ADL Traffic and Highways Engineering Ltd
ADL House, Oaklands Business Park, Armstrong Way, Yate, Bristol, BS37 5NA
Tel: 01454 332 100 Email: cad@adltraffic.co.uk

Your ref: TR010022
Our ref: ADL/RG/ls/2680

24 June 2020

The Planning Inspectorate
National Infrastructure Planning
Temple Quay House
2 The Square
Bristol
BS1 6PN

Dear Sirs

Re: McDONALD'S, MARKEATON PARK

Following from the Hearing of 9th June 2020 there was an online meeting on 16th June between the representatives of McDonald's and Euro Garages with Aecom/Derby City Council as highway authority and the matters discussed were:

1) Car park strengthening
2) A52 junction
3) Rights of way
4) Advance warning signage

This letter forms an update to our previous submission and includes two attached files, all saved into a single PDF.

Car Park Strengthening

Please find enclosed a conditions report undertaken by ST Consult, on behalf of our Client and drawing 4200226-1000 P2 (Proposed Finishes) by Glanville Consultants. The work shows that currently the areas of the car park used now, and potentially in the future are both in need of improvement.

The red area shown on drawing 4200226-1000 P2 shows the existing areas of delivery manoevures and therefore would fall under McDonald's own programme of maintenance and repairs to the store. The green area has until now, never been used for HGV access and therefore it is prudent to ensure the longevity of this through thorough improvements to reduce our Clients exposure to future maintenance and repair costs as a result of the changes in operation needed to accommodate HE's proposals.

Our Client will be seeking financial compensation for these works, so that their own contractor team with experience of working in and around an operational McDonald's restaurant can undertake the works on a programme designed to fit in around restaurant activity, in order to minimise interruption to the business.

Our Client looks forward to further discussions with HE's representatives to agree a way forward on this matter.

A52 junction

As noted in ADL's previous correspondence and analysis, it is accepted that the capacity of the junction is acceptable, despite concerns about how accurately this can be modelled and the potential for erroneous results. The safety aspects of the substandard U turn into the wider site have been under discussion for some time and McDonald's and their neighbours Euro Garages Ltd has sought confirmation that Derby City Council (DCiC) who will ultimately be responsible for the junction, consider that it is safe and suitable for use.

We note that DCiC noted in their Deadline 14 submission that:

> ***"some changes are needed to improve safety and the operation of the proposed signals …***
> ***… and that this can be dealt with at the detailed design stage."***

Both McDonald's and Euro Garages have undertaken their own internal investigations to identify if changes within their sites could be made to improve the proposed junction layout and it was concluded that this would not be possible without significant changes to layout and circulation within the sites. To date no proposal from HE has come forward for our client to consider in terms of how the proposed arrangements could be improved upon, either utilising highway or (even) client controlled land for consideration. The difficulty identified by McDonald's is that to ensure good operation of their site, drivers need to clearly be able to identify and make decisions in terms of entering the drive thru lane or parking; where they need to go after using the drive thru lane, whether they need to make a fuel purchase before or after a visit. Any ingress into the site to accommodate the development will reduce space for these customer decisions, and can also bring the rear of any vehicle queue at the proposed signals further into their site.

DCiC also noted:

> ***"The access is not ideal in terms of general and the provision of pedestrians crossing it, however, the general layout is no worse than the existing situation."***

We would suggest that the current crescent shaped priority arrangements to the A52 offer considerably more space for drivers to execute their manoevures in and out of the site, by virtue of the separation between each end of the crescent arrangement.

In the quotation above, DCiC note that the general layout is *"no worse"* than the existing situation, however, we would contend that *"no worse"* is not adequate confirmation of the acceptability of the junction arrangements, given that using HE's own data (Annex B, Technical Note: Markeaton Traffic Signals Operation, September 2019) the proposals would increase the amount of traffic turning into the site, from the A52 by 100 vehicles in the AM peak hour and 99 in the PM peak, if all traffic which currently enters from the A38 diverts around the to A52 at the north side of the site. We consider that approximately 100 additional vehicles per hour entering the access at peak times represents a considerable intensification of a junction which DCiC consider is *"not ideal"* and the most positive terms they can use to describe it are *"no worse than the existing situation."*

It is noted that Aecom propose further discussion at the detailed design stage, however, any design changes are highly unlikely to alter McDonald's concern in respect of the safety of the A52 access and the potential consequential adverse effect upon the ability to trade from this site.

Rights of way

In respect of the stopping up of the ingress from the A38 there may be some adjustment of rights needed between the parties but the rights of McDonald's in this matter are fully reserved. Our client looks forward to receiving details from Aecom as to how this can be practically resolved to ensure the correct elements of land are in proper ownership to avoid any legal complications, in terms of rights of ownership, maintenance, etc.

Our client will be significantly inconvenienced if the proposals are to proceed, particularly as the closure of the A38 access would appear to be unavoidable at this stage, therefore, it is only reasonable that as part of the application and implementation process any highway or third party land which would (seemingly) end up within the McDonald's demise, should be offered to McDonald's at no cost or complication to them.

Advance Warning signage

It is noted that it is the preliminary view of Highways England that technically the site does not strictly conform to the requirements for advance warning signs, although many signed service area sites are not fully compliant. It is also noted that Aecom support the provision of advance warning signs and will continue to seek clearance from HE on this matter. The timescale for a decision is likely to go beyond the DCO process. We understand that Euro Garages have been asked to provide some additional details concerning the site at Braintree, Essex where signage was permitted in a similar situation. We will be liaising with both our client and Euro Garages on this matter as any signage proposals to the wider site will need to be agreed by both occupiers.

Closing

In closing, you will note that there are still areas which are of concern to our Client and whilst some matters may well be possible to resolve to all parties satisfaction; such as signage, car park strengthening and rights of way, our Client remains highly concerned about the proposed access from the A52 and the lack of viable solution offered to date to address their concerns.

As a result, our client maintains their objection to the scheme and the Statement of Common Ground remains unsigned.

