	Quantity of each EWC code received (kg)	EWC code accepted/rejected	Waste management operation (R or D code)

1 I received this waste at the address given in A3 on: Date Time

2 Vehicle registration no. (or mode of transport if not road):

Name:

On behalf of (name, address, postcode, telephone, e-mail, facsimile):

3 Where waste is rejected please provide details:

I certify that waste permit/exempt waste operation number:

authorises the management of the waste described in B at the address given in A3.

Where the consignment forms part of a multiple collection, as identified in Part C, I certify that the total number of

Signature

Date Time

Waste Transfer / Delivery Note **Ticket No.** 315421 (9)

Collins

WWW.COLLINSEARTHWORKS.CO.UK
UNIT 2B, PARK LANE,
KIRKBY-IN-ASHFIELD,
NOTTINGHAM NG17 9LE
Tel: 01623 750002
Carriers Waste Certificate No:
CB/KM3484KR
Tip Licence No:
EPR/AB30390B

Date: 18/5/18
Haulier: Collins
Driver: Joey
Reg No: BL66 BNX
Lorry Size: 1x 8w
Order No:
Daywork/Waiting time:

Collected from:
(Name and address)
Collins Dominic
Maylands Gateway
Hemel Hempstead

Tipped at:
(Name and address)
Aygean PLC
Stanford Rd
Peterborough

Signed:

Signed:

Material Description:
Haz muck

EWC code: 170505
SIC Code: 43.11

Gross: 32.00 | Tare: | Net: 18.70 Tonnes

Sold subject to our Conditions of Sale, payable within 30 days of collection, copy available on request. Weights and Measures Act 1985 Conveyance note, Controlled Waste (Registration of carriers & Seizure of Vehicles) Regulation 1991 Waste Transfer Note.

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the waste (England & Wales) Regulation 2011.

White: Customer Yellow: Office Pink: Transfer Note Blue: Haulier

ASBESTOS 2.

Waste Transfer / Delivery Note Ticket No. 315414

Collins

WWW.COLLINSEARTHWORKS.CO.UK
UNIT 2B, PARK LANE,
KIRKBY-IN-ASHFIELD,
NOTTINGHAM NG17 9LE
Tel: 01623 750002
Carriers Waste Certificate No:
CB/KM3484KR
Tip Licence No:
EPR/AB30390B

Date: 16/5/18
Haulier: Collins
Driver: Jopesy
Reg No: DL66 BNX
Lorry Size: 8W
Order No:
Daywork/Waiting time:

Collected from:
(Name and address)
Collins c/o Winvic
Mayland Gateway
Hemel Hempstead

Tipped at:
(Name and address)
Augean PLC
Stanford Rd
Peterborough

Signed:

Signed:

Material Description:
Haz Muck

EWC code: 170605
SIC Code: 43:12

Gross:	Tare:	Net: 8W Tonnes

Sold subject to our Conditions of Sale, payable within 30 days of collection, copy available on request. Weights and Measures Act 1985 Conveyance note, Controlled Waste (Registration of carriers & Seizure of Vehicles) Regulation 1991 Waste Transfer Note.

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the waste (England & Wales) Regulation 2011.

White: Customer Yellow: Office Pink: Transfer Note Blue: Haulier

10

ASBESTOS 1

Waste Transfer / Delivery Note Ticket No. 315413

Collins

WWW.COLLINSEARTHWORKS.CO.UK
UNIT 2B, PARK LANE,
KIRKBY-IN-ASHFIELD,
NOTTINGHAM NG17 9LE
Tel: 01623 750002
Carriers Waste Certificate No:
CB/KM3484KR
Tip Licence No:
EPR/AB30390B

Date: 16/5/18
Haulier: Collins
Driver: Jersey
Reg No: [illegible]
Lorry Size: 1x8w
Order No:
Daywork/Waiting time:

Collected from:
(Name and address)
Collins c/o MMC
Mayland Gateway
Hemel Hempstead

Tipped at:
(Name and address)
Augean PLC
Stanford Rd
Trumpsgate

Signed:

Signed:

Material Description:
Agz Muck

EWC code: 170605
SIC Code: 43:11

Gross: | Tare: | Net 1x8w Tonnes

Sold subject to our Conditions of Sale, payable within 30 days of collection, copy available on request. Weights and Measures Act 1985 Conveyance note, Controlled Waste (Registration of carriers & Seizure of Vehicles) Regulation 1991 Waste Transfer Note.

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the waste (England & Wales) Regulation 2011.

White: Customer Yellow: Office Pink: Transfer Note Blue: Haulier

12

~~Waste Transfer~~ / Delivery Note **Ticket No.** 315420

Collins

WWW.COLLINSEARTHWORKS.CO.UK
UNIT 2B, PARK LANE,
KIRKBY-IN-ASHFIELD,
NOTTINGHAM NG17 9LE
Tel: 01623 750002
Carriers Waste Certificate No:
CB/KM3484KR
Tip Licence No:
EPR/AB30390B

Date: 17/5/18
Haulier: Collins
Driver: Jonesy
Reg No: BL66 BNX
Lorry Size: 8W
Order No:
Daywork/Waiting time:

Collected from:
(Name and address)
Collins Dominic
Maylands Gateway
Hemel Hempstead

Tipped at:
(Name and address)
Augean PLC
Stanford Rd
Peterborough

Signed:

Signed:

Material Description:
Haz Much

EWC code: 170605
SIC Code: 43:11

Gross: 31:80 | Tare: | Net: 18:60 Tonnes

Sold subject to our Conditions of Sale, payable within 30 days of collection, copy available on request. Weights and Measures Act 1985 Conveyance note, Controlled Waste (Registration of carriers & Seizure of Vehicles) Regulation 1991 Waste Transfer Note.

