



MEC
Consulting Group

GEO ENVIRONMENTAL



Chapel Lane, Witherley
Remediation Method Statement
October 2024

Report Ref: 20652-GEO-0401

Chapel Lane, Witherley

Remediation Method Statement

October 2024

REPORT REF: 20652-GEO-0401

CLIENT: A.R. Cartwright Construction Ltd

ENGINEER: MEC Consulting Group Ltd
The Old Chapel
Station Road
Hugglescote
Leicestershire
LE67 2GB

Tel: 01530 264 753
Email group@m-ec.co.uk

REGISTRATION OF AMENDMENTS

Date	Rev	Comment	Prepared By	Checked By	Approved By
October 2024	-	First issue	Olesija Cepnijan BSc (Hons) Graduate Geo-Environmental Engineer	Jimesh Mistry MSc MSci FGS Geo-Environmental Engineer	Chris Wall MSc BSc (Hons) AMIEEnvSc RSoBRA Associate Geo-Environmental

COPYRIGHT

The contents of this document must not be copied or reproduced in whole or part without the written consent of MEC Consulting Group Ltd.

CONTENTS

1.0	INTRODUCTION	4
2.0	SITE AND SETTING	6
3.0	CONCEPTUAL SITE MODEL	9
4.0	PROPOSED REMEDIATION STRATEGY	10
5.0	WASTE MANAGEMENT	13
6.0	REPORTING	14
7.0	OTHER CONSIDERATIONS	15

APPENDICES

A. FIGURES AND PLANS

Site Location Plan

Proposed Site Plan

Exploratory Hole Location Plan

B. SOIL CHEMICAL REQUIREMENTS

MEC GAC

Topsoil Requirement

1.0 INTRODUCTION

- 1.1 MEC Consulting Group Ltd has been commissioned by A.R. Cartwright Construction Ltd (hereafter referred to as 'the Client') to prepare a Remediation Method Statement (RMS) for a proposed residential development on land south of Chapel Lane, Witherley, Atherstone (hereafter referred to as 'the Site'). A site location plan is provided in **Appendix A**.

Proposals

- 1.2 The proposed development is to comprise five detached dwellings, with garages, parking, infrastructure, and gardens. A proposed site plan is provided in **Appendix A**.

Existing Relevant Site Information

- 1.3 The following report prepared by Georisk Management has been referenced in the production of this RMS:
- 'Land south of Chapel Lane Witherley, Atherstone, CV93LP - Ground Investigation' report ref. 24091/1, dated June 2024;
- 1.4 This RMS assumes that the reader is familiar with the above document.

Objectives

- 1.5 The objective of this RMS is to detail an appropriate methodology to address the human health risks associated with PAH contamination within the Made Ground in the north of site, around the former stable complex.
- 1.6 This RMS has been completed according to the general principles of BS10175:2011(+A1:2017) 'Investigation of Potentially Contaminated Sites, Code of Practice and Environment Agency LC:RM 'Land Contamination: Risk Management.'

Disclaimer

- 1.7 MEC has completed this RMS for the benefit of the Client and any relevant statutory authority which may require reference in relation to approvals for the proposed development. Other third parties should not use or rely upon the contents of this RMS unless explicit written approval has been gained from MEC.
- 1.8 MEC does not accept responsibility or liability for:
- a) The consequence of this documentation being used for any purpose or project other than that for which it was commissioned;
 - b) The issue of this document to any third party with whom approval for use has not been agreed.
- 1.9 This RMS should be read in its entirety, including all associated drawings and appendices. MEC cannot be held responsible for any misinterpretations arising from the use of extracts of this document that are taken out of context. The findings and opinions conveyed are based on information obtained from a variety of

external sources as detailed within the referenced reports and which MEC believes are reliable. All reasonable care and skill have been applied in examining the information obtained, nevertheless MEC cannot and does not guarantee the authenticity or reliability of the information it has relied upon from external sources.

- 1.10 Any recommendations made or opinions expressed in this document are based on the exploratory hole records, examination of samples retrieved and the results of in-situ and laboratory testing and gas/groundwater monitoring undertaken during the previous ground investigation. Liability cannot be accepted for conditions not revealed by the exploratory holes, particularly between positions. Whilst every effort is made to ensure accuracy of data supplied, any opinion expressed as to the possible configuration of strata between or below investigation locations is for guidance only and no responsibility is accepted as to its accuracy.
- 1.11 The comments on ground gas and groundwater are based on observations made at the time of the previous investigation. It should be noted, however, that ground gas concentrations and groundwater levels may vary from those reported due to seasonal or other effects.

