

SOIL TYPE	PLASTICITY INDEX	DESIGN CBR %
PLASTIC CLAY	GREATER THAN 50	LESS THAN 2
SILTY CLAY	40	3
SANDY CLAY	30	3
SANDY CLAY	20	LESS THAN 2
SILT	10	LESS THAN 2
POORLY GRADED SAND	-	7* (20)
WELL GRADED SAND	-	10* (40)
WELL GRADED SANDY GRAVEL	-	15* (60)
MADE GROUND	-	<2% **
ENGINEERED FILL	-	MINIMUM 2% ***

450mm THICKNESS REQUIRED ON ALL SUB-GRADES. PLASTICITY INDEX OF MATERIAL MUST BE DETERMINED AS THIS MAY OVERRIDE CBR RESULTS TO DICTATE CONSTRUCTION DEPTH.

ONCE RESULTS HAVE BEEN OBTAINED, FINAL CONSTRUCTION MAKEUP TO BE AGREED WITH KCC ENGINEER

CBR VALUE	SUB-BASE THICKNESS	CAPPING LAYER THICKNESS
< 2.0%	150 mm	600 mm
2.0% - 3.0%	480 mm	NIL
3.0% - 5.0%	370 mm	NIL
5.0% - 10.0%	270 mm	NIL
10.0% - 15.0%	220 mm	NIL
> 15%	150mm	NIL

SUB-BASE SHALL BE CATEGORY A MATERIAL IN ACCORDANCE WITH CLAUSE 803 OF THE SPECIFICATION FOR HIGHWAY WORKS AND BS-EN 13265

WHERE SUB-GRADE IS FROST SUSCEPTIBLE THE FOUNDATION SHALL BE INCREASED AS NECESSARY TO ACHIEVE A TOTAL CONSTRUCTION DEPTH OF AT LEAST 450mm

