

**GENERAL NOTES:**

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- DO NOT SCALE FROM THIS DRAWING. ALL DETAILS AND DIMENSIONS AND LEVELS ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER.
- ALL LEVELS ARE IN METERS & DIMENSIONS IN METERS UNLESS NOTED OTHERWISE.
- DESIGN BASED ON TOPOGRAPHICAL & CITY SURVEY AVAILABLE AT THE TIME OF DESIGN. ALL EXISTING SEWERS, CONNECTIONS, PIPE SIZES AND INVERT LEVELS TO BE CONFIRMED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS TO ENSURE CONNECTIVITY. ANY VARIANCE FROM THE INFORMATION SHOWN SHOULD BE REPORTED TO THE ENGINEER FOR REVIEW.
- ALL PREWORK TO BE VERIFIED CLAY.
- WHERE EXISTING DRAINAGE IS BEING USED, ALLOWANCES SHOULD BE MADE TO REDIGATE THIS DRAINAGE IN LINE WITH AVAILABLE CITY SURVEY INFORMATION.
- WHERE THERE IS NO REQUIREMENT TO KEEP EXISTING DRAINAGE, ALLOWANCES SHOULD BE MADE TO ABANDON THIS IN LINE WITH CURTINS DRAINAGE SPECIFICATION.
- ALL INTERNAL DRAINAGE POINTS ARE SHOWN INDICATIVELY AND ARE TO BE DESIGNED AND SET OUT BY THE M&E ENGINEER.
- ANY DRAINAGE RUNS AND THEIR CONNECTIONS DAMAGED THROUGH CONSTRUCTION WORKS SHOULD BE REPLACED TO SUFFICIENT STANDARD.
- CURTINS ACCEPT NO RESPONSIBILITY FOR DEFECTS OR INADEQUACIES OF EXISTING DRAINAGE SYSTEMS. FAILURE OF SITE DRAINAGE DUE TO AN ISSUE WITH THESE NETWORKS ARE OUTSIDE OF OUR REMIT UNLESS SPECIFICALLY INSTRUCTED OTHERWISE.
- THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION PURPOSES.
- EXISTING DITCH DIVERSIONS TO BE 1M WIDE AND 300-500mm IN DEPTH, AS AGREED WITH THE LIA.
- SITE SURFACE WATER DISCHARGE LIMITED TO QBAR (31.3%) AS AGREED WITH LCC.
- FOUL PUMPING STATION TO BE DESIGNED BY OTHERS AT LATER DESIGN STAGE. PROVISION OF 24-HOUR EMERGENCY STORAGE TO BE AGREED WITH BUILDING CONTROL AT LATER DESIGN STAGE. SECONDARY POWER SUPPLY AND SECONDARY PUMP TO BE PROVIDED.

**KEY:**

- SURFACE WATER DRAIN
- SURFACE WATER CHAMBER
- FOUL WATER DRAIN
- FOUL WATER CHAMBER
- EXISTING SURFACE WATER SEWER
- SURFACE WATER CULVERT
- BYPASS SEPARATOR

**ORIFICE PLATES:**

- SW12 (OP) - ORIFICE PLATE: 80mm; 55; INVERT LEVEL: 81.98m AOD
- SW16 (OP) - ORIFICE PLATE: 80mm; 55; INVERT LEVEL: 81.16m AOD
- SW22 (OP) - ORIFICE PLATE: 80mm; 40; INVERT LEVEL: 80.70m AOD
- SW31 (OP) - ORIFICE PLATE: 80mm; 40; INVERT LEVEL: 81.12m AOD
- SW32 (OP) - ORIFICE PLATE: 80mm; 40; INVERT LEVEL: 80.72m AOD
- SW34 (OP) - ORIFICE PLATE: 80mm; 60; INVERT LEVEL: 79.93m AOD
- SW36 (OP) - ORIFICE PLATE: 80mm; 40; INVERT LEVEL: 79.99m AOD
- SW39 (OP) - ORIFICE PLATE: 80mm; 50; INVERT LEVEL: 80.00m AOD
- SW41 (OP) - ORIFICE PLATE: 80mm; 50; INVERT LEVEL: 79.44m AOD