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the waste (England & Wales) Regulation 2011.

White: Customer Yellow: Office Pink: Transfer Note Blue: Haulier

B.P. MITCHELL
HAULAGE CONTRACTORS LTD

FORS FREIGHT OPERATOR RECOGNITION SCHEME

bsi. ISO 14001 Environmental Management
Cert No: EMS 605752

ISO 9001 THE QUALITY SCHEME FOR READY MIXED CONCRETE — UKAS PRODUCT CERTIFICATION 009

Burnside, Hertford Road, Hatfield, Herts. AL9 5RB
Tel: 01707 261166 · Fax: 01707 261184

V.A.T. registration No. 740 1114 90 WRA Waste Reg. No. CB/GN5874SH

No. 1178130

CONVEYANCE / DELIVERY NOTE

DATE: 18 — 06 — 2012

Deliver to / collect from
Name and Site Address: Collins Earthworks
Maylands Avenue
Hemel Hempstead
(Winvic Site)
SIC 41.20

Time on Site:	Time off Site:
Registration No. EU66 WYF	Name of person in charge of vehicle – A. Johns

Cubic Metres (in words)	Description of Material	Tonnes		
Gross	Contaminated		1x8	
Tare	Subsoil			
Nett				

NB. To Customers, Authorised Agents, Representatives or Responsible Persons, signing the delivery ticket. This is in your interest - Please read the ticket fully and inspect material, agreeing quantity, quality and that everything is to your satisfaction before signing this receipt note.
You are accepting the full trading terms and conditions of B. P. Mitchell Haulage Contractors Ltd.

(Plastic sheeting / wood etc)

We regret we cannot under any circumstances entertain any claims concerning quantity or quality once the vehicle has left the site and a clear signature has been given.

Certified that the above particulars are true and relate to the sand and ballast being conveyed in the vehicle described, which sand or ballast is being so conveyed in pursuance of a sale or an agreement for the sale thereof made by volume.

RECEIVED BY Signed on behalf of Site Operator	PRINT NAME [illegible]
SIGN	DATE 18.06.2012

Customers ordering vehicles off the public highway do so entirely at their own risk. ...

SHOOT TICKET
DUTY OF CARE CONTROLLED WASTE TRANSFER NOTE
Environmental Protection Act 1990

Description of Waste & EWC (✓)
- ☐ Soil, Stones, Excavated Subsoils EWC 17 05 04
- ☐ Concrete, Bricks EWC 17 01 07
- ☐ Soil from Contaminated Sites EWC 17 05 00
- ☐ Collection Non Hazardous Waste 38.11
- ☐ Construction and Demolition Wastes EWC 17 09 04
- ☐ Iron & Steel EWC 17 04 05
- ☑ Other Contaminated Subsoil EWC 170503
- ☐ Collection Hazardous Waste 38.12

How is it contained: ☑ Loose ☐ Skip ☐ Drum ☐ Other (specify) 1x8

Current Holder of Waste: Collins

Site Name and Address: As Collection

Company carrying the Waste: BP Mitchell	Date of 1st Movement

Name of Company — Transfer/Disposal Details: Veolia Environmental

Name and address of site: Bradfield to Silvertown	Waste, Management Licence or Exemption

Signed for and on behalf of the disposer	Date

I CONFIRM THAT I HAVE FULFILLED MY DUTY TO APPLY THE WASTE HIERARCHY AS REQUIRED BY REGULATION 12 OF THE WASTE (ENGLAND AND WALES) REGULATIONS 2011.

...ry Print Management T: 0845 388 3874 Ref. D/15368 (09/2014)

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B.P. MITCHELL
HAULAGE CONTRACTORS LTD

FORS FREIGHT OPERATOR RECOGNITION SCHEME

bsi. ISO 14001 Environmental Management
Cert No: EMS 605752

ISO 9001 THE QUALITY SCHEME FOR READY MIXED CONCRETE
UKAS PRODUCT CERTIFICATION 009

Burnside, Hertford Road, Hatfield, Herts. AL9 5RB
Tel: 01707 261166 · Fax: 01707 261184

V.A.T. registration No. 740 1114 90 WRA Waste Reg. No. CB/GN5874SH

No. 1172665

CONVEYANCE / DELIVERY NOTE

DATE: 18/6/18

Deliver to / collect from

Name and Site Address: Collins Winvic

Bunce Field Lane

Hemel Hempstead **SIC 41.20**

Time on Site:	**Time off Site:**
Registration No. CJ65 WZS	Name of person in charge of vehicle WCC

Cubic Metres (in words)	Description of Material	Tonnes		
Gross	Soil			
Tare	Contaminated			
Nett	17.05.00			

NB. To Customers, Authorised Agents, Representatives or Responsible Persons, signing the delivery ticket. This is in your interest - Please read the ticket fully and inspect material, agreeing quantity, quality and that everything is to your satisfaction before signing this receipt note.
You are accepting the full trading terms and conditions of B. P. Mitchell Haulage Contractors Ltd.