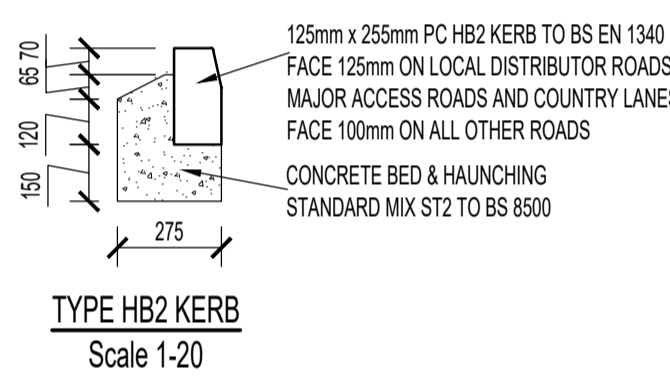
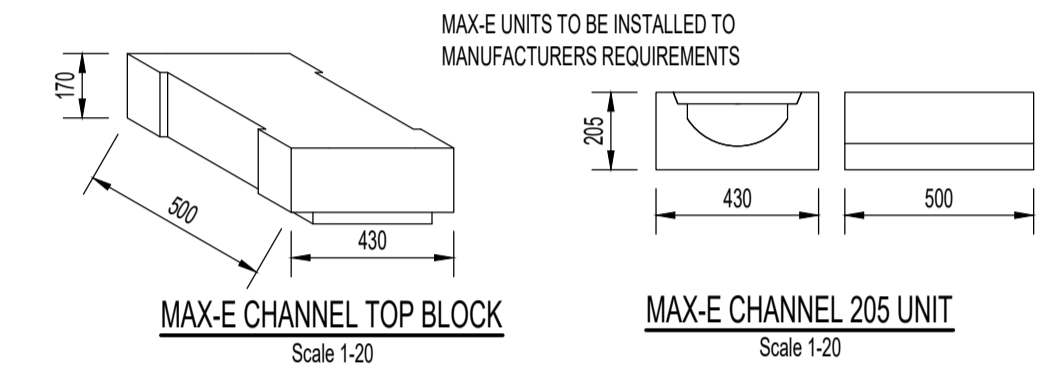
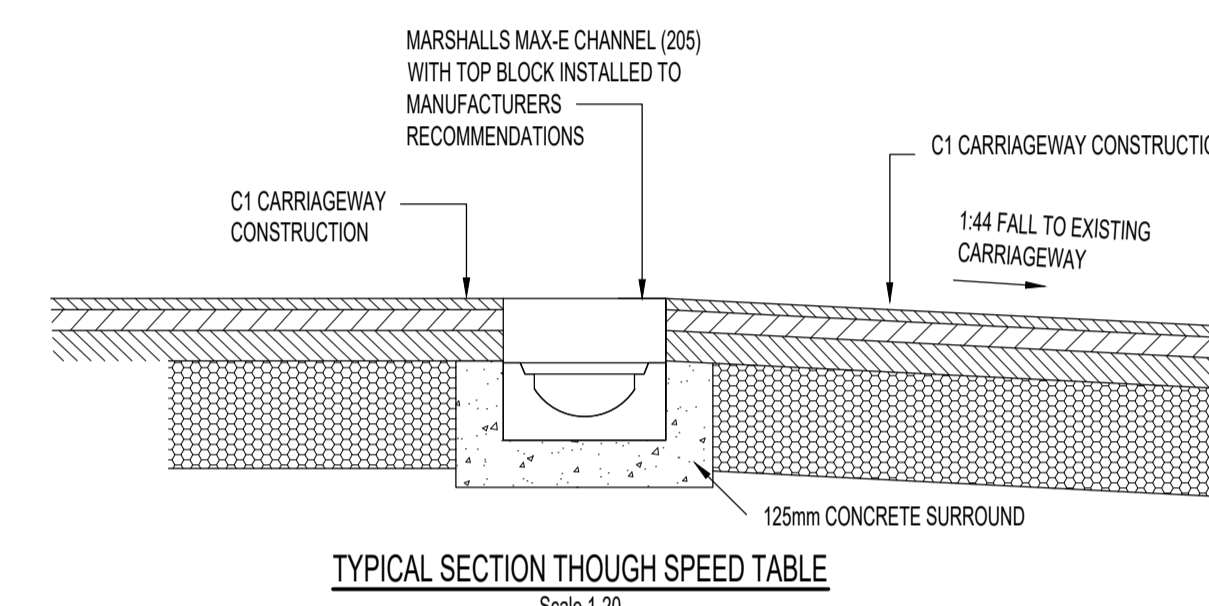
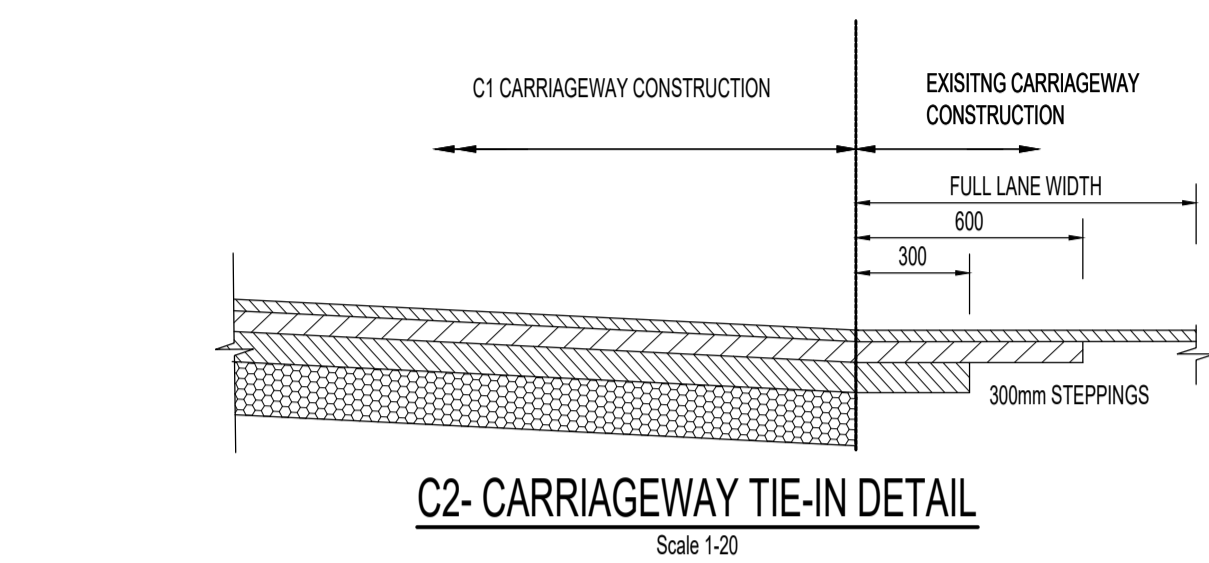
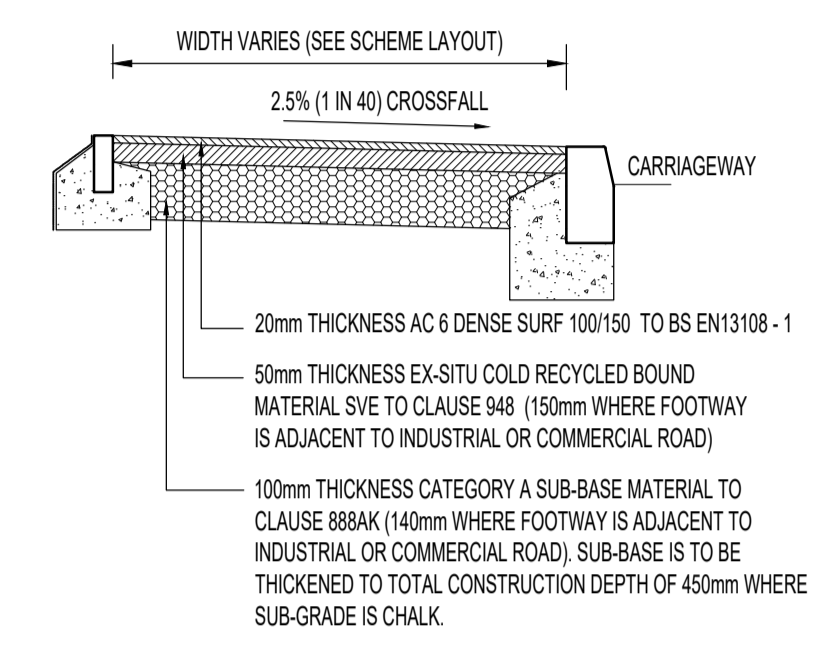
