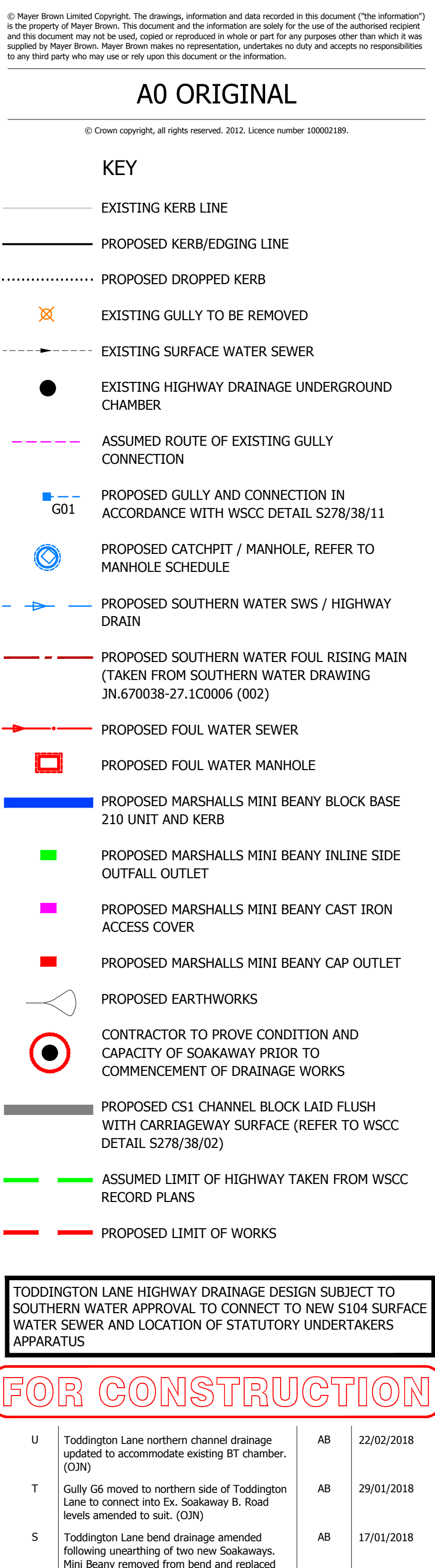
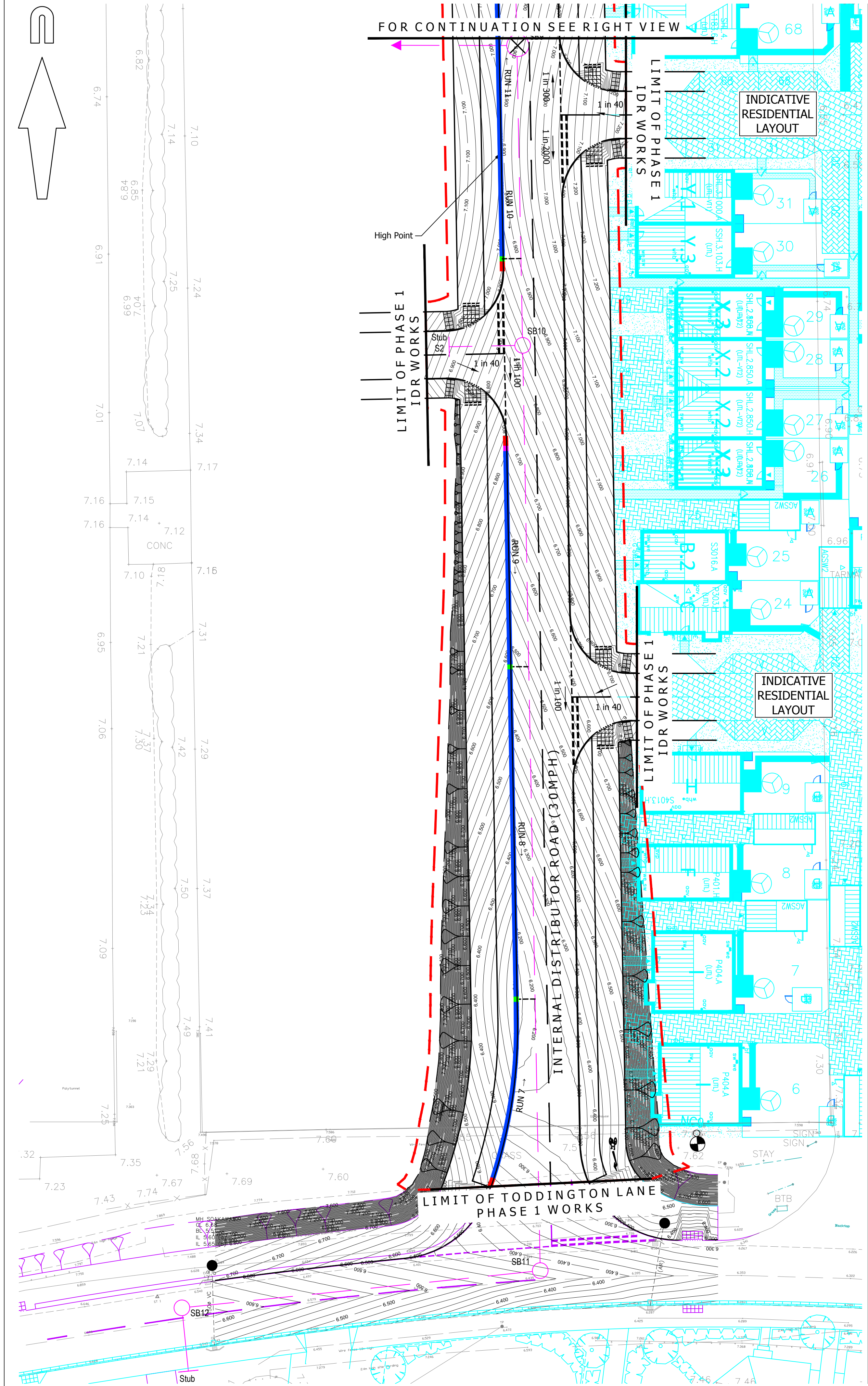