2.0 SITE AND SETTING

Site Location and Description

- 2.1 The site covers an approximate area of 0.5ha, located to the south of Chapel Lane in Witherley, Warwickshire and predominantly comprises an open field with derelict former stable complex in the north-west. Observations made at the time of the walkover during the previous investigation indicated that the stable complex comprised an open sided barn, and small stable block, with gravel hardstanding ground cover. Topographically, the site is relatively flat and level, with a slight slope down, from north to south.

Site History

- 2.2 The earliest available mapping reviewed from 1889 indicated that the site comprised undeveloped agricultural land. By 1989, Chapel Fields Livery Stables had been established in the north-west. Aerial mapping suggests further developments had not occurred after this time, and the site had likely been abandoned by 2020 with overgrown vegetation shown within the stable complex.
- 2.3 The earliest mapping indicated that the surrounding area generally comprised agricultural fields, with a chapel recorded adjacent to the north-western boundary, and the village of Witherley mapped approximately 100m to the west. By 1959 a house was recorded adjacent to the eastern boundary of the site. Between 1971 and 1989 progressive residential developments were recorded to expand to the west.

Ground Conditions

- 2.4 British Geological Survey (BGS) mapping indicates that the south-west of site is underlain by superficial Lacustrine Deposits. The centre and north-east are directly underlain by bedrock mudstone strata of the Gunthorpe Member, which also underlies the superficial deposits across the south-west. The Lacustrine Deposits and Gunthorpe Member are classified by the Environment Agency as Secondary aquifers.
- 2.5 Ground conditions encountered during the investigation generally comprised Topsoil overlying Lacustrine Deposits in the west and north-west, and directly overlying the Gunthorpe Member in the centre and east, to the full depth of the investigation (3.00m bgl).
- 2.6 Topsoil was recorded to depths of up to 0.40 m bgl comprised dark brown, slightly sandy to sandy, slightly gravelly clay. The Lacustrine Deposits were encountered to depths of up to 1.45m bgl, and typically comprised brown, slightly sandy, slightly gravelly clay. Within WS6, reddish brown, very sandy clay, and reddish brown, silty sand were encountered between 1.00-1.20m bgl and 1.20-1.45m bgl respectively.
- 2.7 Made Ground was predominantly recorded in the stable complex, in the absence of Topsoil, to depths of up to 0.55m bgl, typically comprising dark brown, very clayey, sandy gravel or very sandy, clay with gravel sized fragments of brick, aggregate, clinker and quartzite.
- 2.8 Bedrock strata of the Gunthorpe Member were recorded beneath the Topsoil, Made Ground and Lacustrine Deposits and to the full depth of the previous investigation (3.00m bgl). The strata generally comprised reddish brown, sandy clay grading to extremely to moderately weak, reddish brown, mudstone.

Groundwater

- 2.9 Groundwater seepages were encountered during the initial phase of investigation at depths ranging between 0.10m and 2.20m bgl.
- 2.10 Subsequent monitoring recorded groundwater within the monitoring standpipes installed within WS2 and WS4 at depths ranging between 0.40m and 1.30m bgl.

Contamination Summary – Human Health

- 2.11 Based on the proposed site plan, soil chemical analysis results were screened against generic assessment criteria (GAC) for the 'residential with consumption of homegrown produce' end use scenario. A soil organic matter (SOM) content for 1% was utilised as a conservative assessment, given the sensitivity of the receptors.
- 2.12 The results of the GQRA indicated that concentrations of four PAH compounds exceeded the adopted GAC, within a sample of Made Ground collected from WS01. The exceedances are summarised in Table 2.1 below.

Table 2.1 Summary of Exceedances

Analyte	GAC (mg/kg)	Reported Value (mg/kg)
Benzo(a)anthracene	7.2	15
Benzo(a)pyrene	2.2	16
Benzo(b)fluoranthene	2.6	18
Dibenz(ah)anthracene	0.24	2.2

- 2.13 It was therefore considered that remedial measures would be required for the garden areas of Plots 1 and 2.