We regret we cannot under any circumstances entertain any claims concerning quantity or quality once the vehicle has left the site and a clear signature has been given.

Certified that the above particulars are true and relate to the sand and ballast being conveyed in the vehicle described, which sand or ballast is being so conveyed in pursuance of a sale or an agreement for the sale thereof made by volume.

RECEIVED BY Signed on behalf of Site Operator	PRINT NAME
SIGN	DATE

Customers ordering vehicles off the public highway do so entirely at their own risk.

SHOOT TICKET

DUTY OF CARE CONTROLLED WASTE TRANSFER NOTE
Environmental Protection Act 1990

Description of Waste & EWC (✓)

- ☐ Soil, Stones Excavated Subsoils EWC 17 05 04
- ☐ Construction and Demolition Wastes EWC 17 09 04
- ☐ Concrete, Bricks EWC 17 01 07
- ☐ Iron & Steel EWC 17 04 05
- ☑ Soil from Contaminated Sites EWC 17 05 00
- ☐ Other EWC .....
- ☐ Collection Non Hazardous Waste 38.11
- ☐ Collection Hazardous Waste 38.12

How is it contained ☐ Loose ☐ Skip ☐ Drum ☐ Other (specify)

Current Holder of Waste: Collins Winvic

Site Name and Address: Bunce field Lane Hemel Hempstead

Company carrying the Waste: T. F. W.

Date of 1st Movement:

Name of Company: Keltbray Environmental Ltd Thurrock Wharf

Transfer/Disposal Details:

Name and address of site: Richard Lee Silvertown E16 1HT

Waste, Management Licence or Exemption:

Signed for and on behalf of the disposer

Date

I CONFIRM THAT I HAVE FULFILLED MY DUTY TO APPLY THE WASTE HIERARCHY AS REQUIRED BY REGULATION 12 OF THE WASTE (ENGLAND AND WALES) REGULATIONS 2011

riory Print Management T: 0845 388 3874 Ref. D/15368 (09/2014)

F1

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Analytical Report Number : 18-86031

Project / Site name:	Maylands Gateway, Hemel Hempstead	**Samples received on:**	18/05/2018
Your job number:	CCL02935	**Samples instructed on:**	18/05/2018
Your order number:	PO10590	**Analysis completed by:**	23/05/2018
Report Issue Number:	1	**Report issued on:**	23/05/2018
Samples Analysed:	3 soil samples		

Signed:

Jordan Hill
Reporting Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Analytical Report Number: 18-86031

Project / Site name: Maylands Gateway, Hemel Hempstead
Your Order No: PO10590

Lab Sample Number				964023	964024	964025		
Sample Reference				x1	x2	x3		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				17/05/2018	17/05/2018	17/05/2018		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	14	15	17		
Total mass of sample received	kg	0.001	NONE	0.39	0.49	0.47		
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	Chrysotile	Chrysotile		
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Detected		
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	< 0.001	< 0.001		
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	< 0.001	< 0.001		
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.7	7.8	7.9		
Total Cyanide	mg/kg	1	MCERTS	5	2	< 1		
Total Sulphate as SO_4	mg/kg	50	MCERTS	540	700	520		
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.11	0.12	0.082		
Sulphide	mg/kg	1	MCERTS	< 1.0	2.7	2.9		
Total Sulphur	mg/kg	50	MCERTS	270	610	200		
Total Organic Carbon (TOC)	%	0.1	MCERTS	1.1	1.6	1.0		
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Phenanthrene	mg/kg	0.05	MCERTS	0.36	0.20	< 0.05		
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Fluoranthene	mg/kg	0.05	MCERTS	0.51	0.36	< 0.05		
Pyrene	mg/kg	0.05	MCERTS	0.43	0.27	< 0.05		
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.29	< 0.05	< 0.05		
Chrysene	mg/kg	0.05	MCERTS	0.38	< 0.05	< 0.05		
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.25	< 0.05	< 0.05		
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.27	< 0.05	< 0.05		
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.19	< 0.05	< 0.05		
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05		
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	2.68	0.83	< 0.80		

Analytical Report Number: 18-86031

Project / Site name: Maylands Gateway, Hemel Hempstead
Your Order No: PO10590

Lab Sample Number				964023	964024	964025		
Sample Reference				x1	x2	x3		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				17/05/2018	17/05/2018	17/05/2018		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11	12	10		
Boron (water soluble)	mg/kg	0.2	MCERTS	1.4	2.9	2.4		
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2		
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0		
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	30	30	26		
Copper (aqua regia extractable)	mg/kg	1	MCERTS	72	31	20		
Lead (aqua regia extractable)	mg/kg	1	MCERTS	41	51	27		
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3		
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	28	20	23		
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.1	< 1.0	< 1.0		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	64	80	59		
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	7.2	44	2.4		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	20	14	3.8		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	99	130	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	270	460	29		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	390	650	42		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	1.8	8.7	1.9		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	6.7	13	4.4		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	90	160	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	180	400	19		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	280	590	35		

Analytical Report Number: 18-86031
Project / Site name: Maylands Gateway, Hemel Hempstead
Your Order No: PO10590

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
964023	x1		117	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
964024	x2		128	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
964025	x3		167	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Analytical Report Number : 18-86031

Project / Site name: Maylands Gateway, Hemel Hempstead

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
964023	x1	None Supplied	None Supplied	Brown clay with gravel and chalk.
964024	x2	None Supplied	None Supplied	Brown clay with vegetation and gravel
964025	x3	None Supplied	None Supplied	Brown clay with gravel.