Yours sincerely
for **ADL TRAFFIC AND HIGHWAYS ENGINEERING LIMITED**

[redacted]

ROB GREEN
ASSOCIATE DIRECTOR

Enc: JN1409 Conditions Report
4200226-1000 Proposed Finishes

Our Ref: CB/JK/JN1409

ST Consult
Environmental & Geotechnical

Twigden Barns, Brixworth Road
Creaton, Northamptonshire NN6 8LU

t 01604 500020 f 01604 500021
e info@stconsult.co.uk w stconsult.co.uk

ST Consult is a regional office of Southern Testing Laboratories Ltd
Regional Director Dr J Kelly BSc PhD DIC

6th March 2020

Conlon Construction Limited
20 Great Northern Way
Netherfield
Nottingham
NG4 2HD

For the attention of Mr Patrick Conlon

Dear Patrick,

Re: CBR Investigation at McDonalds Derby, off Kingsway (A38), Derby, Derbyshire (nearest postcode - DE22 4AA)
National Grid Reference: SK 333 369 (433372e, 336943n)
Geology: Gunthorpe Member of the Sidmouth Mudstone Formation [Mercia Mudstone Group]

Introduction and Scope

Our authority for carrying out this work was given by Mr Patrick Conlon of Conlon Construction Limited on the 17th February 2020. Further to our attendance at the above site, on the 25th February 2020, please find herewith our Dynamic Cone Penetrometer CBR test results, site plan and comments.

Four locations were requested by the client, as per the plan attached. The tests were undertaken from below the tarmacadam surface, in material comprising sub-base overlying reworked sub-grades or Made Ground material.

A desk study, wider geotechnical or any contamination assessment was outside the requested scope of works.

As with any site there may be differences in soil conditions between exploratory hole positions

1 Dynamic Cone Penetrometer (DCP) CBR Test

The CBR value is the result of an empirical test on soil that can be used for road design purposes. In the field the definitive test requires the use of a reaction load, usually a four-wheel drive vehicle, excavating plant, a CBR jack, and load measuring equipment.

The dynamic cone CBR test employs light portable equipment and is used to provide a continuous record of the penetration resistance of each layer in the ground for a depth of a metre from the surface. The penetration resistance provides a measure from which CBR values may be calculated using formulae published by the Transport Research Laboratory.

In the test a 22 mm diameter 60º cone is driven into the ground to a depth of up to one metre by a 9 kg weight, freely falling over 600 mm. The number of blows is recorded for each successive 50mm penetration increment.

A plot of the cumulative number of blows versus depth penetrated is drawn. This plot usually takes the form of a series of straight lines, the slopes of which are measured and expressed as

penetration in mm per blow. Several authors have prepared relationships between the DCP readings and the CBR and it is the practice of this laboratory to adopt the lower of two values derived from formulae established by Kleyn & Van Heerden, and by the TRL.

$$CBR = 10^{(2.632 - 1.28\text{Log}_{10}(mm/blow))} \quad \text{(K\&VH)}[1]$$

$$CBR = 10^{(2.48 - 1.057\text{Log}_{10}(mm/blow))} \quad \text{(TRL)}[2]$$

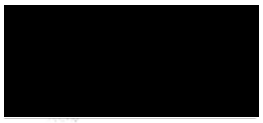
The test is an adaptation of the Perth Penetrometer Test developed for the granular soils in Perth West Australia in the 1960s, and in the UK by this laboratory since 1973. It is similar to the Victoria Country Roads Board Penetrometer, the Transvaal Road Department Penetrometer, and the TRL dynamic cone penetrometer. It has been used for the determination of CBR values, after calibration for the local soil, and for compaction comparisons. In UK conditions it has been found to give consistent results for granular soils. It has the advantage that, as it can be driven through bituminous surfacings, granular road base, sub base and hardcore, the strength and thickness of each layer can be estimated.

2 Results/Comments

The logs and probes appended appear to indicate 70-150mm of tarmacadam underlain by a roadstone (limestone) sub-grade, down to a maximum depth of 300-550mm from surface. The sub-grades (proven at CBR2 and CBR4) appear to be reworked, locally derived clays, with CBR's of around 3%+. Prudent design should, however, consider more conservative CBR values (2%) given the deep, crudely engineered Made Ground materials encountered at CBR1 and CBR4.

Should you have any further queries, please do not hesitate to contact us.

Yours faithfully



Chris Beech BSc MSc FGS
For and on behalf of
Southern Testing Laboratories Limited
DDI: 01604 500027
Email: cbeech@stconsult.co.uk

Notes:

This report presents our probe results only. As with any site there may be differences in soil conditions between exploratory hole positions.

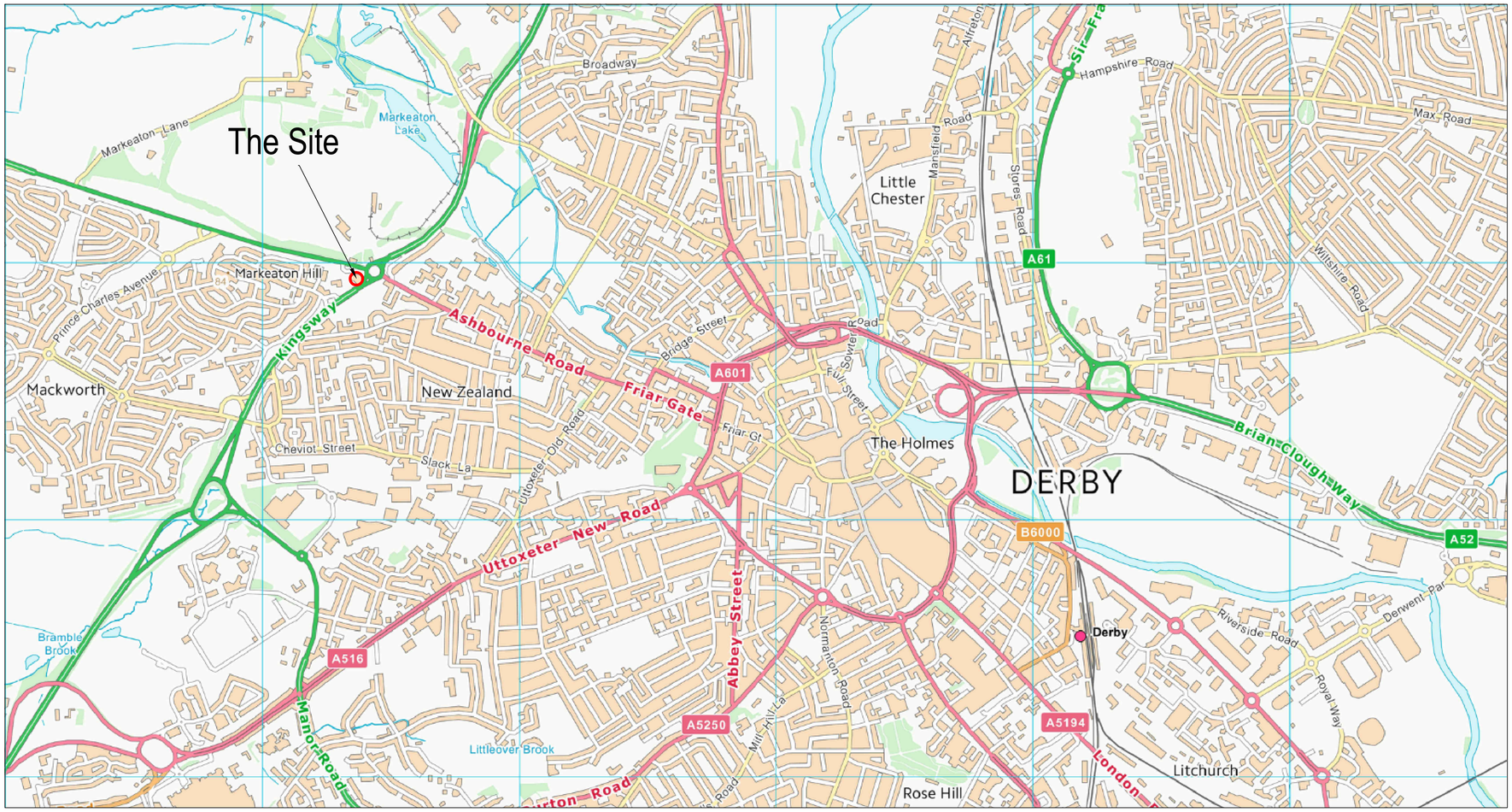
This report is not an engineering design and the figures and calculations contained in the report should be used by the Engineer, taking note that variations will apply, according to variations in design loading, in techniques used, and in site conditions. Our figures therefore should not supersede the Engineer's design.