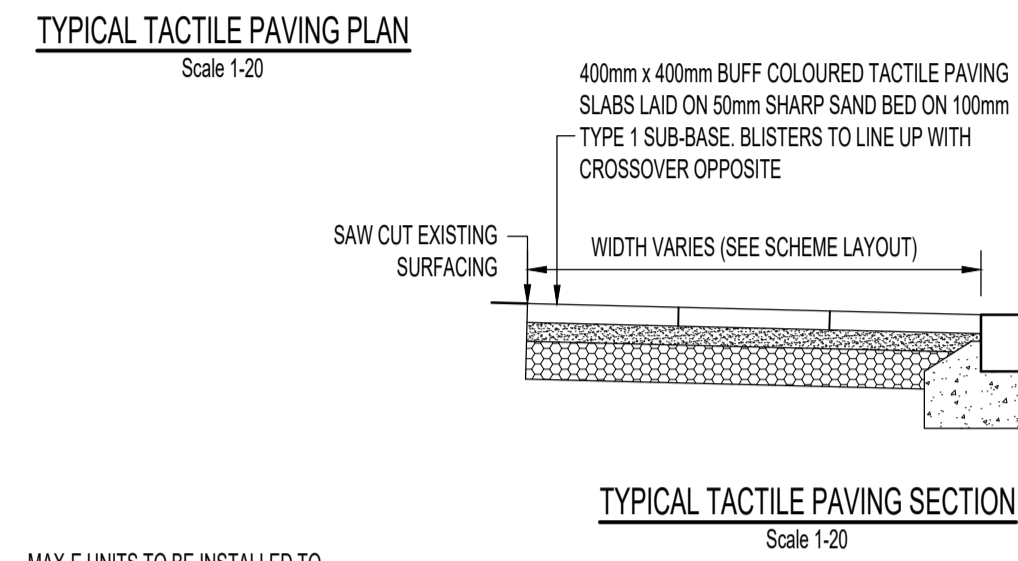
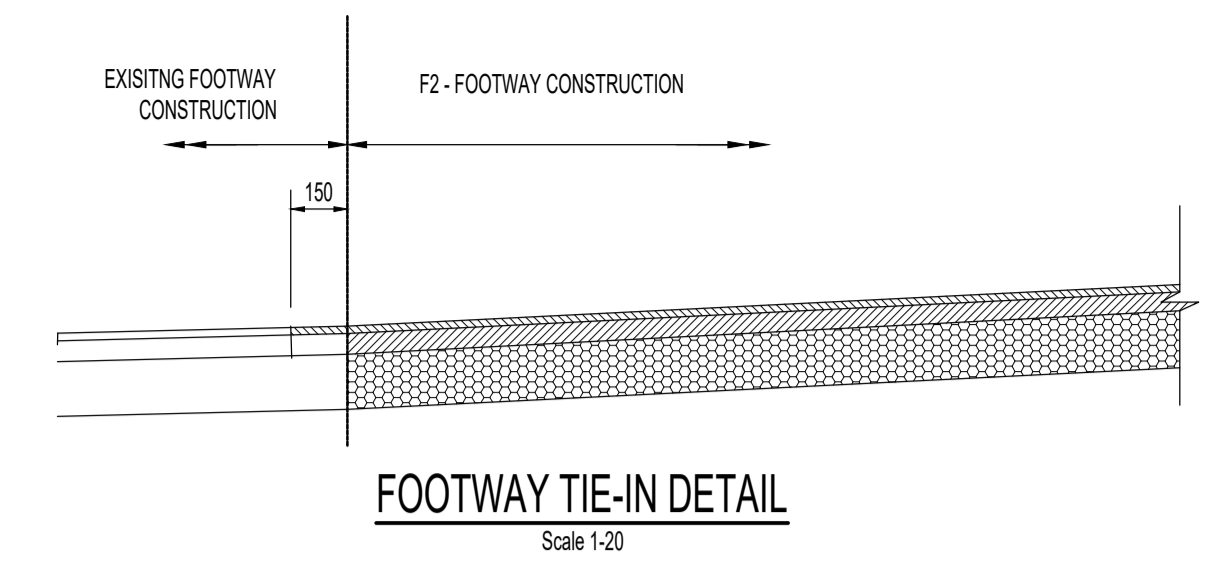
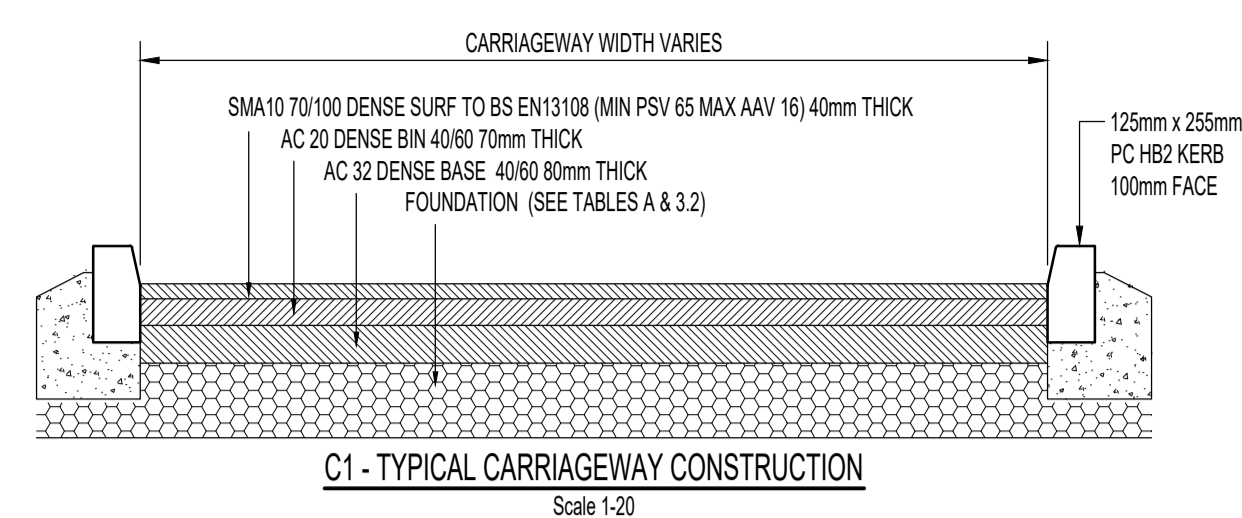
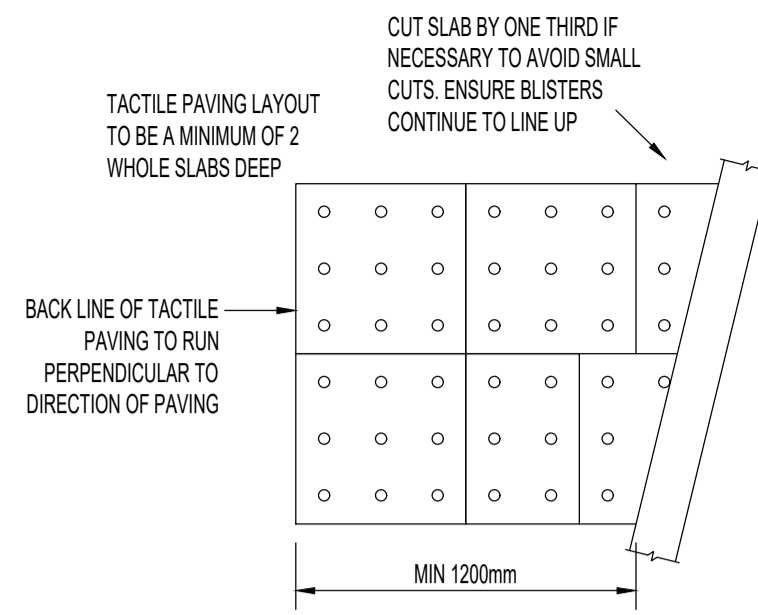
