

PROJECT PLAN No: 13.7841

CONSTRUCTIVE EVALUATION LIMITED

**Project Name: Various Sites for Hastoe Housing
Association (Percolation Testing for ADC)**

Client: Arun District Council

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Constructive Evaluation Limited
Unit 5 Vinnetrow Business Park
Vinnetrow Road
Runcton
Chichester
West Sussex
PO20 1QH



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DOCUMENT APPROVAL

Report Author(s)

D Crellin

Date:

7.2.14

Report Checked/Approved by

R Marsh

Date:

7/2/14

PROJECT PLAN REVISED (response to significant changes in client requirements, methods of work etc).

Name:	Signature:	Date:	Nature of revision:
Name:	Signature:	Date:	Nature of revision:
Name:	Signature:	Date:	Nature of revision:

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1.0 PROJECT INFORMATION SHEET

1.1 GENERAL AND CONTACT INFORMATION			
C.E. JOB	13.7841	EQ REFERENCE	EQ9026
DEPARTMENT:	Soils	OFFICE	Chichester
SITE ADDRESS:	Various Sites for Hastoe Housing Association		
CLIENT:	Arun District Council		
INVOICE ADDRESS:	Arun Civic Centre Maltravers Road Littlehampton West Sussex BN17 5LF		
CONTACT:	Jane Gallifent, Hastoe Paul Cann ADC	TELEPHONE:	07590 962109
EMAIL	jgallifent@Hastoe.com		
PURCHASE ORD N^o:	N/A		
CONSULTING ENGINEER (if different):	ADC		
CONTACT:	Paul Cann ADC	TELEPHONE:	(0) 1903 737819
EMAIL	Paul.Cann@arun.gov.uk		
1.2 CONSTRUCTIVE GROUP STAFF			
PROJECT MANAGER:	Rob Marsh	TELEPHONE:	07921 308790
PROJECT ENGINEER:	Dave Crellin	TELEPHONE:	07710725381
TECHNICAL STAFF (if applicable):	George Boughton Leigh	TELEPHONE:	07825614546

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2.0 PROJECT RECORD

2.1 Project Timetable

Project Plan Production:	7.2.14		
Date on Site:	11 & 12.2.14	Confirmed to Client?	Y / N
Drawings:			
<i>To CAD Operator</i>	<i>Date Requested</i>	<i>Date Received</i>	
Testing			
<i>Laboratory</i>	<i>Date Sent</i>	<i>Date Due</i>	<i>Date Received</i>
Report Checked and Sent (date):			
Invoicing			
<i>Reference No.</i>	<i>Date Invoiced</i>	<i>Amount (before VAT)</i>	

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2.2 Daily Site Record

Weather:

Project Number:

Day(s):

Location:

Date(s):

Staff Details/Site register

The CE supervisor is responsible for ensuring those listed below have received a site induction and have read the method statement

Date _____

Name _____

Staff Role

Company

Time In / Out

Signature

[illegible]

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2.4 Record of Variation from Method Statement			
Reason For Variation			
Description of Variation			
Any Delay?			
2.5 Variations to Risk Assessment			
<i>Specific Hazard</i>	<i>Risk (L/M/H)</i>	<i>Persons/ Assets Affected</i>	<i>Control Measures</i>

It is the responsibility of the Site Supervisor (Project Engineer or Senior Technician to ensure that this risk assessment is correctly completed.

Signatures:

Produced By	
Project Manager	

3.0 RISK ASSESSMENT AND METHOD STATEMENT

3.1 Scope of Works

- 3.1.1 A site service search will be undertaken on site prior to the sinking of any holes, this will involve the lifting of any covers to determine the runs and the use of a CAT Scan to determine the location of any electrical cables. In addition the service plans provided to CE form Hastoe will be consulted.
- 3.1.2 The construction of 5no. machine excavated trial holes using a tracked mini excavator to depths up to 3.00mbgl. The pit length and width will be kept to a minimum (approx 1.5mx0.45m) and will be completed adjacent to the previous installed window sample holes in soft ground areas.
- 3.1.3 The rapid infilling of the trial pits using clean potable water supply to complete soil infiltration testing to BRE365. Tests will be repeated up to two times should the water levels soakaway. Testing to be completed above existing groundwater levels.
- 3.1.4 Once completed the trial pits will be backfilled with material in reverse order with the topsoil material placed back on the surface. The trial pits may be left slightly mounded to allow for any consolidation settlement over time.
- 3.1.4 Blue visible netlon fencing will be erected around the pit areas to clearly demark the locations. Approximate test locations are shown in annex A.