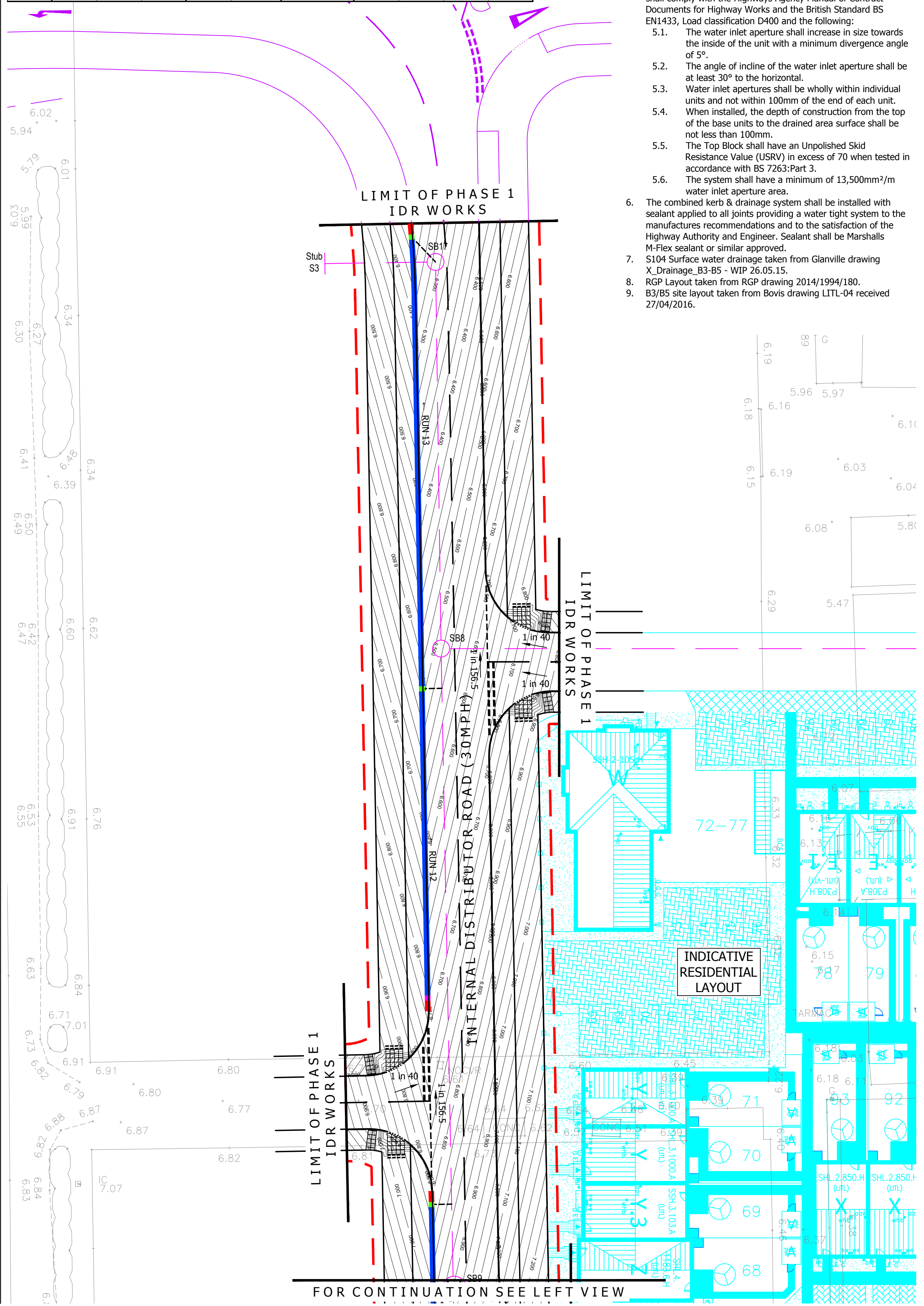