Contamination Summary – Controlled Waters

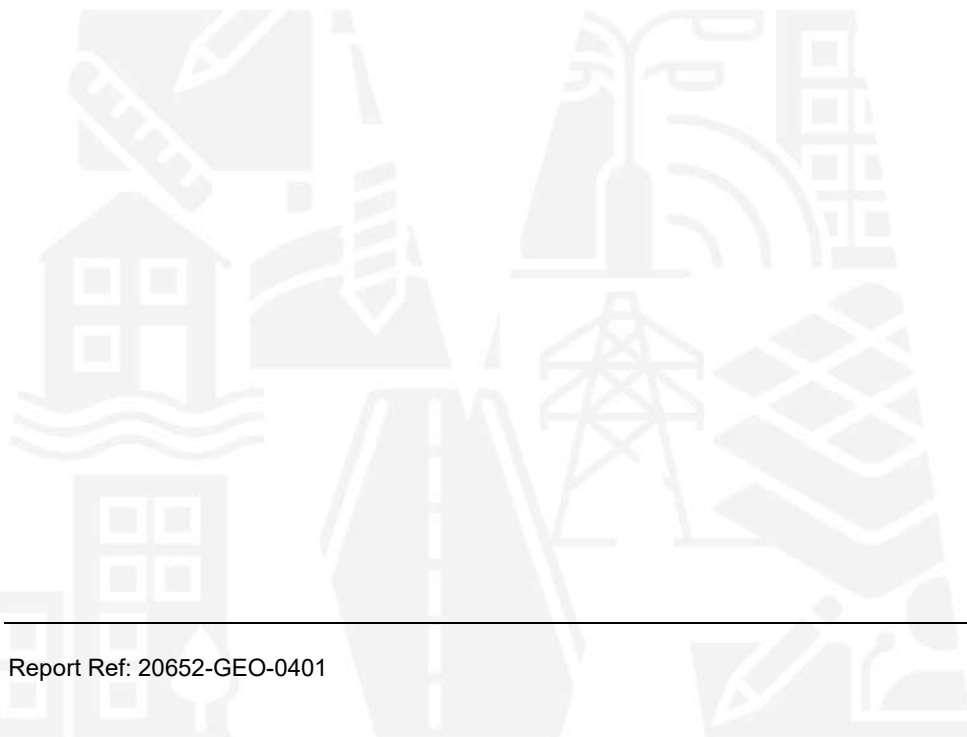
- 2.14 Given the presence of predominantly cohesive strata, the absence of sensitive groundwater abstractions and the distance to the nearest watercourse (approximately 64m), the risk to controlled waters was assessed to be very low.

Ground Gas

- 2.15 Ground gas monitoring was undertaken on four occasions between 30th May and 24th June 2024. A gas screening value (GSV) of 0.0062l/hr was calculated based on the highest recorded flow rate and carbon dioxide concentration. This places the site within Characteristic Scenario (CS1), in accordance with BS8485, and on this basis ground gas protection measures will not be required for the proposed development.
- 2.16 The site is within an area where less than 1% of homes are estimated to be at or above the Radon Action Level, therefore, Radon gas protection measures are not required.

Buried Utilities

- 2.17 Based on the findings of the investigation, standard PE/PVC water utility pipes should be suitable for the site, however, this should be confirmed with the relevant statutory suppliers.



3.0 CONCEPTUAL SITE MODEL

Introduction

- 3.1 The ground investigation has identified the following source, pathway, receptor linkages that indicates the requirement for remedial works;

Sources

- Elevated concentrations of PAH compounds within the Made Ground in the former stable complex;

Pathways

- Direct contact, accidental ingestion/inhalation of contaminated soils and dust, and consumption of home-grown produce.

Receptors

- Construction Workers.
- Future site users.

Conceptual Site Model

- 3.2 The relevant section of the conceptual site model produced by MEC following the site investigation work is provided in Table 3.1 below:

Table 3.1: Conceptual Site Model

Source	Pathway	Receptor	Pollutant Linkage Risk
On-site Contamination	Direct contact and accidental ingestion/inhalation of contaminated soils and dust.	Construction Workers	Low: Elevated concentrations of PAH compounds have been identified beneath the site. Health and safety measures should be adopted on-site to protect site workers from contaminants.
	Consumption of home-grown produce	Future Site Users	Low, locally Low to Moderate: The results of the GQRA have identified concentrations of PAH which exceeded the adopted GAC, within Made Ground in the area of the former stable complex. On this basis, remedial measures will be required for Plots 1 and 2.

4.0 PROPOSED REMEDIATION STRATEGY

Objectives

4.1 The following specific objectives will need to be undertaken/implemented by the contractor and are considered within this RMS:

- The use of suitable PPE and robust health and safety procedures during the ground works stage of construction;
- Removal of Made Ground materials within the gardens and soft landscaped areas of Plots 1 and 2, and replacement with clean Topsoil and subsoil;
- Development of procedures for managing previously unidentified contamination;
- Appropriate handling and stockpiling of materials and compliance with waste management legislation.