**HYDROBRAKES:**

- SW42 (HB) - HYDROBRAKE: Q (lit): 31.3; H (m): 0.227; INVERT LEVEL: 78.60m AOD

**LEGEND:**

- BELOW GROUND SURFACE WATER GEO-CELLULAR STORAGE
- BELOW GROUND SURFACE WATER ATTENUATION CONCRETE TANK WITH SUPPORT COLUMNS
- ABOVE GROUND SURFACE WATER STORAGE BASIN
- PERMEABLE SUB-BASE: SUB-BASE TO COLLECT AND ATTENUATE FLOWS SURFACING TO BE CONFIRMED AT DETAILED DESIGN PHASE
- PERMEABLE SUB-BASE: AREA: 630m²; DEPTH: 300mm @ 95% VOID RATIO
- PERMEABLE SUB-BASE: AREA: 475m²; DEPTH: 300mm @ 30% VOID RATIO
- PERMEABLE SUB-BASE: AREA: 200m²; DEPTH: 300mm @ 30% VOID RATIO
- PERMEABLE SUB-BASE: AREA: 1480m²; DEPTH: 300mm @ 30% VOID RATIO
- PERMEABLE SUB-BASE: AREA: 520m²; DEPTH: 300mm @ 30% VOID RATIO
- PERMEABLE SUB-BASE: AREA: 630m²; DEPTH: 300mm @ 95% VOID RATIO
- PERMEABLE SUB-BASE: AREA: 1700m²; DEPTH: 300mm @ 30% VOID RATIO
- PERMEABLE SUB-BASE: AREA: 885m²; DEPTH: 300mm @ 30% VOID RATIO
- PERMEABLE SUB-BASE: AREA: 960m²; DEPTH: 300mm @ 30% VOID RATIO
- PERMEABLE SUB-BASE: AREA: 940m²; DEPTH: 300mm @ 30% VOID RATIO
- PROPOSED SWALE: LOCATIONS AND DEPTHS TO BE CONFIRMED. ANTICIPATED DEPTH 300-500mm.
- PLANNING BOUNDARY
- EXISTING SURFACE WATER SEWER
- EXISTING LAND DRAINS TO BE RETAINED
- EXISTING LAND DRAINS TO BE DIVERTED
- PROPOSED DIVERTED LAND DRAIN

POS	UPDATED FOLLOWING COMMENT	11.11.19	LB	MS
PO4	FOUL NETWORK ADDED	10.09.19	LB	MS
PO3	UPDATED FOLLOWING COMMENTS	04.09.19	LB	MS
PO2	FOR INFORMATION	28.08.19	LB	MS
PO1	PRELIMINARY ISSUE	02.08.19	NMH	MS