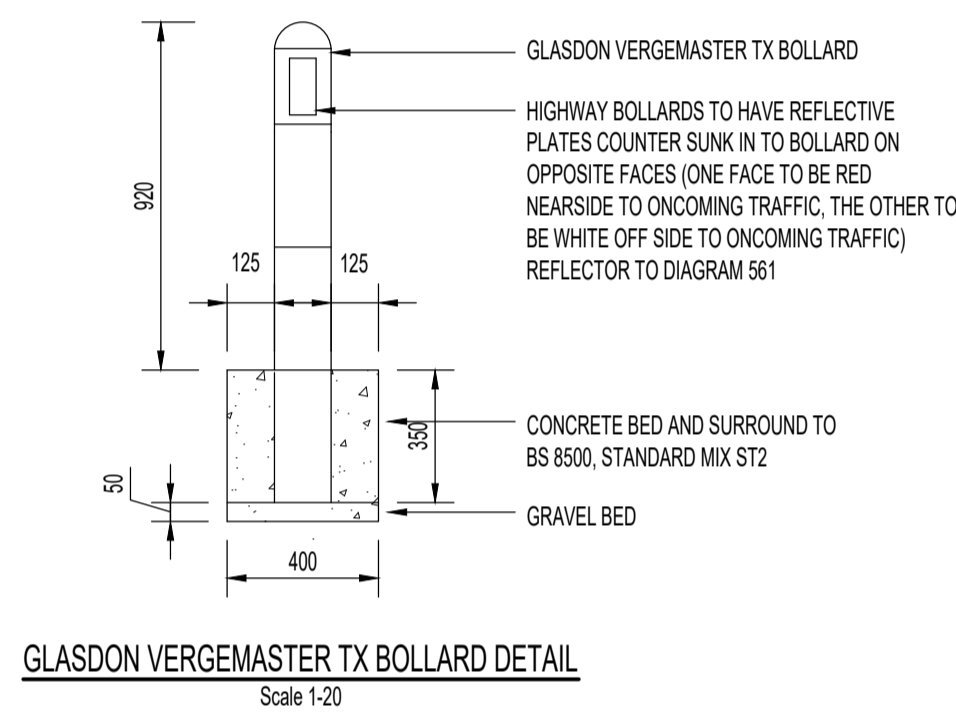
WHERE CBR IS 3% OR LESS A NON WOVEN GEOTEXTILE EARTHWORKS SEPARATION LAYER (TERRAM 1000 OR SIMILAR) SHALL BE INTRODUCED BENEATH THE FOUNDATION