Mitigation for Construction and Groundworkers

4.2 To mitigate the short-term risks to human health receptors, it is recommended that construction workers and service installation personnel should follow guidance stated in CIRIA Report 132: 'A Guide for Safe Working on Contaminated Sites' and CIRIA Report C741: 'Environmental Good Practice on Site' during development works. Adequate standard personal protective equipment should be available and the implementation of basic hygiene measures should be ensured.

4.3 Although not identified during the previous investigation, the roofs of the buildings within the stable complex in the north-west of site may be constructed of cement-bound asbestos tiles, based upon available aerial/road survey imagery. Should this be the case, it is recommended that the tiles are removed by an approved contractor, and taken offsite for disposal at an appropriate facility. Construction and groundworkers should remain vigilant and aware of this potential issue. Should suspected asbestos be identified, works in the impacted area should be halted, and arrangements made to have materials tested by a suitably qualified consultant.

Mitigation for Proposed Future Site Users

4.4 Due to the presence of elevated PAH concentrations within shallow Made Ground in the former stable complex area, mitigation measures to protect future site users will be required to break the contamination pathway. This predominantly affects the gardens for Plots 1 and 2, however, may extend further. Given the limited depth of Made Ground recorded (0.55m bgl in WS5), it is recommended to:

- Fully excavated Made Ground from the garden and soft landscaped areas of Plots 1 and 2:
- Replacement with a minimum of 300mm of clean Topsoil and subsoil.

4.5 The remedial measure implemented will depend upon finalised site levels. Clean capping of 150mm Topsoil and at least 150mm subsoil will be required, to replace the excavated Made Ground. Where Made Ground is greater in thickness, additional subsoil will be required.

- 4.6 Where areas of hardstanding are proposed, the contamination pathway will likely be broken, and Made Ground can remain in situ, dependent upon the geotechnical requirements of the proposed development.
- 4.7 Site-won Topsoil, subsoil and natural materials derived from foundation and infrastructure excavations in the main development area are likely to be suitable for re-use as capping. It is recommended that any clean Topsoil and subsoil earmarked for use in the capping layer is stockpiled away from working areas, and separate to any Made Ground, to avoid any cross contamination.
- 4.8 Should site-won soils be insufficient in volume to meet the requirements outlined above, Topsoil and subsoil may need to be imported on to site. If imported, these materials should be accompanied by associated chemical validation certificates or tested as per the frequency shown in Table 4.1 to confirm chemical suitability. Chemical testing suites should be determined based on the material source but a suggested list of analyses and associated screening criteria for a range of soil organic matter percentages is provided in **Appendix B**.

Table 4.1 Soil Validation Regime

Source and Validation Rate	Chemical Analysis Suite		
	M-EC Std Suite	Asbestos ID	TPH CWG
Greenfield / Manufactured Soils 1 per 250m ³ (min.3)	X	X	
Brownfield / Screened Soils 1 per 100m ³ (min. 6)	X	X	X

- 4.9 The following should be provided by the developer to the consultant responsible for completing the validation works:
- Confirmation of details of material source site;
 - Supplier laboratory test results on the materials to be imported, confirming that topsoil and subsoil comply with BS3882 and BS8601 respectively, and are suitable for use on site;
 - Material delivery tickets for imported topsoil and subsoil, and waste transfer notes for Made Ground removed from site.
- 4.10 The following should be completed by a competent geo-environmental consultant:
- If supplier laboratory test results are insufficient, independent chemical testing at a UKAS and MCERTS accredited laboratory for materials prior to importation on to site, achieving the sampling/testing rates as stated in Table 4.1;
 - Comparison of chemical testing results to adopted criteria (**Appendix B**);
 - Verification of that Made Ground is not present beneath the garden areas of Plots 1 and 2. Verification should also include an assessment of the quality of the materials used (free from visual or olfactory

evidence of contamination, invasive weeds and deleterious materials and visually observed to be a suitable growing medium) with appropriate photographic evidence; and

- Production of a Verification Report to be submitted to the Local Planning Authority.

Unexpected Contamination

- 4.11 For the duration of the redevelopment, a watching brief should be maintained for any previously unidentified soil and/or groundwater contamination. If unforeseen contamination is encountered, a competent geo environmental specialist should be consulted and the Contaminated Land/Environmental Health Officer at Hinckley and Bosworth District Council informed of mitigation proposals for the area of concern and any proposed remedial approach will require their approval. Further investigation of any such contamination is likely to be required.