drawing number	rev.
A/PHLITTLE.2/112	U



Mini-Beany Details									
Run Dimensions			Run-off	Channel Design	Capacity Check				
Run Length (m)	Run Gradient (1 in XX)	Area Drained (m²)	Design Rainfall (mm/hr)	Calculated run-off (l/sec)	System & Deepest Channel	Available Capacity (l/sec)	Required Capacity (l/sec)	% capacity used	Notes
Internal Distributer Road									
Run 7	22.500	100	173	50	2.403	Base 210	12	2.403	20% OK
Run 8	34.000	100	285	50	3.958	Base 210	13	3.958	30% OK
Run 9	21.500	100	323	50	4.486	Base 210	11	4.486	41% OK
Run 10	11.000	500	66	50	0.917	Base 210	11	0.917	8% OK
Run 11	19.000	156	173	50	2.403	Base 210	11	2.403	22% OK
Run 12	28.500	156	376	50	5.222	Base 210	11	5.222	47% OK
Run 13	43.500	156	344	50	4.778	Base 210	11	4.778	43% OK



- NOTES
- All highway drains except filter drains with 1.2m minimum cover shall be laid with Type S bedding and surround in accordance with MCHW detail F1.
 - All highway drains except filter drains with less than 1.2m cover shall be laid with Type Z bedding and surround in accordance with MCHW detail F1.
 - It is the contractors responsibility to undertake pressure tests on the completion of every drainage run between manholes on pipes up to 750mm diameter.
 - Contractor to undertake CCTV survey prior to completion certificate being signed off and issued. The sewerage shall be mechanically cleaned as directed by the Engineer.
 - All components of the combined linear kerbed drainage system, shall comply with the Highways Agency Manual of Contract Documents for Highway Works and the British Standard BS EN1433, Load classification D400 and the following:
 - The water inlet aperture shall increase in size towards the inside of the unit with a minimum divergence angle of 5°.
 - The angle of incline of the water inlet aperture shall be at least 30° to the horizontal.
 - Water inlet apertures shall be wholly within individual units and not within 100mm of the end of each unit.
 - When installed, the depth of construction from the top of the base units to the drained area surface shall be not less than 100mm.
 - The Top Block shall have an Unpolished Skid Resistance Value (USRV) in excess of 70 when tested in accordance with BS 7263:Part 3.
 - The system shall have a minimum of 13,500mm²/m water inlet aperture area.
 - The combined kerb & drainage system shall be installed with sealant applied to all joints providing a water tight system to the manufactures recommendations and to the satisfaction of the Highway Authority and Engineer. Sealant shall be Marshalls M-Flex sealant or similar approved.
 - S104 Surface water drainage taken from Glanville drawing X_Drainage_B3-B5 - WIP 26.05.15.
 - RGP Layout taken from RGP drawing 2014/1994/180.
 - B3/B5 site layout taken from Bovis drawing LITL-04 received 27/04/2016.