TABLE A - FOUNDATION DESIGN MAJOR ACCESS ROAD/ COUNTRY LANE

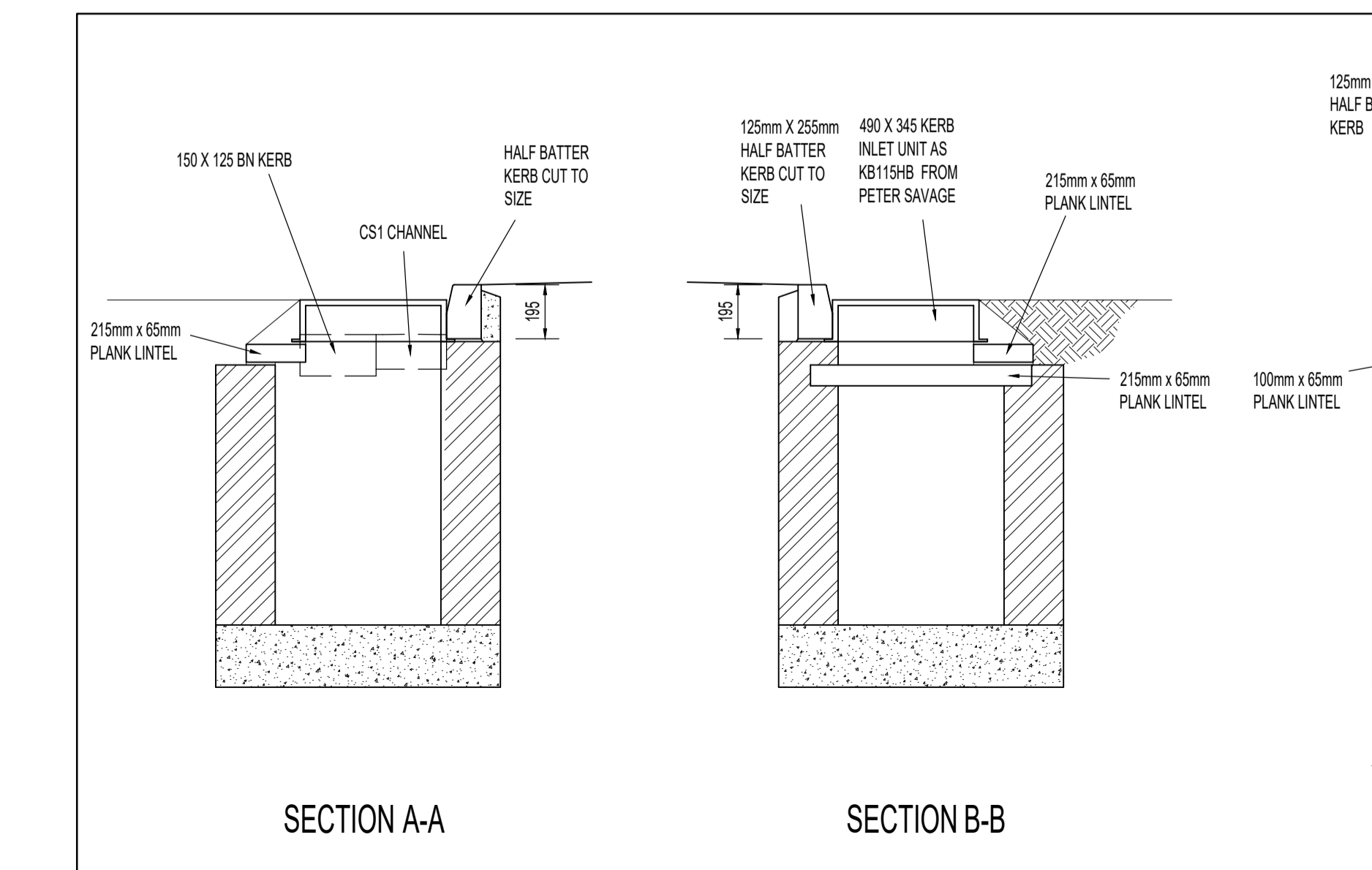
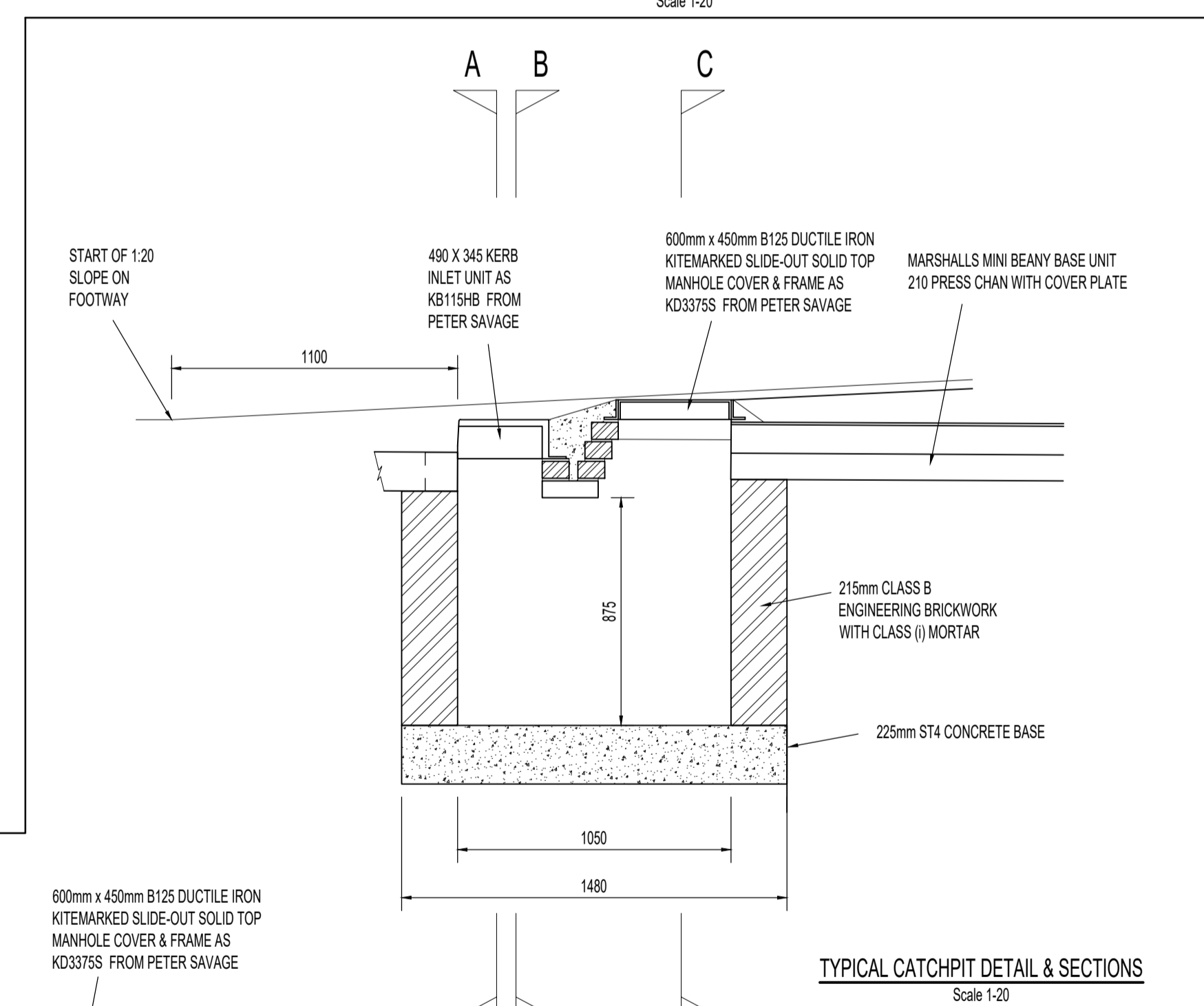
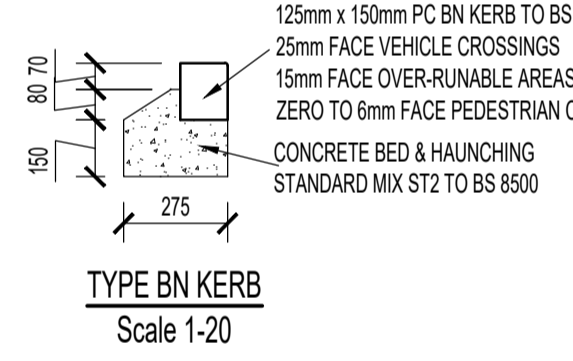