Stockpiling and Handling of Materials

- 4.12 Site derived Topsoil and subsoil should be stockpiled as appropriate for testing and subsequent reuse or disposal, should excess soils be generated. Natural soils should be stockpiled separately from Made Ground.
- 4.13 Suspected contaminated materials, primarily derived from soil capping excavations, should be stockpiled on a bunded impermeable membrane or concrete hardstand to prevent potential contaminant runoff, for subsequent analysis/waste classification and off-site disposal. All stockpiles should be numbered and tracked with appropriate source location and destination details recorded.

Water Supply Pipes

- 4.14 A comparison of hydrocarbon concentrations against threshold values for water supply pipes indicates that standard utility pipes will be appropriate within the residential development area. However, the suggestion should be passed on to the utility providers for confirmation.

Ground Gas Protection Measures

- 4.15 The results of the ground gas monitoring programme indicate that the site falls within Characteristic Situation 1 and gas protection measures will not be required.

Controlled Waters

- 4.16 The results of the controlled waters risk assessment indicate that remedial measures will not be required.

5.0 WASTE MANAGEMENT

- 5.1 It is anticipated that Made Ground that is removed from site will be disposed to landfill. Materials destined for landfill should be accompanied by appropriate waste classification and Waste Acceptance Criteria (WAC) certificates, produced by the chosen contractor. The number of tests needed for the total volume for export should be agreed with the receiving landfill.
- 5.2 The contractor shall comply with the Waste Management (Duty of Care) Regulations and waste disposal hierarchy. All waste transfer documentation shall be retained for a minimum of 6 years. Copies of all waste transfer documentation shall be provided to the consultant for inclusion in the validation report.
- 5.3 Wastes generated from the site that are destined for landfill may require pre-treatment to reduce the volume or hazardous nature of the waste and to facilitate handling or enhance recovery. Exemptions to the regulations exist where treatment is not technically feasible or where such treatment would not reduce the hazardous nature or volume of material going to landfill.
- 5.4 A Site Waste Management Plan (SWMP) should be produced by the chosen contractor, as best practice, prior to the commencement of the project. The SWMP should describe the volumes and types of waste that are likely to be produced during the removal of Made Ground and should set out the actions for recycling, recovery, re-use and disposal for each waste stream.

6.0 REPORTING

6.1 The verification visits and subsequent report should be completed in line with the appropriate guidance and should include the following as a minimum:

- Site details including National Grid Reference;
- Planning application details and description of development;
- Details of the developer, contractor and supervising environmental consultant;
- Description of garden and soft landscaped areas including a plan showing verification location;
- Dates of verification visits;
- Description of remedial works undertaken as agreed by the LPA;
- Material tracking information for imported and exported materials;
- Site specific chemical analysis results;
- Verification photographs including remarks;
- Confirmation of verification passes/failures and how non-conformances were dealt with;
- Details of additional remedial works, if required, and subsequent verification; and
- Clear statement confirming that remedial objectives have been achieved with supporting lines of evidence.

7.0 OTHER CONSIDERATIONS

Licensing and Permitting

7.1 It is the responsibility of the contractor to ensure that all required permits and consents are in place for the duration of the works. These may include:

- Site waste management plan; and
- Material management plan including completed declaration by a qualified person.

Third Party Liability

7.2 The contractor shall take all suitable measures to prevent pollution entering drainage systems or local watercourses and to avoid any nuisance odours impacting local properties. Measures must be put in place to prevent the release of dusts during the remediation works, particularly if asbestos contaminating materials are identified. The contractor should have suitable spill kits available to contain any pollution spills/leaks.