Rev	Description	Date	By	Chk

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Status: **PRELIMINARY**

Project: **GREAT WOLF LODGE**

Orig Title: **PROPOSED DRAINAGE STRATEGY**

Size	Date	Drawn By	Designed By	Checked By
A0	02.08.19	NMH	MS	MS

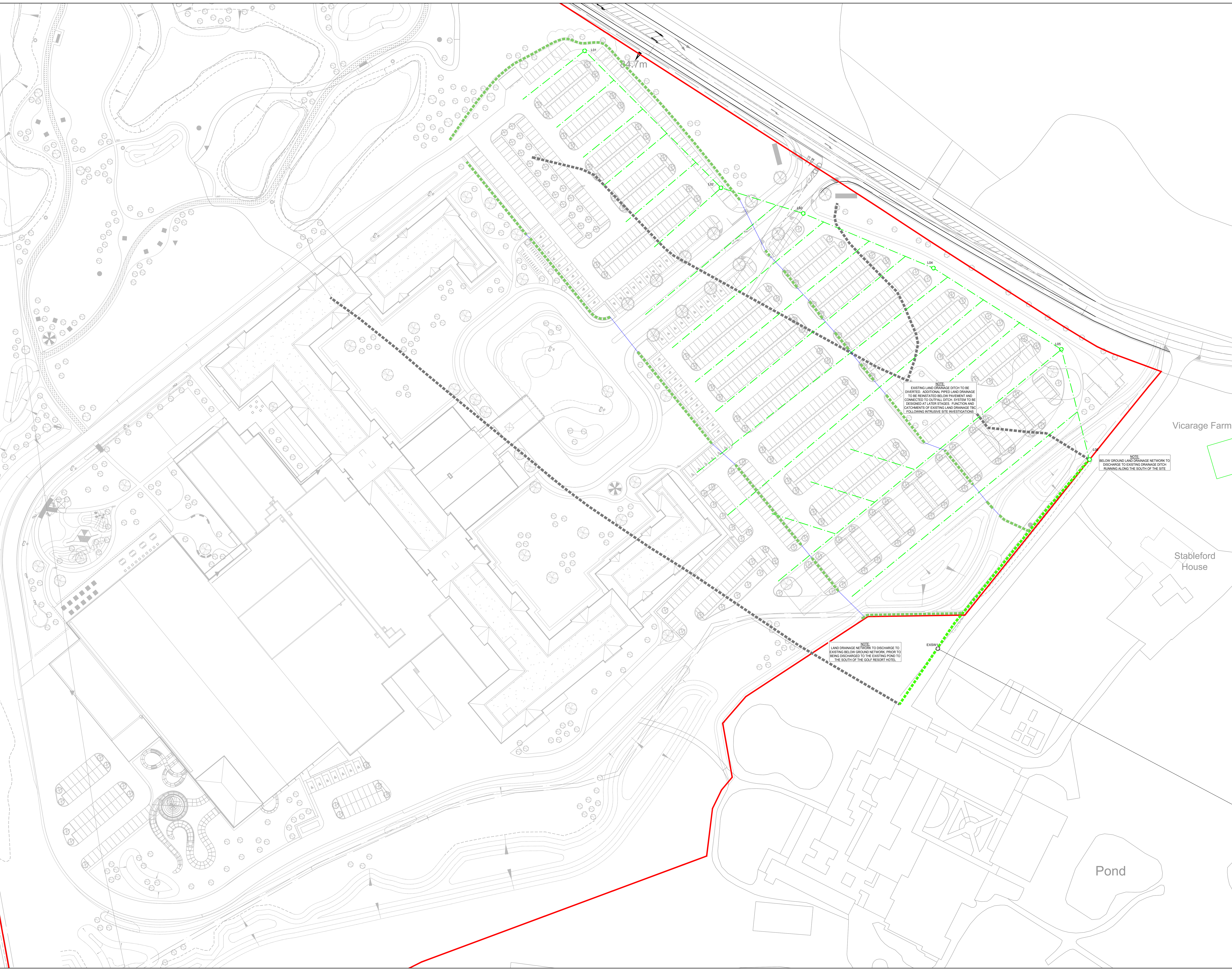
Scale: 1:500

Project No	Originator	Zone	Level	Type	Discipline	Category	Number	Rev
06535	CUR	00	XX	DR	C		92000	-P05



## Appendix G – Proposed Land Drainage Strategy





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- ALL PREWORK TO BE PERFORMED HOPE.
- WHERE EXISTING DRAINAGE IS BEING USED, ALLOWANCES SHOULD BE MADE TO RELOCATE THIS DRAINAGE IN LINE WITH AVAILABLE CCTV SURVEY INFORMATION.
- WHERE THERE IS NO REQUIREMENT TO KEEP EXISTING DRAINAGE, ALLOWANCES SHOULD BE MADE TO ABANDON THIS IN LINE WITH CURTINS DRAINAGE SPECIFICATION.
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- THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION PURPOSES. LATERAL BRANCHES TO MAIN BELOW GROUND LAND DRAINAGE RUNS NOT SHOWN FOR CLARITY. LAND DRAINAGE TO BE INSTALLED IN A HERRINGBONE PATTERN, WITH DRAIN SPACING TO CONFIRMED FOLLOWING COMPLETION OF DETAILED GEOLOGICAL INVESTIGATIONS.

— EXISTING SURFACE WATER SEWER

— EXISTING LAND DRAINS TO BE RETAINED

— EXISTING LAND DRAINS TO BE DIVERTED

— PROPOSED DIVERTED LAND DRAIN

— PROPOSED PERFORATED LAND DRAINAGE

— PROPOSED LAND DRAINAGE CHAMBER

NOTE

EXISTING LAND DRAINAGE DITCH TO BE DIVERTED. ADDITIONAL PIPED LAND DRAINAGE TO BE REINSTALLED BELOW FURNITURE AND CONNECTED TO OUTFALL DITCH. SYSTEM TO BE DESIGNED AT LATER STAGES. FUNCTION AND CATCHMENTS OF EXISTING LAND DRAINAGE TO BE FOLLOWING INTRUSIVE SITE INVESTIGATIONS.