Analytical Report Number : 18-86031

Project / Site name: Maylands Gateway, Hemel Hempstead

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS

Analytical Report Number : 18-86031

Project / Site name: Maylands Gateway, Hemel Hempstead

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 18-87917

Project / Site name:	Maylands Gateway, Hemel Hempstead	**Samples received on:**	05/06/2018
Your job number:	CCL02935	**Samples instructed on:**	05/06/2018
Your order number:	PO10625	**Analysis completed by:**	08/06/2018
Report Issue Number:	1	**Report issued on:**	08/06/2018
Samples Analysed:	5 soil samples		

Signed:

Dr Claire Stone
Quality Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Analytical Report Number: 18-87917

Project / Site name: Maylands Gateway, Hemel Hempstead
Your Order No: PO10625

Lab Sample Number				975252	975253	975254	975255	975256
Sample Reference				x4	x5	x6	x7	x8
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/06/2018	05/06/2018	05/06/2018	05/06/2018	05/06/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	18	19	21	19	16
Total mass of sample received	kg	0.001	NONE	0.38	0.40	0.46	0.43	0.36
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.3	7.8	7.8	7.9	8.0
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	5	< 1
Total Sulphate as SO_4	mg/kg	50	MCERTS	510	690	340	590	450
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.12	0.059	0.077	0.070	0.090
Sulphide	mg/kg	1	MCERTS	9.6	1.2	2.3	540	2.3
Total Sulphur	mg/kg	50	MCERTS	490	290	220	300	240
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.8	0.8	0.6	1.0	0.6
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.39	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.16	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.80	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.59	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.36	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.31	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.40	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.15	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.38	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	3.54	< 0.80	< 0.80	< 0.80

Analytical Report Number: 18-87917

Project / Site name: Maylands Gateway, Hemel Hempstead
Your Order No: PO10625

Lab Sample Number				975252	975253	975254	975255	975256
Sample Reference				x4	x5	x6	x7	x8
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				05/06/2018	05/06/2018	05/06/2018	05/06/2018	05/06/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	10	13	14	13
Boron (water soluble)	mg/kg	0.2	MCERTS	1.6	1.1	1.0	1.7	1.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	42	37	52	39	38
Copper (aqua regia extractable)	mg/kg	1	MCERTS	24	25	16	24	23
Lead (aqua regia extractable)	mg/kg	1	MCERTS	32	28	17	31	24
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	35	33	21	33	29
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.3	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	86	65	43	120	62
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	2.7	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	8.5	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	24	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	18	< 8.0	< 8.0	54	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	23	< 10	< 10	89	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	1.2	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	5.6	< 2.0	3.5	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	23	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	31	< 10	67	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	48	< 10	94	< 10

Analytical Report Number : 18-87917

Project / Site name: Maylands Gateway, Hemel Hempstead

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
975252	x4	None Supplied	None Supplied	Brown clay and sand with gravel.
975253	x5	None Supplied	None Supplied	Brown clay and sand with gravel.
975254	x6	None Supplied	None Supplied	Brown clay with gravel.
975255	x7	None Supplied	None Supplied	Brown clay and sand with gravel.
975256	x8	None Supplied	None Supplied	Brown clay and sand with gravel.

Analytical Report Number : 18-87917

Project / Site name: Maylands Gateway, Hemel Hempstead

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS

Analytical Report Number : 18-87917

Project / Site name: Maylands Gateway, Hemel Hempstead

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

APPENDIX II

APPENDIX II – RECORDS OF POST ENABLING WORKS/CONSTRUCTION PHASE REMEDIATION WORKS

Introduction

Post enabling works/construction phase remediation works were recommended based on the assessments within the Supplementary Ground Investigation Report. The recommended works have been undertaken at the site following completion of the earthworks operations. These works included the placement of a suitable thickness of topsoil within soft landscaping areas (if ashy Made Ground remained at the surface following completion of the earthworks operations), the installation of multi-layer barrier pipe for the potable water supply and post earthworks gas monitoring for each unit.

The following information is included in this Appendix.

- Barry Chinn Associates Landscape Proposal drawing nos. 1644/16.dwg Rev 07 and 1644/16-07.dwg Rev 08
- Affinity Water Proposed Route for New Supply drawing no. DS0015140-01 Rev C1
- Photographs showing the water pipe installation

A separate Ground Gas Assessment has been completed and reported for each of the Units, Unit 1, Units 2 to 3, Unit 5, Unit 6 and Units 7-10 and are reported under separate cover as listed in the References of this Report.