MEC
Consulting Group

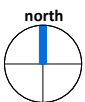
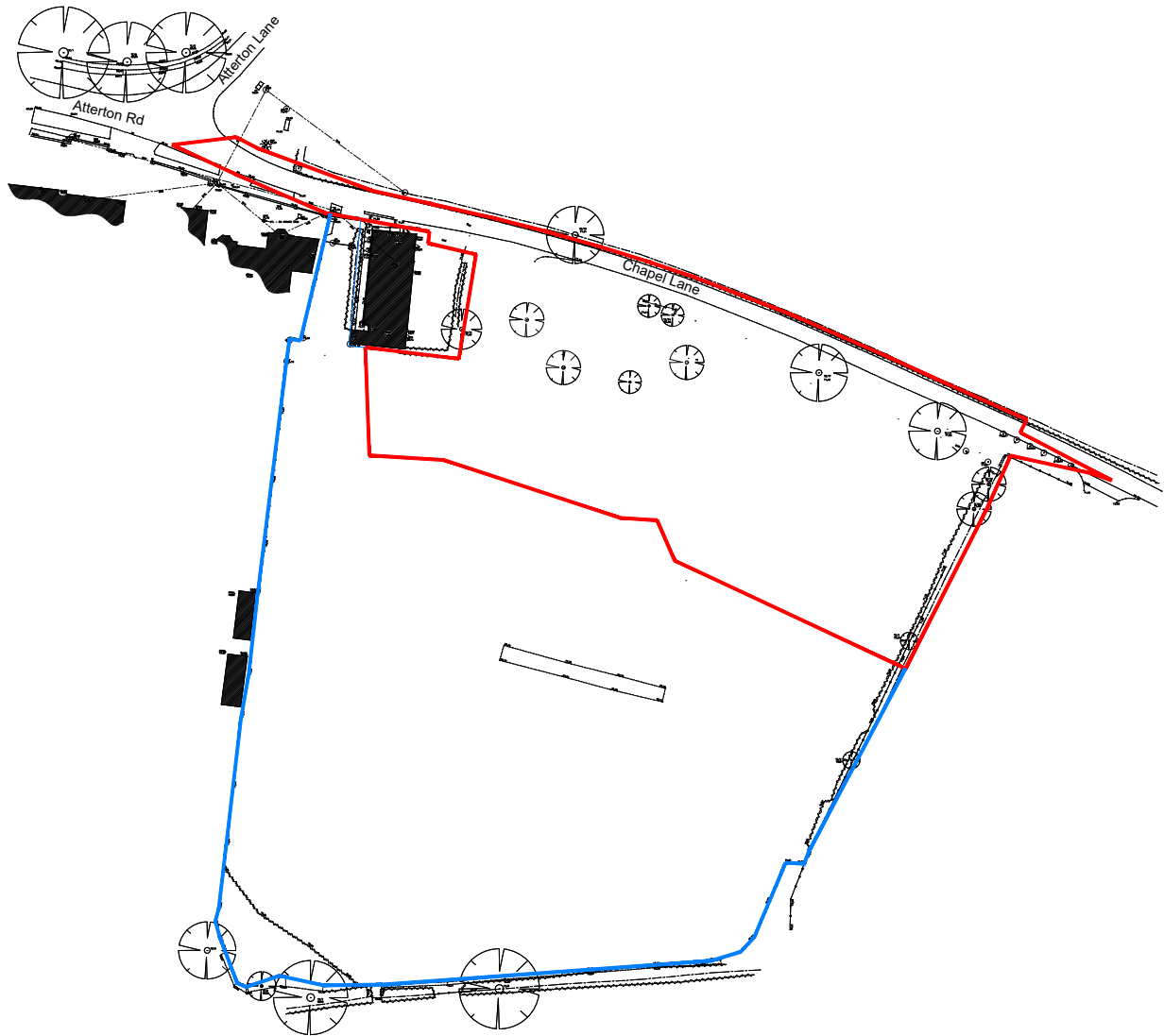
APPENDICES



APPENDIX A

Proposed Residential Development @ Chapel Lane, Witherley

- Application Site Boundary
- Ownership Boundary



0 10 50 100 125
Metres at scale 1:1250

hayward
ARCHITECTS LTD

19 Station Rd
Hinckley
Leicestershire
LE10 1AW
Tel: 01455 635665
Fax: 01455 618971
www.hayward-architects.co.uk

THE COPYRIGHT OF THIS DRAWING IS VESTED IN HAYWARD ARCHITECTS LTD.
REPRODUCTION IN ANY FORM, EITHER IN WHOLE OR IN PART IS FORBIDDEN
WITHOUT THE PRIOR WRITTEN PERMISSION OF THE COPYRIGHT HOLDER.

Project No: 22-124
Drawing No: P01
Scale: 1@1250@A4
Drawn By: JET
Date: 28.03.23

Rev	Date	By	Description
-			

Proposed Site Layout

Chapel Lane, Witherley



- Application Boundary
- Ownership Boundary
- Established Building Line
- Extent of flood allowance