NOTE

BELOW GROUND LAND DRAINAGE NETWORK TO DISCHARGE TO EXISTING DRAINAGE DITCH RUNNING ALONG THE SOUTH OF THE SITE.

NOTE

LAND DRAINAGE NETWORK TO DISCHARGE TO EXISTING BELOW GROUND NETWORK, PRIOR TO BEING DISCHARGED TO THE EXISTING POND TO THE SOUTH OF THE GOLF RESORT HOTEL.

P02 | UPDATED FOLLOWING COMMENTS | 11.11.19 | MS | TL

P01 | PRELIMINARY ISSUE | 17.09.19 | MS | TL

Rev	Description	Date	By	Chk'd

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Status:

Project:

GREAT WOLF LODGE

Orig Title:

PROPOSED LAND DRAINAGE  
GENERAL ARRANGEMENT

Size	Date	Drawn By	Designed By	Checked By
A0	17.09.19	MCS	MCS	TL

Scale: 1:500

Project No	Originator	Zone	Level	Type	Discipline	Category Number	Rev
06535	CUR	00	- XX -	DR	C	92003	-P02



## Appendix H – Thames Water Foul Discharge Correspondence

**Mr Michael Smith**

Curtins Consulting  
40 Compton Street  
London  
EC1V 0BD



30 September 2019

## Pre-planning enquiry: Capacity Concerns

**Site: Great Wolf Lodge Resort, Chesterton, Bicester OX26 1TH**

Dear Michael,

Thank you for providing information on your development.

*Proposed site: Hotel (500 rooms), Water Park (8540m<sup>2</sup>), Food court, Conference area and Back of house (12500m<sup>2</sup>).*

*Proposed foul water discharge by pump at 50 l/s into manhole SP55217601.*

*Surface water discharging into watercourse.*

### Foul Water

We've assessed your foul water proposals and concluded from our review, that our sewerage network does not have sufficient capacity to accommodate foul water flows from the proposed development.

In order to ensure we make the appropriate upgrades – or 'off-site reinforcement' – to serve your development, we'll need to carry out modelling work, design a solution and build the necessary improvements. Typical timescales for a development of your size are:

**Modelling: 8 months**

**Design: 6 months**

**Construction: 6 months**

**Total: 20 months**

If the time you're likely to take from planning and construction through to first occupancy is longer than this, we'll be able to carry out the necessary upgrades in time for your development. If it's shorter, please contact me on the number below to discuss the timing of our activities.

### What do you need to tell us before we start modelling?

We're responsible for funding any modelling and reinforcement work. We need, though, to spend our customers' money wisely, so we'll only carry out modelling once we're confident that your development will proceed.

In order to have this confidence, we'll need to know that you **own the land and have either outline or full planning permission**. Please email this information to us as soon as you have it.

If you'd like us to start modelling work ahead of this point, we can do this if you agree to underwrite the cost of modelling and design. That means we'll fund the work – but you agree to pay the cost if you don't achieve first occupancy within five years.

If the modelling shows we need to carry out reinforcement work, then before we start construction, we'll need you to supply us with notification that you've confirmed your 'nominated competent person' (NCP) submission to the Health and Safety Executive.

### **What do I need to do next?**

The discharge of non-domestic effluent is not permitted until a valid trade effluent consent has been issued by Thames Water. If anything, other than domestic sewage is discharged into the public sewers without the above agreement an offence is committed, and the applicant will be liable to the penalties contained in Section 109(1) (WIA 1991). Please contact Trade Effluent prior to seeking a connection approval, to discuss trade effluent consent and conditions of discharge.

**Please note that you must keep us informed of any changes to your design – for example, an increase in the number or density of homes.**

If you have any further questions, please contact me on 020 3577 9224.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Hemlata', with a stylized flourish at the end.

Hemlata Gurung  
Technical Coordinator  
Developer Services – Sewer Adoptions Team

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