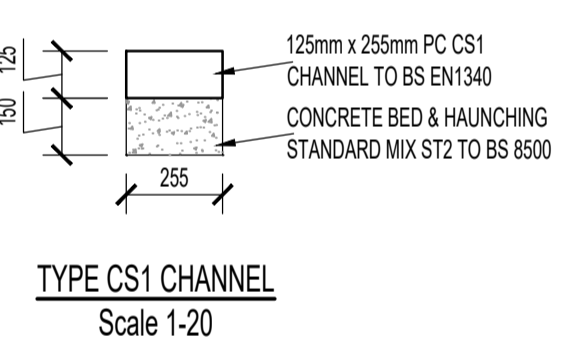
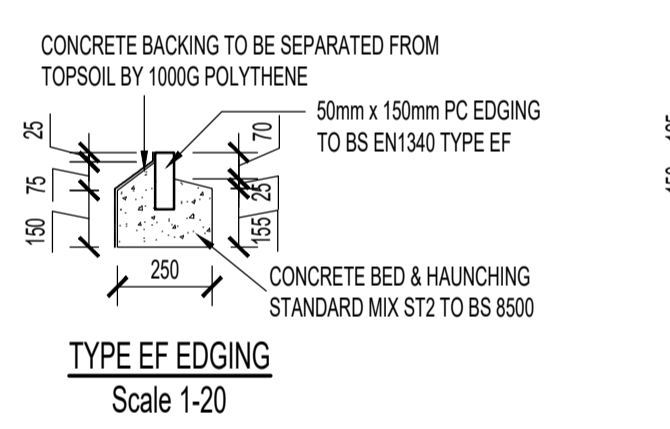
TABLE 3.2 - EQUILIBRIUM CBR VAULES AND PLASTICITY INDEX (KCC ROAD PAVEMENT DESIGN GUIDE)