NORTH↑

Refer to drg 1644/16-08 for continuation

Refer to drg 1644/16-08 for continuation

HARD WORKS KEY

- PROPOSED TIMBER POST AND 3 RAIL FENCE (to include 3.6m wide vehicular maintenance gate where necessary)
- PROPOSED RETAINING STRUCTURES AND BATTERS All to Engineers details
- PROPOSED 3m WIDE FOOTPATH/CYCLE PATH (To be surfaced in tarmacadam)
- PROPOSED 1.8 / 2.0m WIDE FOOTPATH (To be surfaced in tarmacadam)
- PROPOSED SECURITY FENCE All to Architects details
- SUGGESTED LOCATION OF ACOUSTIC FENCE All to specialists details
- 2.1m TALL CLOSE BOARD TIMBER FENCE
- For Sections refer to BCA drawing no. 1644/16-11
- PROPOSED TIMBER BOLLARDS 200x200mm @ 1500mm cts

SOFT WORKS KEY

EXISTING TREES AND HEDGEROWS TO BE RETAINED
(Refer to the Pre Development Tree Survey for detail)

EXISTING TREES AND HEDGEROWS TO BE REMOVED
(Refer to the Pre Development Tree Survey for detail)

SEMI-MATURE TREE
(*Tree pit size: 2000x2000x1000mm*)
30-35cm stem girth
6.5-7.5m height
2.5m clear stem
Rootballed

Fs	Fagus sylvatica

SEMI-MATURE TREE
(*Tree pit size: 2000x2000x1000mm*)
25-30cm stem girth
6.0-7.0m height
2.5m clear stem
Rootballed

ApEQ	Acer platanoides 'Emerald Queen'
BuJ	Betula utilis 'Jacquemontii'
TpSW	Tilia platyphyllos 'Streetwise'

SEMI-MATURE TREE
(*Tree pit size: 2000x2000x1000mm*)
20-25cm stem girth
6.0-7.0m height
2.5m clear stem
Rootballed

ApEQ	Acer platanoides 'Emerald Queen'
Cb	Carpinus betulus
Ls	Liquidamber styraciflua
Qr	Quercus robur

EXTRA HEAVY STANDARD TREES
(*Tree pit size: 1500x1500x900mm*)
18-20cm stem girth
4.5-6.5m height
1.8-2.1m clear stem
Rootballed

AcS	Acer campestre 'Streetwise'
Ac	Acer campestre
TcGS	Tilia cordata 'Greenspire'
Qr	Quercus robur

EXTRA HEAVY STANDARD TREES
(*Tree pit size: 1000x1000x750mm*)
14-16cm girth
4.25-6m height
1.8-2.1m clear stem

Ac	Acer campestre
Ap	Acer pseudoplatanus
ApD	Acer platanoides 'Debora
Ag	Alnus glutinosa
BE	Betula 'Edinburgh'
Pa	Prunus avium
TcGS	Tilia cordata 'Greenspire'
Sa	Sorbus aucuparia
Sc	Salix caprea
Qr	Quercus robur

PROPOSED MULTI-STEM TREES
(*Tree pit size: 1000x1000x750mm*)
3.5-4.0m height
5x transplanted
Rootballed

BuJ	Betula utilis 'Jacquemontii

FEATHERED TREES
2.1-2.4m height
6-8cm stem girth
Well furnished with lateral shoots to the base

Ac	Acer campestre
Ag	Alnus glutinosa
Bp	Betula pendula

PROPOSED CONIFEROUS TREES
(*Tree pit size: 1000x1000x750mm*)
2.0-2.5m height
4x transplanted
Rootballed

Ps	Pinus sylvestris

GENERAL NOTE
Species marked # to be fitted with 600mm high x 200mm diameter rabbit guards.
Species marked + to be fitted with 600mm high x 90mm diameter rabbit guards

PROPOSED THICKET MIX PLANTING
(*300mm depth of topsoil*)
Where thicket is planted next to a hard surface/kerb/fence, it should be positioned 1m from the edge.

Transplants planted in groups of 7-15 of the same species on a 1.0m grid.

%	Species	Common Name	Supply Size		
20%	Acer campestre +	Field Maple	400-600mm	1+1	OG
10%	Carpinus betulus #	Hornbeam	400-600mm	1+1	OG
15%	Corylus avellana #	Hazel	400-600mm	1+1	OG
20%	Crataegus monogyna #	Hawthorn	400-600mm	1+1	OG 'B'
5%	Ilex aquifolium	Holly	400-600mm		2L
5%	Ligustrum vulgare #	Privet	400-600mm	1+1	OG
10%	Prunus spinosa #	Blackthorn	400-600mm	1+1	OG
10%	Salix caprea #	Goat Willow	400-600mm	1+1	OG
5%	Ulex europeaus #	Gorse	400-600mm	1+1	OG

PROPOSED INDIGENOUS HEDGEROW
(*300mm depth of topsoil*)
Planted at 450mm centres in a double staggered row. Rows to be 500mm apart.

%	Species	Common Name	Size	Age	Root
10%	Acer campestre +	Field maple	400-600mm	1+1	OG
10%	Corylus avellana #	Hazel	400-600mm	1+1	OG
50%	Crataegus monogyna #	Hawthorn	400-600mm	1+1	OG 'B'
5%	Ilex aquifolium	Holly	400-600mm		2L
5%	Ligustrum vulgare	Privet	400-600mm	1+1	OG
7.5%	Prunus spinosa #	Blackthorn	400-600mm	1+1	OG
5%	Salix caprea #	Goat Willow	400-600mm	1+1	OG
7.5%	Sambucus nigra #	Elder	400-600mm	1+1	OG

PROPOSED FORMAL NATIVE HEDGE
(*300mm depth of topsoil*)
Planted at 450mm centres in a double staggered row. Rows to be 500mm apart

%	Species	Common Name	Supply Size
Carpinus betulus #		Hornbeam	1000-1250mm 1+2 B

PROPOSED SPECIMEN SHRUBS
(*450mm depth of topsoil*)

PROPOSED ORNAMENTAL SHRUB PLANTING
(*450mm depth of topsoil*)
Ultimate plant height is above 1m.