3.2 Site Activity Method Statements and Risk Assessments

The Method Statements and Risk Assessments for the works outlined in section 3.1 are contained in Annex 2.

STANDARD OPERATING PROCEDURES APPENDED

4.0 HEALTH AND SAFETY PLAN

4.1 Summary of Site Status

Existing house estate

4.2 Known Hazards

Buried services, possible made ground soils.

4.3 Underground Services

4.3.1 Clearance

Has the site been cleared of services? NO

Has a specialist contractor been requested to clear services for exploratory positions? NO

Note: Specialist Service Contractors can detect electric, some telecoms and some metal gas lines. They cannot detect drainage, or plastic water/gas pipes.

If none of the above are available then a CAT must be used on Site by Constructive Evaluation, and hand pits, to a minimum depth of 1.2 m, must be excavated.

4.4 Hospital Emergency Route (Accident and Emergency)

Hospital Name: Worthing Hospital

Phone Number: 01903 20511

Hospital Address: Lyndhurst Road, Worthing, West Sussex, BN11 2DH

Estimated Driving Time: 20 mins

NOTE: Driving to the hospital must not be undertaken if the injury sustained has the potential to impair driving ability. In such circumstances, if no other driver is available, an ambulance must be requested.

*** Hospital should be notified immediately if an injury occurs which requires medical attention.**

Is the hospital route plan appended? YES

Annex 1

Official Order, EQ and Tender Information

TP1

1 TP2



Proposed trail hole locations. Sheet 1 of 2

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TP4

TP5

Sheet 2 of 2.

Annex 2

Standard Operating Procedures (SOP's)

Site: 5 no site locations within Wick Estate, Littlehampton

Method Statement – Mechanically Excavated Trial Pits

General

This Method Statement details the procedure to be followed for the avoidance of underground services and excavation of inspection pits in line with HS(G) 47 – Avoiding Danger from Underground Services.

Site work will comprise of the excavation of test pits to a predetermined depth by means of a mechanical excavator. The work will be directed by an operative from the Constructive Group, who will also act as banksman.

Tracked excavators will be delivered to site either by trailer or low loader, dependant on their size, some wheeled excavators (e.g. JCB 3CX) are road legal and will be driven to site.

Within the upper 1.2m the trial pit should be advanced in minimal increments (<100mm) and the excavated surface examined for any signs of buried services. Mechanical breakers and concrete corers should only be used to penetrate hard standing and not over any known services.

This Method Statement should be read in conjunction with the relevant Risk Assessments.

Personnel

All work will be carried out by competent personnel who have received training in line with the Company Training Policy. Specialist tracing equipment such as the RD4000 / CAT₃ Cable Avoidance Tool (CAT will only be operated and interpreted by personnel with certification of their competency from the Constructive Group).

The operator of the machine will carry CPCS or similar accreditation of their competency to operate the specific plant required. The excavator supplier will be required to provide a plant safety certificate for the machine.

Standard Equipment and Materials

- RD4000 / CAT₃ CAT
- Excavator with hydraulic breaker attachment.
- Tape measure
- Glass sample jars, zip seal bags and bulk bags

Personal Protective Equipment

- Blue or white hard hat (mandatory)
- Lace up safety Boots (mandatory)
- Orange High Visibility Jacket/Vest (mandatory)
- Orange High Visibility Over Trousers (for Network Rail Sites)
- Ear Defenders (to be worn in accordance with noise assessments)
- Safety Glasses/Goggles (worn as per risk assessments)
- Gloves (mandatory)

COSHH

- Fuel oil
- Lubricating oil

Site: 5 no site locations within Wick Estate, Littlehampton

General Instructions

All steps detailed in this Method Statement are to be completed sequentially, unless otherwise instructed by CE Contract Manager or Supervising Engineer.