* THIS ASSUMES SOME PROBABILITY OF THE MATERIAL SATURATING IN SERVICE. IF THE DRAINAGE AND WATER TABLE POSITION MAKE THIS VERY UNLIKELY THE FIGURES BRACKETED MAY BE USED.
 ** SPECIALIST INVESTIGATIONS WILL BE REQUIRED TO DETERMINE THE EXTENT OF GROUND IMPROVEMENT REQUIRED.
 *** DESIGN CBR DEPENDANT UPON CHOICE OF FILL MATERIAL. MINIMUM 2% CBR ASSUMED LIMIT OF TRAFFICABILITY OF FILL.

NOTE: FOR CBR LESS THAN 2% SPECIAL MEASURES ARE NECESSARY TO PROVIDE ADEQUATE FOUNDATION SUPPORT.



- KERB, EDGING AND CHANNEL NOTES:**
1. THE CONCRETE FOUNDATION SHALL BE EITHER AS DETAILED OR EXTEND TO THE TOP SURFACE OF THE SUB-BASE WHICHEVER GIVES THE GREATER DEPTH.
 2. BITUMINOUS SPRAYS ARE NOT PERMITTED FOR THE CURING OF THE CONCRETE FOUNDATION
 3. KERBS, EDGINGS AND CHANNELS SHALL BE BUTT JOINTED.
 4. KERB RADI OF 12m OR LESS SHALL BE FORMED IN PREFORMED RADIUS KERBS
 5. ALL MORTAR SHALL COMPLY WITH THE REQUIREMENTS OF CLAUSE 2601 (MCHW1)
 6. EDGINGS AND CHANNELS ALONG A RADIUS OF BETWEEN 6m AND 12m SHALL BE MACHINE CUT TO LENGTHS NOT LESS THAN 300mm



- Notes:**
1. DO NOT SCALE FROM THIS DRAWING.
 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THIS PROJECT.
 3. CONTRACTOR TO LOCATE UTILITIES ON SITE