Gross Site Area: 0.495ha

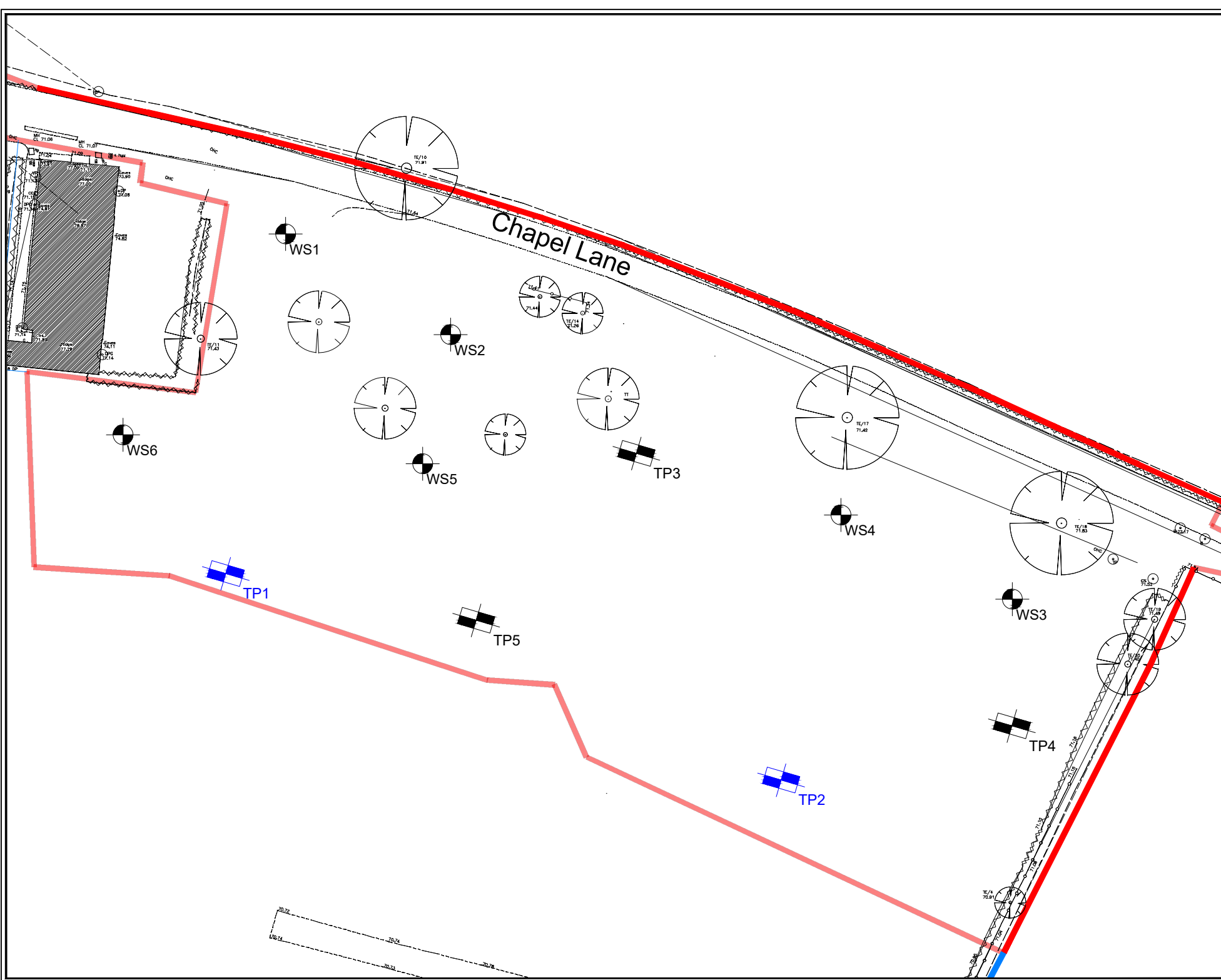
NOTE: Please see specialists' designs for soft landscaping, drainage and Highways

hayward
ARCHITECTS LTD

19 Station Road
Hinckley
Leicestershire
LE10 1AW
Tel: 01455 635 665
Fax: 01455 618 971
www.hayward-architects.co.uk

Client Cartwright Homes		
Project Residential Development Chapel Lane Witherley		
Drawing Proposed Site Layout		
Scale 1:500		Sheet A3
Date 28.03.23	Author JET	Checked by
Job No. 22-124	Drawing No. P02	
Drawing Status Planning Submission		

THE COPYRIGHT OF THIS DRAWING IS VESTED IN HAYWARD ARCHITECTS LTD.
REPRODUCTION IN ANY FORM, EITHER IN WHOLE OR IN PART IS FORBIDDEN
WITHOUT THE PRIOR WRITTEN PERMISSION
OF THE COPYRIGHT HOLDER. DO NOT SCALE FROM DRAWING AND ONLY
FIGURED DIMENSIONS ARE TO BE USED



Notes

This drawing is the copyright of georisk management ltd and may not be reproduced, copied or used without express written permission.