The site investigation was conducted and this report has been prepared for the sole internal use and reliance of Conlon Construction Limited and their appointed Engineers. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Southern Testing Laboratories Limited. If an unauthorised third party comes into possession of this report they rely on it at their peril and the authors owe them no duty of care and skill.

[1] Kleyn & Van Heerden
[2] TRL

Figure 1 - Site Location Plan

North



General Notes

No.	Revision/Issue	Date

Firm Name and Address

ST Consult
Environmental & Geotechnical

Twigden Barns
Brixworth Road
Creaton
Northampton
NN6 8NN

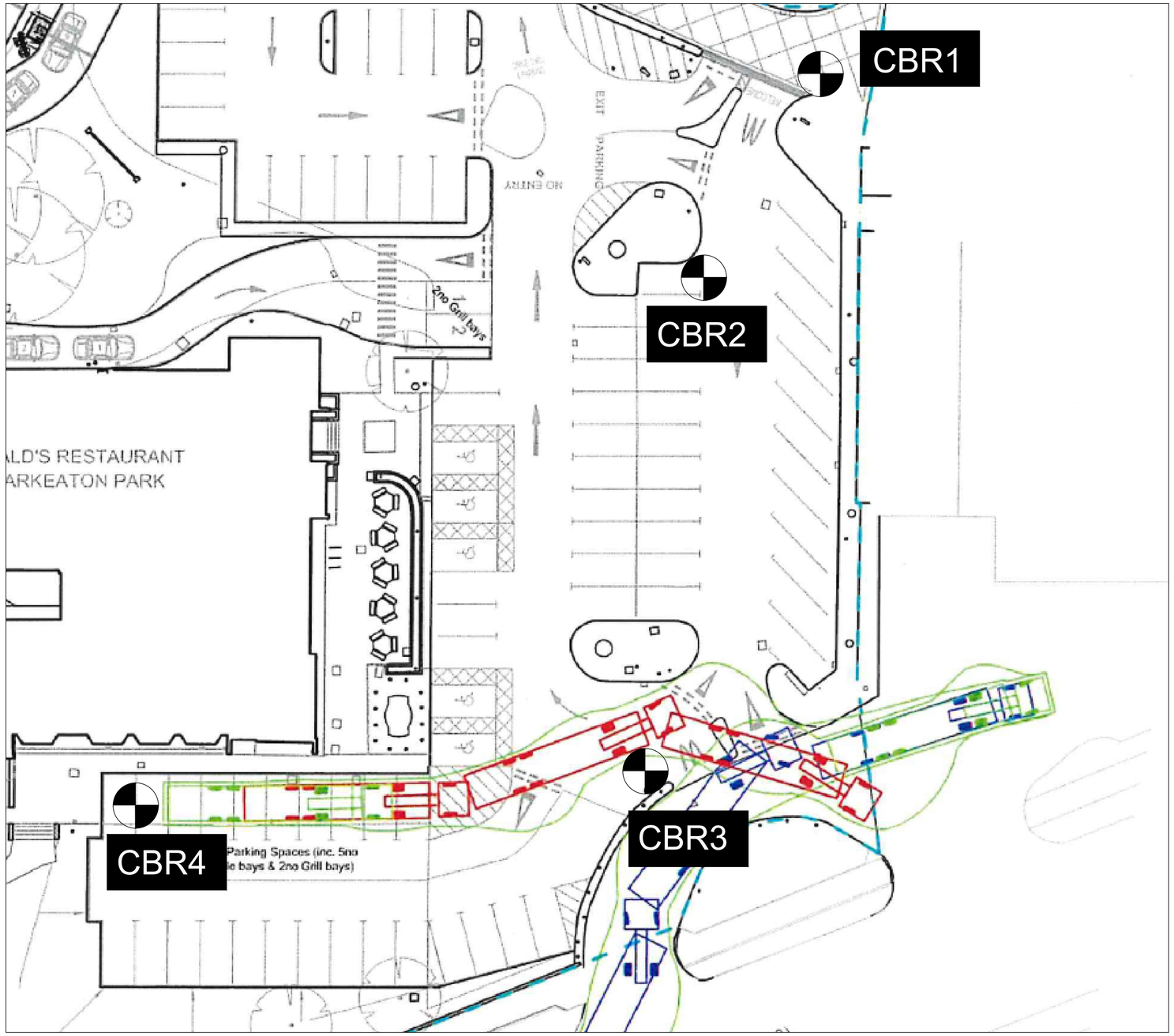
Project Name and Address

McDonalds Derby
A38 Kingsway
Derby
Derbyshire DE22 4AA

Project	Sheet
JN1409	1/1
Date: 05/03/20	
Scale: Not to scale	

Figure 2 – Exploratory Hole Location Plan

North



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A38 Kingsway
Derby
Derbyshire DE22 4AA