KENT COUNTY COUNCIL - MATERIAL TESTING REQUIREMENTS	
<ul style="list-style-type: none"> ALL TESTS ARE TO BE UNDERTAKEN AND RESULTS ISSUED TO KCC AGREEMENTS TEAM IN A TIMELY MANNER SO AS NOT TO JEOPARDISE SUCCESSIVE LAYERS/PROCESSES OR WORKS ADOPTION. ADDITIONAL TESTING MAY BE REQUIRED AT THE DISCRETION OF KCC. ALL MATERIAL TESTING MUST BE UNDERTAKEN BY AN INDEPENDENT UKAS ACCREDITED TESTING LABORATORY. WORKS NOT MEETING THE REQUIREMENTS SPECIFIED HERE MAY BE CONDEMNED 	
FORMATION / SUB-FORMATION <ul style="list-style-type: none"> EQUILIBRIUM CBR TESTING AND PLASTICITY INDEX TO ESTABLISH CONSTRUCTION & CAPPING LAYER THICKNESS REQUIRED. 	
CAPPING LAYER <ul style="list-style-type: none"> STIFFNESS MODULUS TEST (BY PORTABLE DYNAMIC PLATE) OF 60MPa MAINTAINED UNTIL CARRIAGEWAY CONSTRUCTION IS COMPLETE. TESTS SHALL BE CARRIED OUT EVERY 10m OF CARRIAGEWAY. GRADING ANALYSIS AND MOISTURE CONTENT TO CHECK COMPLIANCE WITH MATERIAL SPECIFICATION. 	
SUB-BASE <p>GRANULAR TYPE 1 MATERIAL</p> <ul style="list-style-type: none"> NUCLEAR DENSITY TEST TO CHECK COMPACTION CARRIED OUT EVERY 20m OF CARRIAGEWAY. THE MATERIAL SHALL ACHIEVE AT LEAST 95% DENSITY WHEN COMPACTED, MEASURED IN-SITU USING A CALIBRATED NUCLEAR DENSITY METER. RECENT TARGET DENSITY FIGURE TO BE USED, OBTAINED FROM SUPPLIER. STIFFNESS MODULUS TEST (BY PORTABLE DYNAMIC PLATE) OF 100MPa MAINTAINED UNTIL CARRIAGEWAY CONSTRUCTION IS COMPLETE. TESTS SHALL BE CARRIED OUT EVERY 20m OF CARRIAGEWAY. GRADING ANALYSIS AND MOISTURE CONTENT TO CHECK COMPLIANCE WITH MATERIAL SPECIFICATION. LAYER SHALL BE DIPPED BY THE AGREEMENTS ENGINEER TO ACHIEVE WITHIN +10/-30mm OF FINISHED LAYER LEVEL. 	
HBM - NOTE: LAYING MUST SATISFY ALL NORMAL TEMPERATURE REQUIREMENTS FOR A CEMENT BOUND MATERIAL <ul style="list-style-type: none"> 7 & 28 DAY CUBE STRENGTH FROM MATERIAL AT SOURCE & OF DELIVERED MATERIAL. SAMPLING EVERY 200 TONNES. STIFFNESS MODULUS TEST (BY PORTABLE DYNAMIC PLATE) CARRIED OUT EVERY 20m OF CARRIAGEWAY, ON SAME DAY OF LAYING, AND AGAIN 24hrs LATER. LAYER SHALL BE DIPPED BY THE AGREEMENTS ENGINEER TO ACHIEVE WITHIN +10/-30mm OF FINISHED LAYER LEVEL. 	
FLEXIBLE CARRIAGEWAY <ul style="list-style-type: none"> AIR TEMPERATURES MUST BE 5°C (MIN) AND RISING THROUGHOUT LAYING. THIS IS DUE TO THE MULTIPLE WEATHER-RELATED VARIABLES THAT CAN ADVERSELY IMPACT THE LAYERS INTEGRITY (E.G WIND SPEED, AIR & GROUND TEMPERATURES, FROST ECT). A MAXIMUM OF ONE COURSE SHALL BE LAID IN ANY ONE DAY TO PROVIDE ASSURANCE THAT THE MATERIAL HAS SUFFICIENTLY COOLED/CURED, AND TO AVOID RUTTING, IN ORDER TO MAINTAIN THE INTEGRITY OF THE MATERIAL FOR THE LENGTH OF ITS LIFESPAN. 	
BASE COURSE <ul style="list-style-type: none"> LAYER SHALL BE DIPPED BY THE AGREEMENTS ENGINEER TO ACHIEVE WITHIN +15/-15mm OF FINISHED LAYER LEVEL. GRADING ANALYSIS AND BINDER CONTENT TO BE TESTED IN THE LABORATORY (ONE SAMPLE EVERY 200 TONNES) NUCLEAR DENSITY TEST TO CHECK COMPACTION SHALL BE CARRIED OUT EVERY 20m OF CARRIAGEWAY, 93% COURSE MACADAM, 95% ROLLED ASPHALT. A SAMPLE MUST BE TAKEN FOR LABORATORY TESTING. MATERIAL DELIVERY, LAYING AND ROLLING TEMPERATURE RECORDS 	
BINDER COURSE <ul style="list-style-type: none"> LAYER SHALL BE DIPPED BY THE AGREEMENTS ENGINEER TO ACHIEVE WITHIN +10/-15mm OF FINISHED LAYER LEVEL. GRADING ANALYSIS AND BINDER CONTENT TO BE TESTED IN THE LABORATORY (ONE SAMPLE EVERY 200 TONNES) NUCLEAR DENSITY TEST TO CHECK COMPACTION IF THICKNESS 60mm OR ABOVE, SHALL BE CARRIED OUT EVERY 20m OF CARRIAGEWAY. A SAMPLE MUST BE TAKEN FOR LABORATORY TESTING. MATERIAL DELIVERY, LAYING AND ROLLING TEMPERATURE RECORDS 	
SURFACE COURSE - STRICTLY NO OVERBANDING <ul style="list-style-type: none"> LAYER SHALL BE DIPPED BY THE AGREEMENTS ENGINEER TO ACHIEVE WITHIN +6/-0mm OF FINISHED LAYER LEVEL. GRADING ANALYSIS AND BINDER CONTENT TO BE TESTED IN THE LABORATORY (ONE SAMPLE EVERY 80 TONNES) TEXTURE DEPTH TO BE CARRIED OUT ON SMA & HRA SURFACE COURSE MATERIALS. MATERIAL DELIVERY, LAYING AND ROLLING TEMPERATURE RECORDS 	
FLEXIBLE FOOTWAYS & CYCLEWAYS - STRICTLY NO OVERBANDING <ul style="list-style-type: none"> LAYER SHALL BE DIPPED BY THE AGREEMENTS ENGINEER (+10/-30mm (SUB-BASE) AND +0/-6mm (BINDER)) 	
*TESTS MARKED WITH ASTERISK MAY BE REQUIRED AT THE DISCRETION OF THE AGREEMENTS ENGINEER	

FOR APPROVAL

Rev	Description	Dm	Chk	Date
P2	INCORPORATED KCC COMMENTS	DNT	DdM	29/09/17
P1	S278 SUBMISSION & ADDED RSA COMMENTS	DNT	DdM	24/07/15

BdR
 Incorporating
K L Harrison & Associates Ltd
 Civil & Structural Engineering Consultants
 The Old Engine House
 Goblins Farm Business Park
 Court Lane, Hadlow
 Kent
 TN11 0DP
 Tel 01732 851416
 Fax 01732 852200
 email: engineering@bdr.uk.com

Client
MILLWOOD DESIGNER HOMES

Project
**POLO FARM SPORTS CLUB
 LITTLEBOURNE ROAD
 CANTERBURY, CT3 4AF**

Drawing
CONSTRUCTION DETAILS

Scale @ A1	Date	Drawn by	Checked
1:20	15/04/15	DNT	DdM
Job No.	Drng. No.	Rev	
15117	C1010	P2	