PROPOSED ORNAMENTAL GROUND COVER SHRUB PLANTING
(*450mm depth of topsoil*)
Ultimate plant height is below 1m.

PROPOSED AMENITY GRASS AREAS
(*150mm depth of topsoil*)
Grass seed (DLF-Trifolium Pro Master 120 Slowgrowth), sown at 35-50g/m2.

PROPOSED ECOLOGICAL GRASSLAND AREAS
(Cultivated subsoil to a depth of *200mm*)
EM2 General Purpose Meadow mixture sown at 4g/m2 supplied by Emosgate Seeds

PROPOSED INUNDATION GRASSLAND AREAS
(Cultivated subsoil to a depth of *200mm*)
EP1 – Pond edge mixture sown at 4g/m2 supplied by Emosgate Seeds

PROPOSED MARGINAL PLANTING
(Cultivated subsoil to a depth of *200mm*)

10%	Caltha palustris	Marsh marigold	9cm pot 600c/s 0-100mm
10%	Filipendula ulmaria	Meadowsweet	9cm pot 600c/s 0-100mm
10%	Galium palustre	Marsh bedstraw	9cm pot 600c/s 0-100mm
10%	Lythrum salicaria	Purple Loosestrife	9cm pot 600c/s 0-50mm
10%	Mentah aquatica	Water mint	9cm pot 600c/s 0-100mm
10%	Myosotis scorpioides	Water-forget-me-not	9cm pot 600c/s 0-100mm
10%	Ranunculus sceleratus	Celery-leaved buttercup	9cm pot 600c/s 0-100mm
10%	Scrophularia auriculata	Water Figwort	9cm pot 600c/s 0-100mm
10%	Sparganium erectum	Branched Bur Reed	9cm pot 600c/s 0-200mm
10%	Veronica beccabungo	Brooklime	9cm pot 600c/s 0-100mm

PROPOSED REED BED
(Cultivated subsoil to a depth of *200mm*)
100% Phragmites australis 9cm pot 500c/s 0-900mm

REV O	Planting adjacent to Unit 5 service yard updated and bunding added.	30-10-17 MAB
REV N	Small hornbeam avenue added adjacent to the PROW	08-09-17 MAB
REV M	Unit 5 landscape zone to Breakspear Way increased in width	14-08-17 MAB
REV L	Unit 5 and associated landscape updated, bollards added to footpaths at key locations	07-08-17 MAB
REV K	Buncefield Lane verges changed to ecological meadow variety	08-06-17 MAB
REV J	Landscape key updated following comments from Herts Ecology officer	25-05-17 MAB
REV I	Evergreen tree species added to the rear of Unit 3, trees to the car parks of Units 5 and 6 omitted	05-05-17 MAB
REV H	Tree sizes to rear of Unit 3 increased	27-03-17 MAB
REV G	Native hedge and close board fence added	16-03-17 JM
REV F	Proposed planting to cemetery boundary updated	09-01-17 MAB
REV E	Red line boundary updated	05-01-17 MAB
REV D	Red line boundary updated	04-01-17 MAB
REV C	Footpath shown adjacent to Wood Lane End	22-12-16 MAB
REV B	Drawing updated in line with latest MSA base	20-12-16 MAB
REV A	Drawing updated in line with latest MSA base	17-11-16 MAB
REV NOTE		DATE AUTH

BCA BARRY CHINN associates
Landscape Architects

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MAYLANDS GATEWAY

DRAWING
LANDSCAPE PROPOSAL - Sheet 1 of 2

CONTRACT	1644/16		DRG NO. 07
DATE	July 2016	DRAWN MAB	
ISSUE	Planning	CHECKED BRC	
SCALE	1:500	ORG SHEET A0	REV O
CAD FILE	1644/16-07.dwg		

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Refer to drg 1644/16-07 for continuation

Refer to drg 1644/16-07 for continuation

NORTH

KEY

EXISTING TREES AND HEDGEROWS TO BE RETAINED
(Refer to the Pre Development Tree Survey for detail)

EXISTING TREES AND HEDGEROWS TO BE REMOVED
(Refer to the Pre Development Tree Survey for detail)

EXTRA HEAVY STANDARD TREES
(*Tree pit size: 1000x1000x750mm*)
14-16cm girth
4.25-6m height
1.8-2.1m clear stem

ApD	Acer platanoides 'Deborah'
Pa	Prunus avium
TcGS	Tilia cordata 'Greenspire'
Sa	Sorbus aucuparia
Qr	Quercus robur

GENERAL NOTE
Species marked # to be fitted with 600mm high x 200mm diameter rabbit guards.
Species marked + to be fitted with 600mm high x 90mm diameter rabbit guards

PROPOSED THICKET MIX PLANTING
(*300mm depth of topsoil*)
Where thicket is planted next to a hard surface/kerb/fence, it should be positioned 1m from the edge.

Transplants planted in groups of 7-15 of the same species on a 1.0m grid.