Project	Sheet
JN1409	1/1
Date: 05/03/20	
Scale: Not to scale	

Appendix A

Southern Testing ST Consult	Start - End Date:	Project ID:	Machine Type:	CBR1
www.southerntesting.co.uk tel:01342 333100 www.stconsult.co.uk tel:01604 500020	25/02/2020	JN1409	Hand Tools	Sheet 1 of 1

Project Name:	McDonalds, Derby	Remarks:	Co-ordinates:	Level (m AOD):	Logger:
			E 433298 - N 336904		CJB
Location:	Markeaton, Derby Derbyshire	1) National Grid Reference inferred from Ordnance Survey Mapping. 2) Elevation not stated. 3) CBR DCP Perth probe testing undertaken. 4) Groundwater not encountered. 5) Materials backfilled upon completion and tarmacadam reinstated.			
Client:	Conlon Construction Limited				

Samples and Insitu Testing			Level (m AOD)	Thickness (m)	Legend	Depth (m bgl)	Stratum Description
Depth (m)	Type	Results					
				(0.12)		0.12	HARDSTANDING consisting of: Tarmacadam.
				(0.23)		0.35	SUBBASE consisting of: medium dense becoming dense, whitish grey, slightly sandy GRAVEL. Gravels consist of subrounded to angular, medium to coarse roadstone.
0.50	HP	UCS(kPa)=85		(0.35)		0.70	MADE GROUND consisting of soft, dark blackish grey, very sandy, gravelly CLAY. Gravels consist of subrounded to subangular, fine to coarse, roadstone, brick, flint and angular-tabular, fine ceramic fragments.
							Pit terminated at 0.70m.

Pit Dimension (m)		Pit Stability:	Water Strikes:
Width:		Stable.	
Length:			
Depth:			

Southern Testing ST Consult	Start - End Date:	Project ID:	Machine Type:	CBR2
www.southerntesting.co.uk tel:01342 333100 www.stconsult.co.uk tel:01604 500020	25/02/2020	JN1409	Hand Tools	Sheet 1 of 1

Project Name:	McDonalds, Derby	**Remarks:**	**Co-ordinates:**	**Level (m AOD):** / **Logger:**
			E 433339 - N 336914	CJB
Location:	Markeaton, Derby Derbyshire	1) National Grid Reference inferred from Ordnance Survey Mapping. 2) Elevation not stated. 3) CBR DCP Perth probe testing undertaken. 4) Groundwater not encountered. 5) Materials backfilled upon completion and tarmacadam reinstated.		
Client:	Conlon Construction Limited			

Samples and Insitu Testing			Level (m AOD)	Thickness (m)	Legend	Depth (m bgl)	Stratum Description
Depth (m)	Type	Results					
				(0.08)		0.08	HARDSTANDING consisting of: Tarmacadam.
				(0.02)		0.10	SUBBASE consisting of: dense, whitish grey, slightly sandy GRAVEL. Gravels consist of subrounded to angular, medium to coarse roadstone.
				(0.25)		0.35	SUBBASE consisting of: dense, light greyish brown, slightly silty, slightly cobbly, gravelly fine to coarse SAND. Gravels consist of subrounded to angular, medium to coarse roadstone, red brick and road planings.
				(0.15)		0.50	SUBBASE consisting of: dense, black, gravelly fine to coarse SAND. Gravels consist of angular, fine road planings.
				(0.10)		0.60	SUBGRADE consisting of: medium dense, light grey, very silty, clayey fine SAND.
							Pit terminated at 0.60m.

Pit Dimension (m)		Pit Stability:	Water Strikes:
Width:		Stable.	
Length:			
Depth:			

Southern Testing ST Consult

www.southerntesting.co.uk tel:01342 333100 www.stconsult.co.uk tel:01604 500020

Start - End Date:	Project ID:	Machine Type:	CBR3
25/02/2020	JN1409	Hand Tools	Sheet 1 of 1

Project Name:	McDonalds, Derby	Remarks:	Co-ordinates:	Level (m AOD):	Logger:
			E 433327 - N 336952		CJB
Location:	Markeaton, Derby Derbyshire	1) National Grid Reference inferred from Ordnance Survey Mapping. 2) Elevation not stated. 3) CBR DCP Perth probe testing undertaken. 4) Groundwater encountered at 0.5m bGL as slow seepage. 5) Materials backfilled upon completion and tarmacadam reinstated.			
Client:	Conlon Construction Limited				

Samples and Insitu Testing			Level (m AOD)	Thickness (m)	Legend	Depth (m bgl)	Stratum Description
Depth (m)	Type	Results					
				(0.07)		0.07	HARDSTANDING consisting of: Tarmacadam.
				(0.23)			SUBBASE consisting of: medium dense becoming dense, whitish grey, slightly sandy GRAVEL. Gravels consist of subrounded to angular, medium to coarse roadstone.
				(0.30)		0.30	MADE GROUND consisting of: medium dense, dark grey, slightly clayey, slightly sandy GRAVEL. Gravels consist of subangular to angular, fine to coarse roadstone, red brick fragments. at 0.4m bGL occasional fine to medium gravel sized plastic fragments encountered. at 0.5m bGL groundwater encountered as a slow seepage.
						0.60	Pit terminated at 0.60m.

Pit Dimension (m)		Pit Stability:	Water Strikes:
Width:		Stable.	
Length:			
Depth:			

Southern Testing ST Consult	Start - End Date:	Project ID:	Machine Type:	CBR4
www.southerntesting.co.uk tel:01342 333100 www.stconsult.co.uk tel:01604 500020	25/02/2020	JN1409	Hand Tools	Sheet 1 of 1

Project Name:	McDonalds, Derby	Remarks:	Co-ordinates:	Level (m AOD):	Logger:
			E 433344 - N 336966		CJB
Location:	Markeaton, Derby Derbyshire	1) National Grid Reference inferred from Ordnance Survey Mapping. 2) Elevation not stated. 3) CBR DCP Perth probe testing undertaken. 4) Groundwater not encountered. 5) Materials backfilled upon completion and tarmacadam reinstated.			
Client:	Conlon Construction Limited				

Samples and Insitu Testing			Level (m AOD)	Thickness (m)	Legend	Depth (m bgl)	Stratum Description
Depth (m)	Type	Results					
				(0.15)		0.15	HARDSTANDING consisting of: Tarmacadam.
				(0.40)		0.55	SUBBASE consisting of: medium dense becoming dense, light grey, slightly clayey, gravelly medium to coarse SAND. Gravels consist of subangular to angular, fine to medium roadstone.
0.60	HP	UCS(kPa)=120		(0.15)		0.70	SUBGRADE consisting of: firm, reddish grey, sandy, gravelly CLAY. Gravels consist of angular and angular-tabular, fine mudstone
							Pit terminated at 0.70m.