System of Work

1. All available plans and other suitable information regarding underground and overhead services in the area of concern must be referred to when the work is planned and should be available on site when locating borehole positions. (It should be noted that service connections from a main service to a building or street light may not be shown on drawings).
2. A visual inspection of proposed exploratory location must be undertaken to identify potential underground hazards. For example, locations should be relocated if they fall within line of two inspection covers or are in close proximity to other signs of service connections (e.g. telegraph poles).
3. Blue Netlon fencing will be erected around the works area clearly demarking the open excavation.
4. Locations will be scanned by the trained operative with an RD4000 / CAT₃ CAT prior to commencement of excavation. If underground services are detected the Contract Manager/Supervising Engineer should be informed immediately and before continuing further.
5. Excavation work must be carried out carefully, following safe digging practices and in line with the Permit to Dig. Excavation must be completed in a controlled manner to prevent breakage of plastic or clay pipes not located by the CAT, and to allow observation of the material being excavated. Picks and digging bars should only be used with care to free boulders etc, and to break up hard layers. Excavated soil should be stockpiled adjacent to the pit.
6. CAT scanning for services must be continued at regular intervals (not more than 300mm) as the pit is progressed. If a service is detected the Contract Manager/Supervising Engineer should be informed immediately.
7. If a service is uncovered, work must stop, the service should be assumed live and the Contract Manager should be informed immediately.
8. The pit will be advanced to the required depth, samples must only be removed from the excavated heap. Manned entry to any unshored pit greater than 1.2m deep is strictly forbidden, no manned entry to a pit with unstable sides should be undertaken.
9. Once complete the pit should be backfilled in reverse order and compacted with the digger arm in 300mm maximum layers. Any water should be bailed out to avoid slurring of the soils

Site: 5 no site locations within Wick Estate, Littlehampton

Additional Information and Comments

For modern installations, a national coding system for buried services has been agreed by most utilities. In summary, the system is as follows:

Black: Electricity, Red: Electricity – some high voltage cable
 Orange: Street Lighting & Traffic Control Cables
 Blue: Water
 Yellow: Gas
 Grey or White: Telecommunications
 Green: Cable TV and some Telecommunications

Where there is any doubt about the identity of an exposed service it should be treated as an electricity cable or gas pipe until proved otherwise.

Risk Assessment – Mechanically Excavated Trial Pits

<i>No.</i>	<i>SPECIFIC HAZARD</i>	<i>RISK</i>	<i>CONTROL MEASURES</i>
1.	Buried Services (Gas, Electricity)	M	Detailed above
2.	Vibration	M	Use low vibration tools where possible, limit time spent continuously working on vibrating tools and take regular breaks.
3.	Noise	H	Wear appropriate PPE when operating or working near plant and machinery
4.	Dust	L	Wear appropriate PPE; conduct onsite Risk Assessment.
5.	Manual Handling	L	Do not lift more than 25kg without assistance. Wear gloves to protect hands.
6.	Mechanical Plant	H	Wear appropriate PPE, agree hand signals with the operator. No movements without a banksman.

Site: 5 no sites in Wick Estate, Littlehampton

Method Statement – Soakaway Testing in Trial Pits

General

This Method Statement describes the procedure to be followed when undertaking Soakaway testing techniques.

The purpose of this work is to determine the infiltration rate for the underlying soils for the design of surface water drainage discharge.

Testing is to be completed within mechanically excavated pits. This method statement provides a system of work for infiltration testing trial pits.

Water is to be provided by a roadside tanker (2000gls) with hose attachments to allow water to be pumped into the base of the trial hole.

This Method Statement should be used in conjunction with the relevant Risk Assessment.

Personnel

All work will be carried out by competent personnel who have received training in line with the Company Training Policy.

Standard Equipment and Materials

- Dip Meter
- Water Supply (Tap, bowser or water butts)
- A variety of hand tools
- Stopwatch

Personal Protective Equipment

- Blue or white hard hat (mandatory)
- Lace up safety Boots (mandatory)
- Orange High Visibility Jacket/Vest (mandatory)
- Gloves (mandatory)

General Instructions

All steps detailed in this Method Statement are to be completed sequentially, unless otherwise instructed by CE Operations Manager or Supervising Engineer.

System of Work

1. Upon arrival all positions will be checked that they are serviceable and testing can be commenced.
2. Each soakaway test position will excavated to the appropriate size using either hand excavation techniques or mechanical excavation (refer to SOPC02 & C10). All soils encountered and groundwater (if present) will be logged and recorded.
3. If no groundwater is encountered, testing can be completed.