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A1 ORIGINAL

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KEY

- EXISTING KERB LINE
- PROPOSED KERB/EDGING LINE
- PROPOSED DROPPED KERB
- GLANVILLE S104 SURFACE WATER SEWER
- PROPOSED MARSHALLS MINI BEANY BLOCK BASE 210 UNIT AND KERB
- PROPOSED MARSHALLS MINI BEANY BLOCK BASE 260 UNIT AND KERB
- PROPOSED MARSHALLS MINI BEANY BLOCK BASE 260 UNIT AND KERB DROPPED CROSSING
- PROPOSED MARSHALLS MINI BEANY BLOCK BASE 210 UNIT AND COVER PLATE ACROSS ACCESS
- PROPOSED MARSHALLS MINI BEANY INLINE SIDE OUTFALL OUTLET
- PROPOSED MARSHALLS MINI BEANY CAST IRON ACCESS COVER
- PROPOSED MARSHALLS MINI BEANY CAP OUTLET
- PROPOSED EARTHWORKS
- PROPOSED LIMIT OF WORKS

FOR CONSTRUCTION

C1	Revision changed to construction issue. (PB)	AB	01/09/2016
P2	Drawing title & section lines updated and cycle marking amended following comments received from WSCC dated 09/08/2016. (OJN)	AB	09/08/2016
rev.	amendment	checked	date

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client
PERSIMMON HOMES

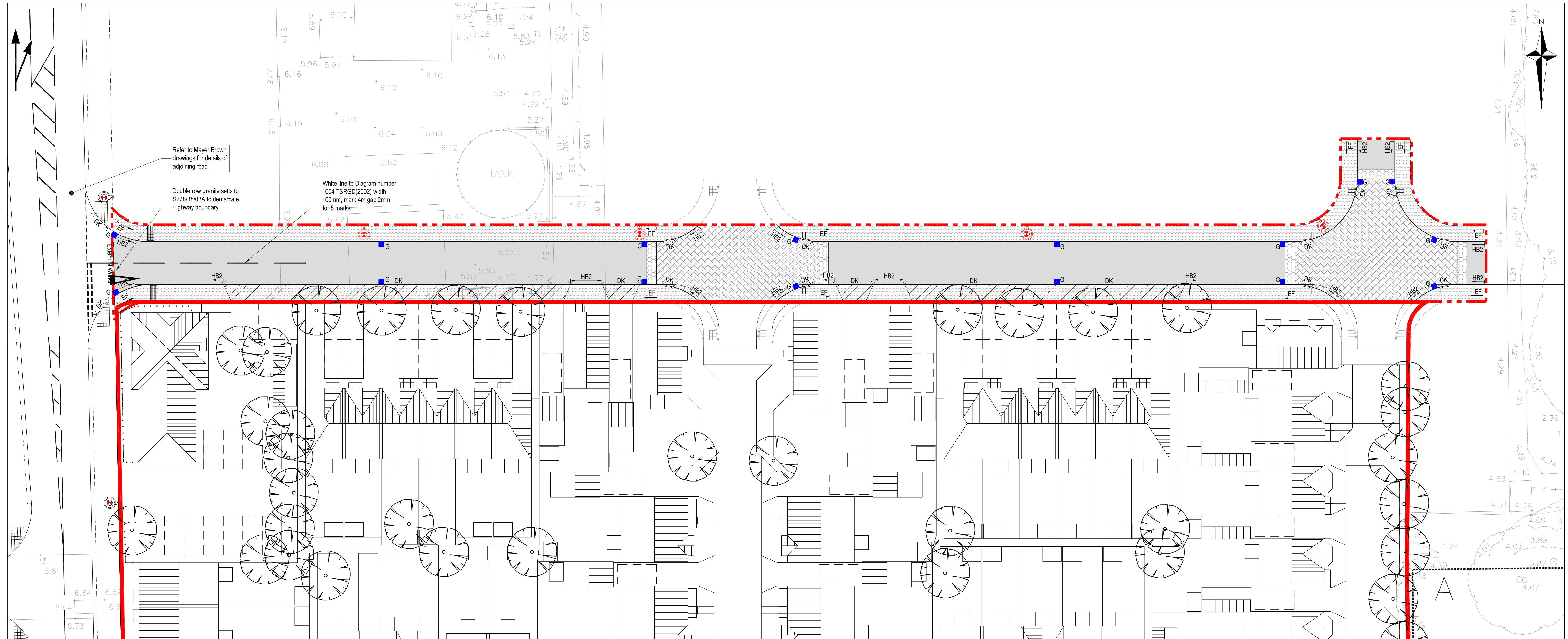
project
NORTH LITTLEHAMPTON PHASE 1 - IDR WORKS
OFF TODDINGTON LANE S38 WORKS