Pit Dimension (m)		Pit Stability:	Water Strikes:
Width:		Stable.	
Length:			
Depth:			

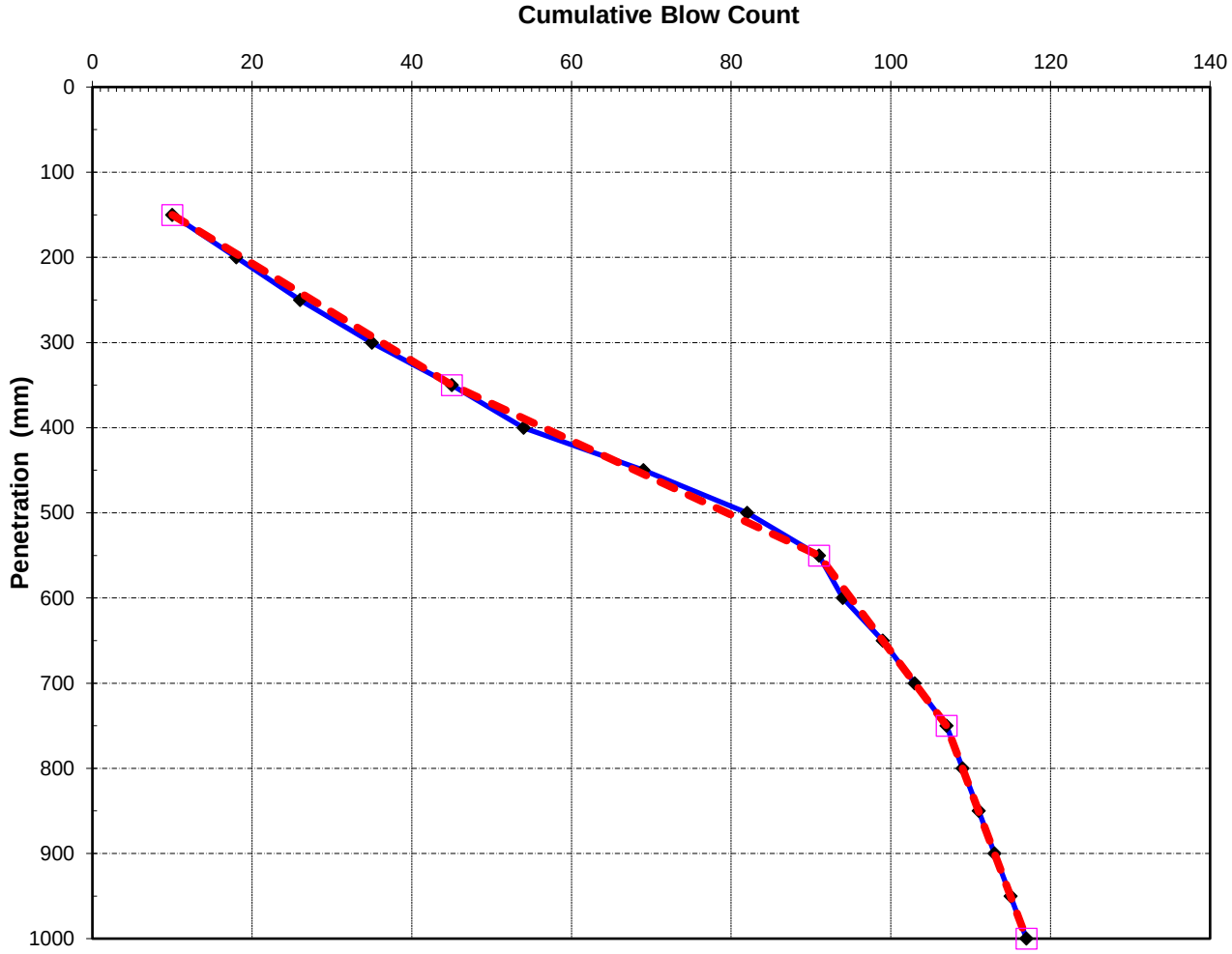
Appendix B

Dynamic Cone Penetrometer (DCP) Test Results

Test No: CBR1

Chainage:		Tested By:	CJB
Start Layer:		Checked By:	ADM
Soil Condition:		Test Date:	27-Feb-20
Notes:			

Perth Cone CBR Penetration *vs* Cumulative Blow Count



Evaluated CBR Values from DCP Test Results

Layer No	From *(mm)*	To *(mm)*	Depth *(mm)*	Blow Count	No. of Blows	DCP *mm/blow*	CBR *%*	Soil Type	Remarks
1	150	350	200	45	35	5.7	46		
2	350	550	200	91	46	4.3	64		
3	550	750	200	107	16	12.5	17		
4	750	1000	250	117	10	25.0	7.0		