Site: 5 no sites in Wick Estate, Littlehampton

4. The trial pit is filled with water to two thirds of the depth of the pit using the potable water from the road side tanker. The dip meter will then be used to measure the reduction in levels (if any) of the course of set intervals and timescales. Results will be recorded on the relevant documentation.
5. Once all the water has percolated and the water still remains, the test will be repeated using the same method. Testing will be completed up to 2 times within each position.
6. If the water remains after at suitable timescale has been achieved, then the test will be abandoned, and the results recorded.
7. Positions will be made safe and good on leaving site, leaving positions clean and tidy.

Risk Assessment – Soakaway testing within trial pits

<i>No.</i>	<i>SPECIFIC HAZARD</i>	<i>RISK</i>	<i>CONTROL MEASURES</i>
1.	Contaminated Ground	M	Wear Correct PPE and maintain minimum standard of personal cleanliness. Conduct onsite Risk Assessment of visual and olfactory evidence of contamination.
2.	Soil gases	M	
3.	Buried Services (Gas, Electricity)	M	See machine excavation standard operating procedure.
4.	Vibration	N/A	
4.	Noise	L	Wear appropriate PPE when operating or working near plant and machinery
5.	Dust	N/A	
6.	Manual Handling	L	Do not lift more than 25kg without assistance. Wear gloves to protect hands.
7.	Mechanical Plant	H	Wear appropriate PPE, agree hand signals with the operator. No movements without a banksman.

Annex 3

Permit to Work

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The Constructive Group 	
Permit to Work (Excavations & Penetrations)	SOP_C40

Project Reference No:

Permit No:

Part 1. To be completed by Constructive Group Site Supervisor

Request for Permit to Work (Excavations & Penetrations)

Company requesting permit:

Responsible Engineer's Name:Phone No.....

Detailed description of work to be carried out:

Expected duration of work: Starting at:

On:

Site where work is to be carried out:

Hole Reference No(s):

Specific location within site:

Details of equipment/machinery involved:

Part 2. To be completed by Constructive Group Site Supervisor

I. Service Identification - Summary of anticipated services from drawing/document review/visual inspection –

Tick applicable box

Services	Walls	Ground	Voids	Ducts	Floors	Overhead
Electrical Cables						
Electrical Cables (Redundant/ Isolated)						
Gas						
Water						

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Drainage						
Others (specify)						

II. Pre-Start Safety Precautions Checklist

	YES	NO	REMARKS
1) Are service location drawings available for proposed work area?			
2) Have the drawings been reviewed?			
3) Have the relevant service providers been contacted and are the works being carried out in coordination with them to ensure the protection and support of cables?			
4) Have CAT scans been performed by a competent person using approved and calibrated equipment?			

NOTE: The CAT scanner should be used at least every 300mm throughout the excavation and no mechanical digging should take place within 500mm of any known services.

Survey and Investigation by: (print)

Calibration Certification:

Type/Model of CAT/Scan Equipment:

CAT/Scan Equipment Serial Number:

Part 6. Site Person in Charge/Requestor Declaration

I certify that I will:

Ensure that I/my staff are competent to safely undertake the required work.

Ensure that I/my staff are briefed in accordance with the agreed Method Statement and Risk Assessment

Ensure that I/my workforce will adhere to the course of action detailed within the agreed Method Statement and the required controls.

Ensure that no work will be undertaken which is not covered by this Permit to Work and attached Method Statement

Inform the workforce of any additional local safety restrictions as detailed below.

Signed (Constructive Group Engineer)..... Name (print).....