%	Species	Common Name	Supply Size		
20%	Acer campestre +	Field Maple	400-600mm	1+1	OG
10%	Carpinus betulus #	Hornbeam	400-600mm	1+1	OG
15%	Corylus avellana #	Hazel	400-600mm	1+1	OG
20%	Crataegus monogyna #	Hawthorn	400-600mm	1+1 OG	'B'
5%	Ilex aquifolium	Holly	400-600mm	2L	
5%	Ligustrum vulgare #	Privet	400-600mm	1+1	OG
10%	Prunus spinosa #	Blackthorn	400-600mm	1+1	OG
10%	Salix caprea #	Goat Willow	400-600mm	1+1	OG
5%	Ulex europeaus #	Gorse	400-600mm	1+1	OG

PROPOSED INDIGENOUS HEDGEROW
(*300mm depth of topsoil*)
Planted at 450mm centres in a double staggered row. Rows to be 500mm apart.

%	Species	Common Name	Size	Age	Root	
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10%	Corylus avellana #	Hazel	400-600mm	1+1	OG	
50%	Crataegus monogyna #	Hawthorn	400-600mm	1+1	OG	'B'
5%	Ilex aquifolium	Holly	400-600mm		2L	
5%	Ligustrum vulgare	Privet	400-600mm	1+1	OG	
7.5%	Prunus spinosa #	Blackthorn	400-600mm	1+1	OG	
5%	Salix caprea #	Goat Willow	400-600mm	1+1	OG	
7.5%	Sambucus nigra #	Elder	400-600mm	1+1	OG	

PROPOSED FORMAL NATIVE HEDGE
(*300mm depth of topsoil*)
Planted at 450mm centres in a double staggered row. Rows to be 500mm apart

%	Species	Common Name	Supply Size		
Carpinus betulus #		Hornbeam	1000-1250mm	1+2	B

PROPOSED AMENITY GRASS AREAS
(*150mm depth of topsoil*)
Grass seed (DLF Trifolium Pro Master 120 Slowgrowth), sown at 35-50g/m2.

PROPOSED ECOLOGICAL GRASSLAND AREAS
(*150mm depth of topsoil*)
EM2 General Purpose Meadow mixture sown at 4g/m2 supplied by Emosgate Seeds

PROPOSED TIMBER POST AND 3 RAIL FENCE

PROPOSED 3m WIDE FOOTPATH/CYCLE PATH
(To be surfaced in tarmacadam)

PROPOSED 1.8 / 2.0m WIDE FOOTPATH
(To be surfaced in tarmacadam)

REV E	Landscape key updated following comments from Herts Ecolgogy officer	25-05-17 MAB
REV D	Proposed planting to cemetery boundary updated	09-01-17 MAB
REV C	Red line boundary updated	04-01-17 MAB
REV B	Area of amenity lawn increased in size	22-12-16 MAB
REV A	Drawing formally illustrative site sections.	20-12-16 MAB
REV NOTE		DATE AUTH

BCA BARRY CHINN associates Landscape Architects

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MAYLANDS GATEWAY

DRAWING
LANDSCAPE PROPOSAL - Sheet 2 of 2

CONTRACT	1644/16			DRG NO. 08
DATE	December 2016	DRAWN	MAB	
ISSUE	Planning	CHECKED	BRC	
SCALE	1:500	ORIG SHEET	A2	REV E
CAD FILE	1644/16-07.dwg			

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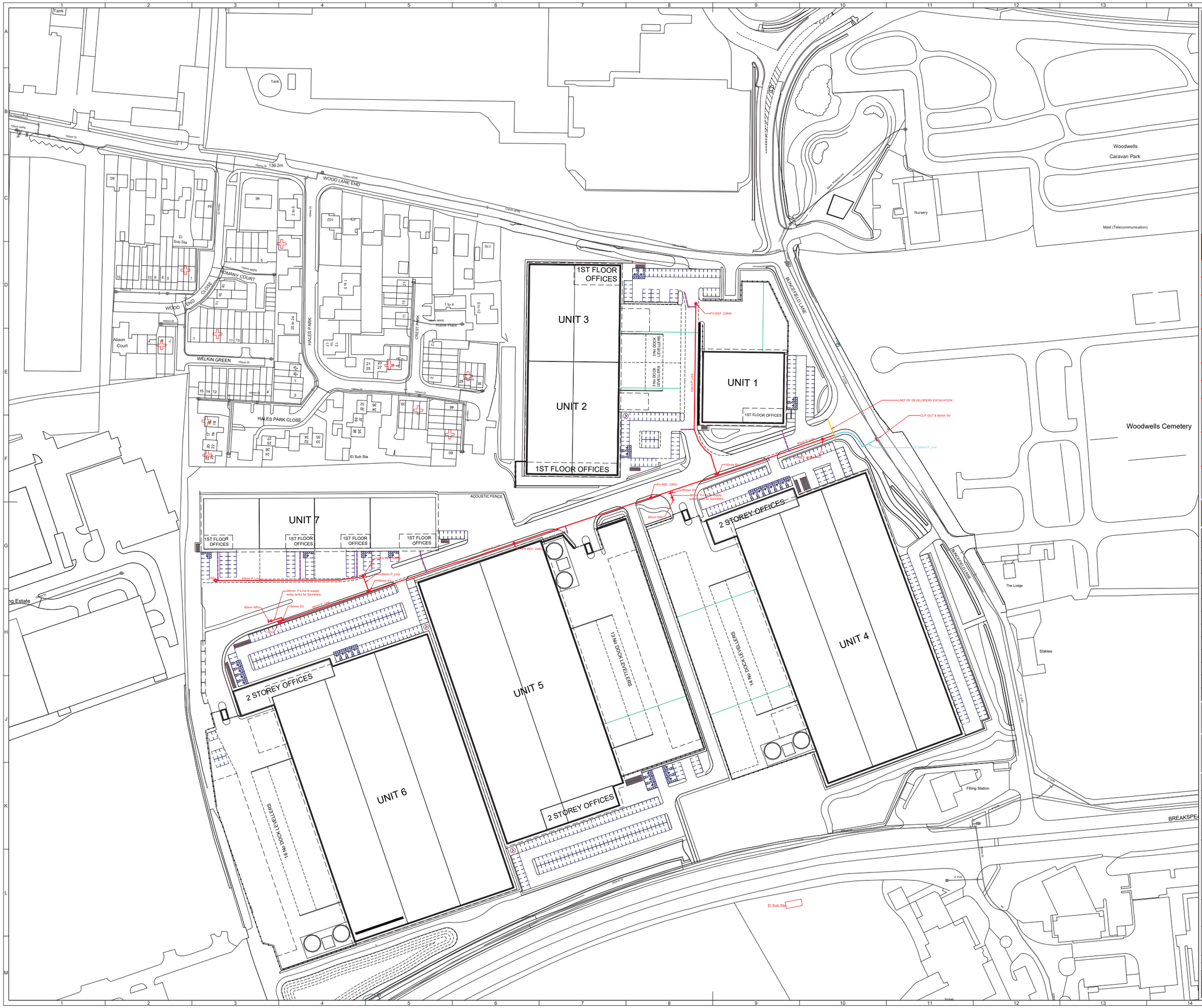