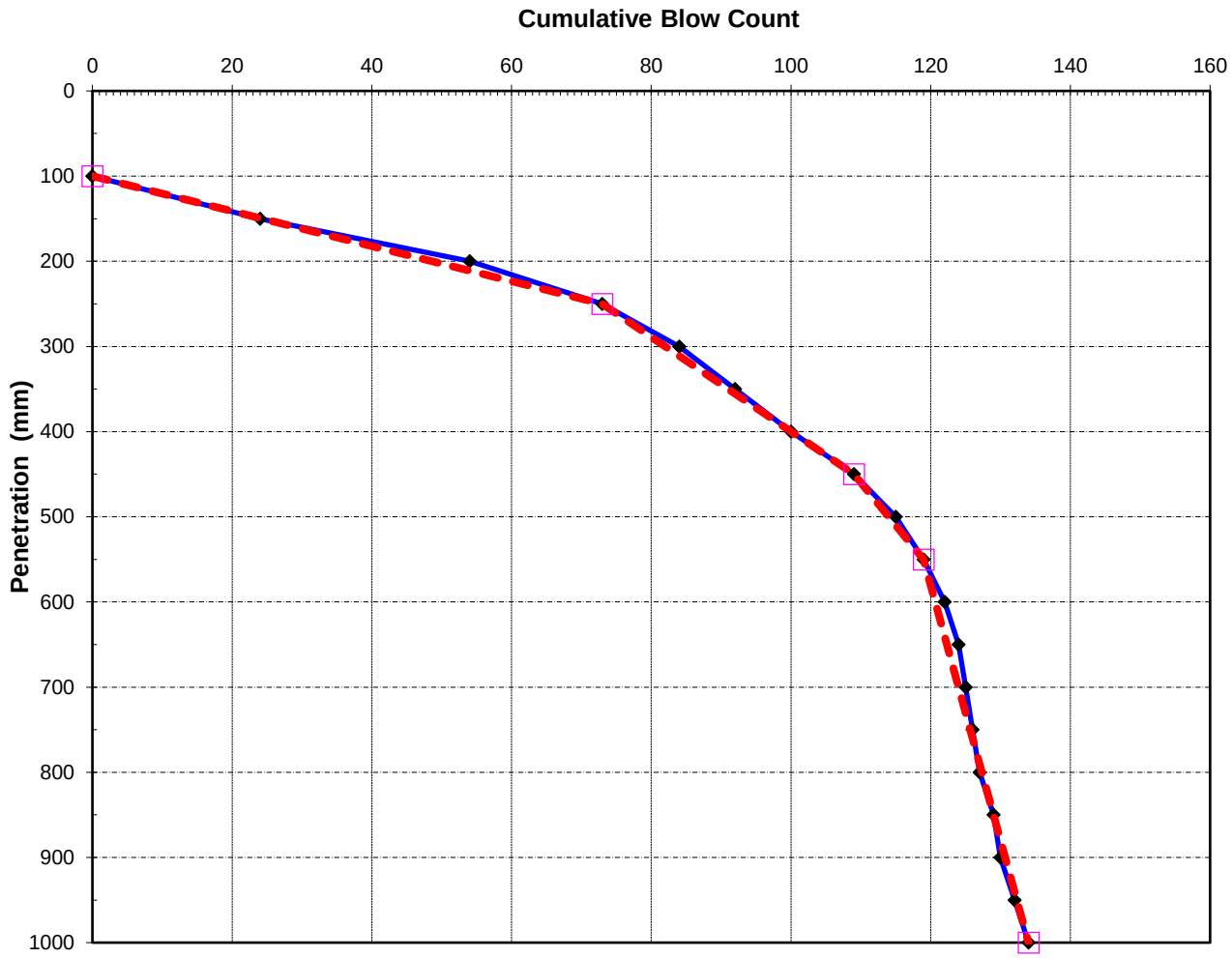
Client:	**Conlon Construction (Nottingham) Ltd**	**Job No:** JN1409	
Site:	**McDonalds, Markeaton Park, Derby**	**Date:**	**Fig.**

Dynamic Cone Penetrometer (DCP) Test Results

Test No: CBR2

Chainage:		Tested By:	CJB
Start Layer:		Checked By:	ADM
Soil Condition:		Test Date:	27-Feb-20
Notes:			

Perth Cone CBR Penetration *vs* Cumulative Blow Count



Evaluated CBR Values from DCP Test Results

Layer No	From *(mm)*	To *(mm)*	Depth *(mm)*	Blow Count	No. of Blows	DCP *mm/blow*	CBR *%*	Soil Type	Remarks
1	100	250	150	73	73	2.1	141		
2	250	450	200	109	36	5.6	48		
3	450	550	100	119	10	10.0	22		
4	550	1000	450	134	15	30.0	5.5		

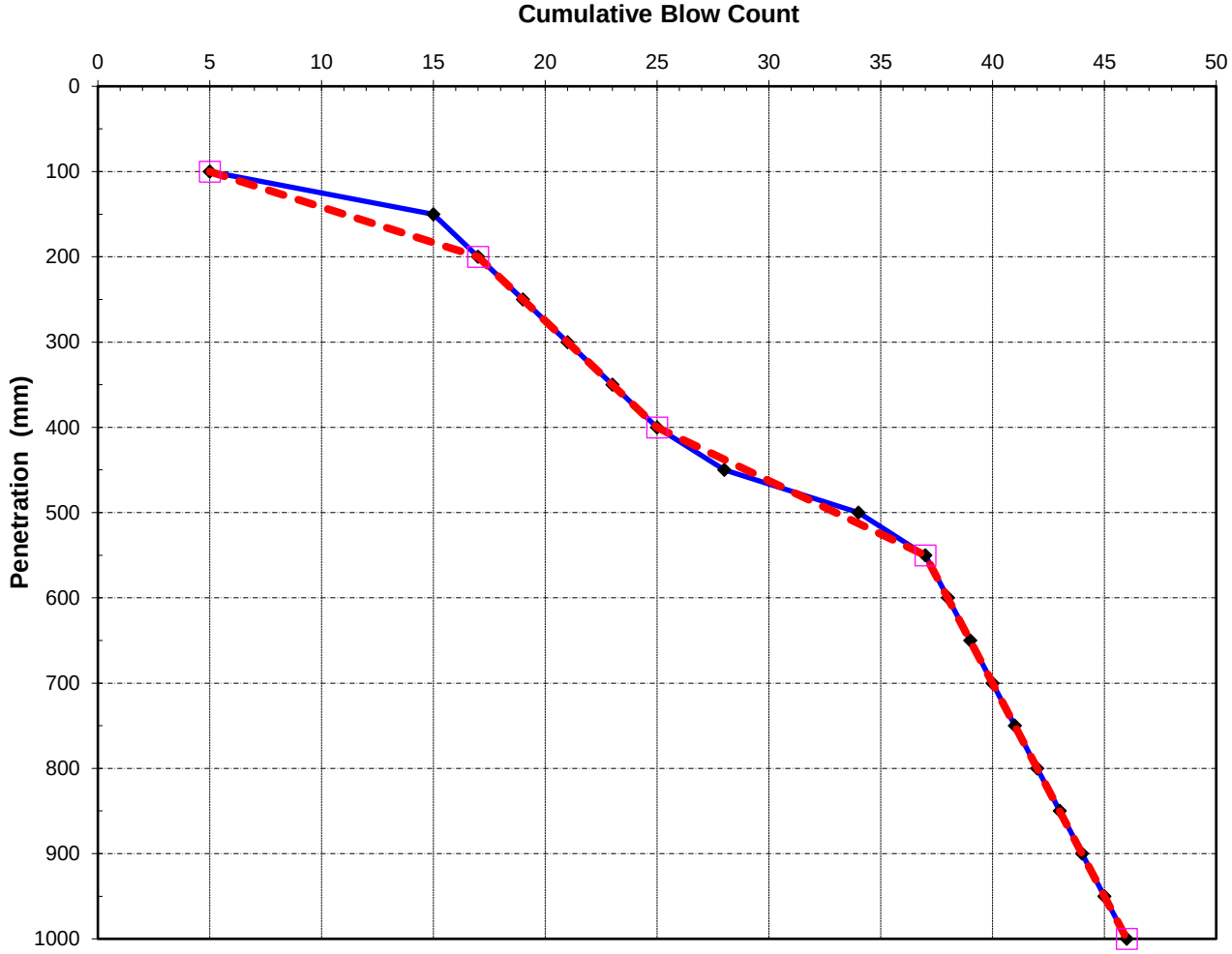
Client:	**Conlon Construction (Nottingham) Ltd**	**Job No:** JN1409	
Site:	**McDonalds, Markeaton Park, Derby**	**Date:**	**Fig.**