Annex 4

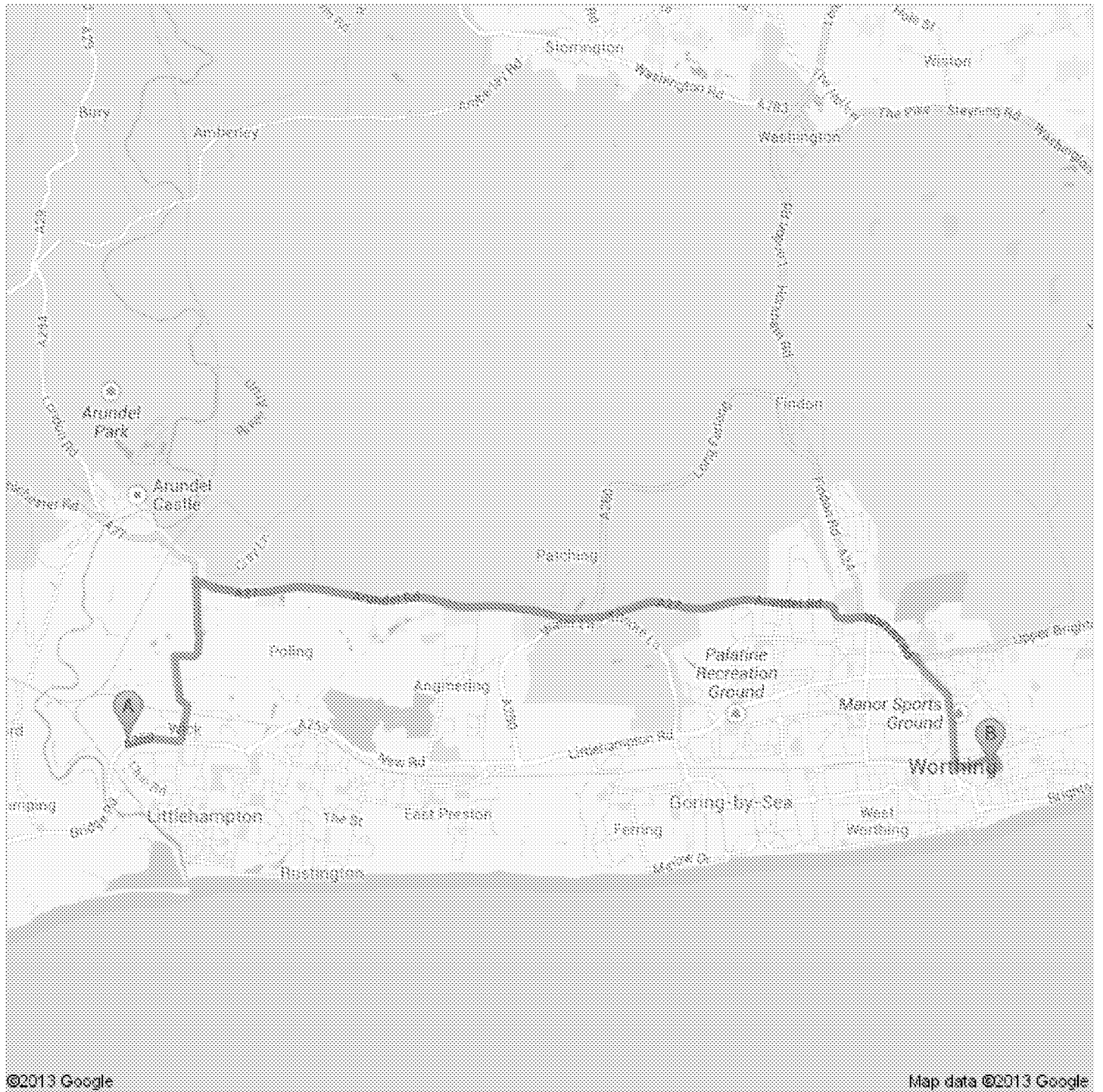
Plant and COSHH Information Sheets

Annex 5

Hospital Route



Directions to BN11 2DH, UK
11.6 mi – about 21 mins



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Map data ©2013 Google



A259

1. Head **northeast** on **A259** toward **New Courtwick Ln** go 0.5 mi
About 53 secs total 0.5 mi

2. At the roundabout, take the **2nd** exit onto **Lyminster Rd/A284** go 1.8 mi
About 4 mins total 2.3 mi

3. Continue onto **A27** go 184 ft
total 2.4 mi

4. Slight right to stay on **A27** go 112 ft
total 2.4 mi

5. Turn right to stay on **A27** go 7.3 mi
Go through 1 roundabout
About 10 mins total 9.7 mi

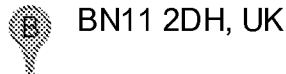
6. At the roundabout, take the **3rd** exit onto **Broadwater St W/A24** go 1.2 mi
Go through 1 roundabout
About 3 mins total 10.9 mi

7. At the roundabout, take the **1st** exit onto **Newland Rd** go 0.3 mi
About 1 min total 11.2 mi

8. Continue onto **Chesswood Rd** go 0.1 mi
total 11.3 mi

9. Turn right onto **Homefield Rd** go 0.1 mi
total 11.4 mi

10. Turn right onto **Park Ave** go 0.1 mi
total 11.6 mi



BN11 2DH, UK

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

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Directions weren't right? Please find your route on maps.google.co.uk and click "Report a problem" at the bottom left.