NOTES

Lay 365m of 90mm P_Line main.
Lay 14m of 90mm Protecta-Line Main with NRV's for supply to water tanks for sprinklers.
Lay 187m of 63mm Protecta-Line main.

SERVICES

Install 7 x 25mm Protecta-Line services with 15mm meters for plots 1-3 & 7a-7d.
Install 3 x 32mm Protecta-Line services with 15mm meters for plots 4-6.

- All stop cocks located in roads or vehicle cross overs should be suitable for the expected vehicular loading.
- Communication pipes in carriageway to be ducted.
- Ducts for service pipes to be supplied and laid by developer at a depth of 750mm and should project 300mm beyond kerb line.
- Water mains are not laid in ducts.
- Chapter 8 required.

BARRIER PIPE REQUIRED

TRAFFIC MANAGEMENT REGISTER

TM Ref Symbol	KEY	Location
RC	Road Closure	Buncefield Lane
AWB	Advanced Warning Boards	Refer to plan for locations

MEDIUM AND HIGH RISK PROJECT REGISTER

Risk Ref Symbol	Risk	Controls
	MP Gas Pipeline	Verification of utility drawings by site investigation prior to works.
	High Voltage Electric Cables	Verification of utility drawings by site investigation prior to works.
	Electricity Sub-Station	Verification of utility drawings by site investigation prior to works.

UTILITY STATS PLANS MUST BE CONSULTED PRIOR TO ANY EXCAVATION!
APPROVED AND CALIBRATED CABLE AVOIDANCE TOOLS MUST BE USED AT ALL PROPOSED EXCAVATIONS!
SAFE DIG METHODS MUST BE EMPLOYED AT ALL TIMES!

DEVELOPER SERVICES KEY LEGEND

MAINS TECHNIQUE / OTHERS		PROPOSED FITTINGS / OTHER	
DESCRIPTION	LEGEND	DESCRIPTION	LEGEND
PIPE-BURSTING		RECORDED BURST	
DRILLING		SAFEGUARD REGISTER CUSTOMERS	
OPEN-CUT		OPEN SLUICE VALVE	
NO EXCAVATION		CLOSED VALVE	
PROPOSED SERVICE		PRESSURE REDUCING VALVE [PRV]	
PROPOSED SERVICE DUCT		NON-RETURN VALVE [NRV]	
TO BE ABANDONED		AIR VALVE [AV]	
EXISTING MAIN		WASHOUT [WO]	
SCOPE BOUNDARY		FIRE HYDRANT [FH]	
		DISTRICT METER [M]	5
		END CAP / FLAP	

10m 0 50m 100m
SCALE - 1:1000

T - Tender Issue, **C** - Construction Issue

Rev	Description	Drawn	Date
T1	ISSUED FOR TENDER	PG	02/06/17
T2	ISSUED FOR TENDER/ AMENDMENT TO EXISTING MAIN	PG	22/06/17
T3	ISSUED FOR TENDER - Route main changed- 2 x supplies added	DC	26/03/18
C1	ISSUED FOR CONSTRUCTION	BH	04/06/18

Owner: Affinity Water

Project Name & Site:
Buncefield Lane, Hemel Hempstead, Herts. HP2 4UA

Title & Discipline:
PROPOSED ROUTE FOR NEW SUPPLY

DISTRICT METER ZONE:
UM_Maylands Ave-HH_04U

Drawn:	PG	APM:	OB	HDZ:	Hemel Hempstead	ISO A1
Highway Authority:	Herts			OS Reference:	508622, 207891	841x594mm

Drawing Number: DS0015140-01
Rev: C1

Plate 1 – Installed multi-layer barrier pipe (Protecta-Line)

Plate 2 – Installed multi-layer barrier pipe (Protecta-Line)