Dynamic Cone Penetrometer (DCP) Test Results

Test No: CBR3

Chainage:		Tested By:	CJB
Start Layer:		Checked By:	ADM
Soil Condition:		Test Date:	27-Feb-20
Notes:			

Perth Cone CBR Penetration *vs* Cumulative Blow Count



Evaluated CBR Values from DCP Test Results

Layer No	From *(mm)*	To *(mm)*	Depth *(mm)*	Blow Count	No. of Blows	DCP *mm/blow*	CBR *%*	Soil Type	Remarks
1	100	200	100	17	12	8.3	28		
2	200	400	200	25	8	25.0	7.0		
3	400	550	150	37	12	12.5	17		
4	550	1000	450	46	9	50.0	2.9		

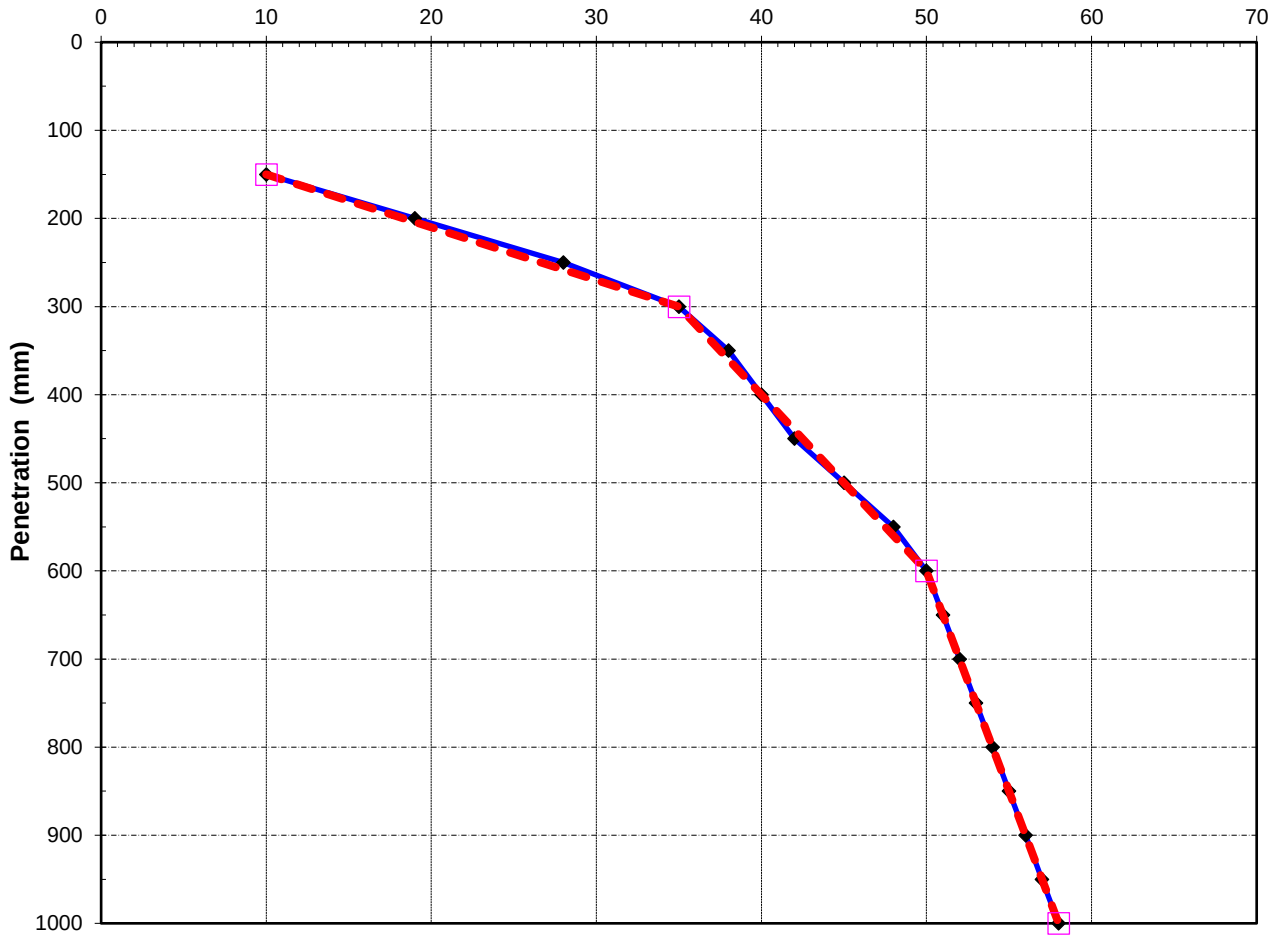
Client:	**Conlon Construction (Nottingham) Ltd**	**Job No:** JN1409	
Site:	**McDonalds, Markeaton Park, Derby**	**Date:**	**Fig.**

Dynamic Cone Penetrometer (DCP) Test Results

Test No: CBR4

Chainage:		Tested By:	CJB
Start Layer:		Checked By:	ADM
Soil Condition:		Test Date:	27-Feb-20
Notes:			

Perth Cone CBR Penetration *vs* Cumulative Blow Count



Evaluated CBR Values from DCP Test Results

Layer No	From *(mm)*	To *(mm)*	Depth *(mm)*	Blow Count	No. of Blows	DCP *mm/blow*	CBR *%*	Soil Type	Remarks
1	150	300	150	35	25	6.0	43		
2	300	600	300	50	15	20.0	9.3		
3	600	1000	400	58	8	50.0	2.9		

Client:	**Conlon Construction (Nottingham) Ltd**	**Job No:** JN1409	
Site:	**McDonalds, Markeaton Park, Derby**	**Date:**	**Fig.**