This drawing is to be read in conjunction with all development drawings, and designers risk assessments.

This drawing must not be scaled. Work to figured dimensions only.

KEY

- Dynamic Percussive Sampling Borehole Location
- Trial Pit Location
- Infiltration Test Location

Rev	Date	Description	Initials

Client

A R CARTWRIGHT LIMITED

georisk
MANAGEMENT

Varney House, 91 Spoon Lane, West Bromwich B70 6AB
t: 0121 553 4044, f: 0121 553 1112
www.georisk-uk.com, email: enquiries@georisk-uk.com

Contract

CHAPEL LANE
WITHERLEY

Drawing Title

EXPLORATORY HOLE
LOCATION PLAN

Drawing Status	
Drawn By	WB
Checked/Approved	AMG
Scale	NTS

Date	Drawing Number
30/05/24	24091/1



MEC
Consulting Group

APPENDICES



APPENDIX B

Table 1 Topsoil characteristics

Parameter	Multipurpose topsoil	Specific purpose			Method of test
		Acidic	Low fertility	Calcareous	
Soil texture % <i>m/m</i> Clay content % Silt content % Sand content %			5–35 0–65 30–85		BS 7755-5.4:1998
Soil organic matter content % <i>m/m</i> (see 3.7 and Note 1) Clay 5–20% Clay 20–35%	3–20 5–20	3–30 3–30	1–10 1–10	3–30 5–30	Modified Walkley Black [1]
Maximum coarse fragment content % <i>m/m</i> >2 mm >20 mm >50 mm			0–30 0–10 0		BS 7755-5.4:1998
pH H ₂ O Carbonate % <i>m/m</i>	5.5–8.5 –	3.5–5.5 –	3.5–9.0 –	7.5–9.0 >1	BS ISO 10390:2005 BS 7755-3.10:1995
Available plant nutrient content Nitrogen % <i>m/m</i> Extractable phosphorus mg/l Extractable potassium mg/l Extractable magnesium mg/l	≥0.15 16–100 121–900 51–600	≥0.15 16–100 121–900 51–600	<0.1 <15 <120 <600	≥0.15 16–100 121–900 51–600	BS 7755-3.7:1995 See Annex A See Annex A See Annex B
Carbon:Nitrogen ratio			<20:1		Modified Walkley Black [1] and BS 7755-3.7:1995
Exchangeable sodium percentage % Need not measure if soil electrical conductivity <2 800 μS cm ⁻¹			<15		Annex C Annex B
Chemical contaminants (Human health and the environment) (See Notes 2 and 3)	Concentrations of contaminants (Notes 2, 3 and 4) shall not present excessive risk to human health or the environment (see Note 4)				
Phytotoxic contaminants (by soil pH) (mg/kgDS) (Note 3)	Multipurpose and specific purpose topsoils				
Soil pH range	<6.0	6.0–7.0	>7		
Zn (Nitric acid extractable)	<200	<200	<300		See Annex D
Cu (Nitric acid extractable)	<100	<135	<200		
Ni (Nitric acid extractable)	<60	<75	<110		
Visible contaminants % <i>m/m</i> >2 mm ...of which plastics ...sharps			<0.5 <0.25 zero in 1 kg air-dried soil		PAS 100:2005, procedure E6.2
NOTE 1 For more demanding landscaping applications (e.g. ornamental shrub planting, rootballed trees), minimum soil organic matter contents 1% greater than the minima shown might be beneficial.					
NOTE 2 The list of contaminants to be analysed should be based on the history of the source(s) of materials that make up the topsoil, and the intended use of the site(s) where the topsoil is to be used. The concentrations of concern depend on the end use of the topsoil. Where this information is not available, appropriate conservative assumptions should be made. The CLEA model might be a useful guide [2].					
NOTE 3 The lower of the two values for chemical contaminants and phytotoxic contaminants is to be used.					
NOTE 4 Attention is drawn to the need for the concentrations of contaminants not to exceed those permitted by UK legislation (current at the time when the topsoil is supplied).					



MEC
Consulting Group

APPENDICES



APPENDIX C



CIVIL ENGINEERING



TRANSPORT



FLOOD RISK & DRAINAGE



STRUCTURES



GEO-ENVIRONMENTAL



ACOUSTIC AIR



UTILITIES



GEOMATICS



LIGHTING



EXPERT WITNESS



MEC
Consulting Group

E: group@m-ec.co.uk
W: www.m-ec.co.uk