FULL DEPTH BITUMINOUS CONSTRUCTION

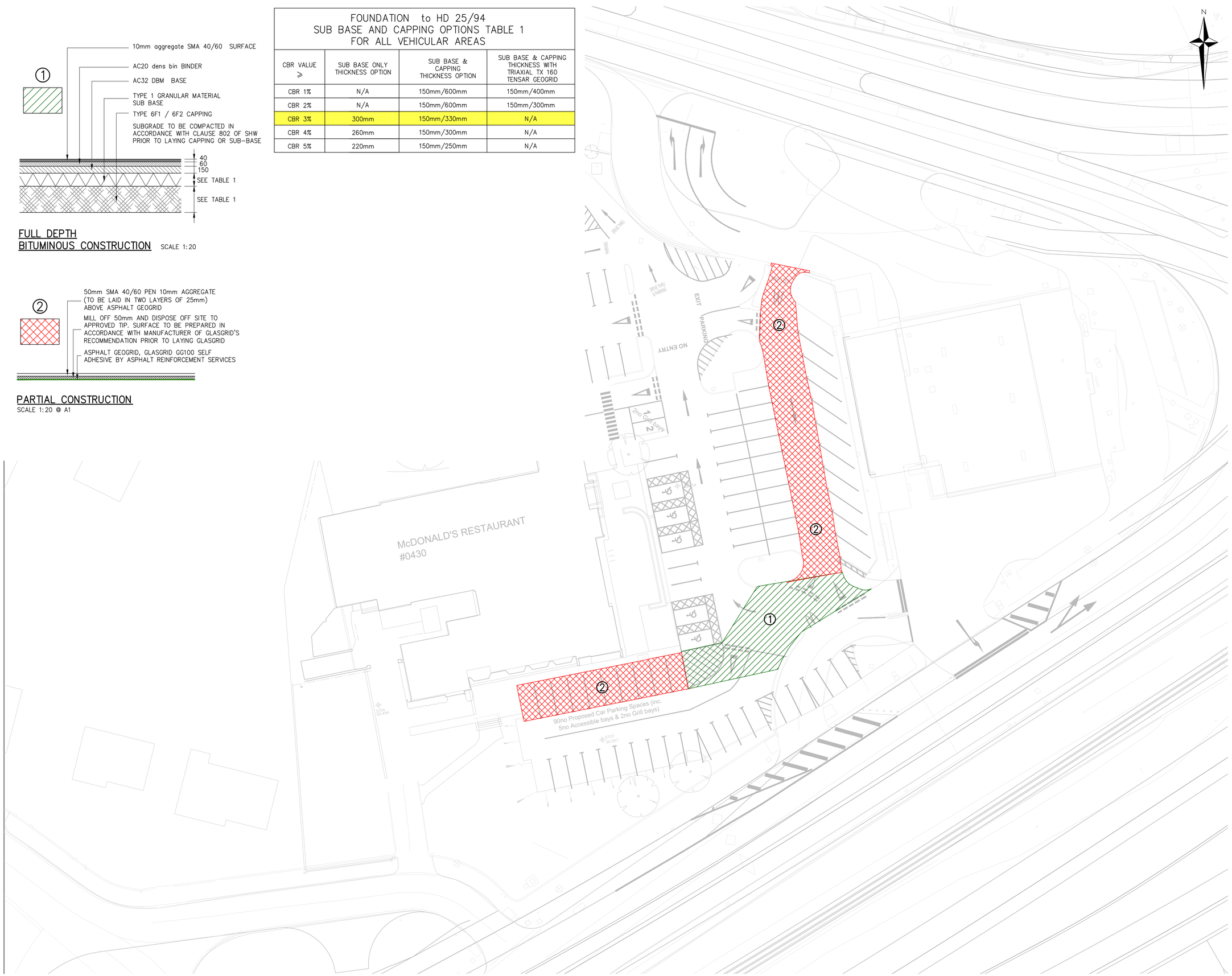
SCALE 1:20

PARTIAL CONSTRUCTION

SCALE 1:20 @ A1

FOUNDATION to HD 25/94 SUB BASE AND CAPPING OPTIONS TABLE 1 FOR ALL VEHICULAR AREAS

CBR VALUE ≥	SUB BASE ONLY THICKNESS OPTION	SUB BASE & CAPPING THICKNESS OPTION	SUB BASE & CAPPING THICKNESS WITH TRIAXIAL TX 160 TENSAR GEOGRID
CBR 1%	N/A	150mm/600mm	150mm/400mm
CBR 2%	N/A	150mm/600mm	150mm/300mm
CBR 3%	300mm	150mm/330mm	N/A
CBR 4%	260mm	150mm/300mm	N/A
CBR 5%	220mm	150mm/250mm	N/A



NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS, DOCUMENTS AND SPECIFICATIONS. ANY DISCREPANCIES BETWEEN INFORMATION SHOWN ON THIS AND ANY OTHER DRAWING SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
2. DO NOT SCALE FROM THIS DRAWING. WORK TO FIGURED DIMENSIONS ONLY.
3. THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS SPECIFICALLY STATED AS 'FOR CONSTRUCTION' IN THE DRAWING STATUS.
4. ALL DRAWING INFORMATION MUST BE READ FROM HARD COPY / PDF FILES ONLY, MARKED CHECKED. BEFORE PROCEEDING PLEASE ENSURE THE ISSUE STATUS IS APPROPRIATE FOR THE INTENDED USE. ALL INFORMATION EXTRACTED DIRECTLY FROM DRAWING FILES (E.G. DWG'S) IS DONE SO ENTIRELY AT THE USERS RISK.
5. PROPOSED FINISHES ARE BASED ON THE OUTCOME OF THE SITE INVESTIGATION CARRIED OUT BY ST CONSULTANT, REPORT REFERENCE CB/JK/JN1409.

Rev.	Description	Date	Chkd
P1	FIRST ISSUE	26/03/20	SP

Glanville
3 Grovelands Business Centre
Boundary Way
Hemel Hempstead, Herts. HP2 7TE
Tel: (01442) 835999 Fax: (01442) 258924
postbox@glanvillegroup.com
www.glanvillegroup.com

Client : McDonald's RESTAURANT

Project : McDONALD'S RESTAURANT MARKEATON, DERBY (ST1409)

Title : PROPOSED FINISHES

Project Engineer :	SP	Scale :	1:250 @ A1
Project Director :	HBG	Date :	APRIL 20202
Status :	PRELIMINARY		

Drawing No. 4200226-1000 Rev. P1