scale 1:250 | drawn by OJN | checked by AB

date JUNE 2016 | cad file MASTER IDR.DWG

title
PROPOSED S38 HIGHWAY WORKS
DRAINAGE AND DUCTING DRAWING

drawing number A/PHLITTLE.2/IDR-112 | rev. C1



KEY

- Site Boundary
- DK: Dropped kerb (Type BN). Upstand not to exceed 6mm at pedestrian crossings, 25mm for vehicular crossings (S278/38/02/A)
- HB2: Kerb Type HB2 125x255mm (S278/38/02/A)
- EF: Edging Type 1 125x255mm (S278/38/02/A)
- Duct crossing for services. Details TBC refer to TOS drawings for details of proposed services
- G: Proposed gully (S278/38/11/A)
- Indicative location of proposed street lighting to be confirmed at detail design

Accurate site tests must be carried out to confirm CBR value prior to construction. Subject to on-site confirmation of actual CBR, depth of sub-base and capping layer may be modified as follows, subject to agreement of Engineer

TABLE A

CBR of sub-grade (%)	Depth of open graded crushed rock (mm)
≤2.0*	750
2.0 to 5.0%	500
5.0 to 15.0%	500
≥15%	500

*Where CBR value is less than 1%, special treatment may be necessary. Consult Engineer.

CONSTRUCTION KEY

- UNCONTROLLED PEDESTRIAN CROSSING (TACTILE PAVING SLABS) (S278/38/18/A)
New uncontrolled pedestrian crossing. Blister tactile paving slabs (400x400x50mm) laid to finish flush with top of dropped kerb. Colour to be buff.
- 50mm: Tactile paving slabs (BS7263: Part 1)
- 30mm: Compacted sand bedding
- 150mm: Type 1 Sub-Base to Cl.803
- ASPHALT FOOTWAY CONSTRUCTION (S278/38/04/B)
20mm: AC 6 dense surf 100/150 recipe mix to BS EN13108-1: 2006
50mm: AC 20 dense bin 40/60 recipe mix to BS EN13108-1: 2006
200mm: Type 1 Sub-base to Cl.803
Marshalls M380 tanking membrane or similar approved
- ASPHALT CROSSOVER TYPE 1 (S278/38/07/C)
25mm: AC6 Close surf 100/150 to BS EN13108-1: 2006
30mm: AC20 dense binder 40/60 recipe mix to BS EN13108-1: 2006
200mm: Type 1 Sub-base to Cl.803

- ASPHALT CARRIAGWAY CONSTRUCTION (S278/38/21/B)
30mm: AC10 Close surf 100/150 to BS EN13108-1: 2006
50mm: AC20 dense binder 40/60 recipe mix to BS EN13108-1: 2006
100mm: A32 dense base 40/60 recipe mix to BS EN13108-1: 2006 to grading BS EN 13242:2002
750mm: Open graded crushed rock 4/20mm to Priora BS EN 12620 to provide a minimum void space of 0.32 (Marshalls Priora aggregates or similar approved)
Marshalls M380 tanking membrane or similar approved
- BLOCK PAVED RAMP TYPE 5 (S278/38/16/C)
80mm: Precast concrete blocks to BS EN1338: 2003
150mm: Freshly laid and unset C20/20 class concrete bed
520-595 mm: Open graded crushed rock 4/20mm to Priora BS EN 12620 to provide a minimum void space of 0.32 (Marshalls Priora aggregates or similar approved)
Marshalls M380 tanking membrane or similar approved
- BLOCK PAVED CONSTRUCTION LAID HERRINGBONE PATTERN H(S278/38/21/B)
80mm: Precast concrete blocks to BS EN1338: 2003
30mm: Compacted sharp sand to BS7533-3 CAT II
50mm: AC20 dense binder 40/60 recipe mix to BS EN13108-1: 2006
845 mm: Open graded crushed rock 4/20mm to Priora BS EN 12620 to provide a minimum void space of 0.32 (Marshalls Priora aggregates or similar approved)
Marshalls M380 tanking membrane or similar approved

NOTES

- This drawing to be read in conjunction with all relevant documents and specifications
- Dimensions not to be scaled
- The works shall be carried out in accordance with Volume 1 of the Manual of Contract Documents for Highway Works - Specification for Highway Works
- For details on the location of existing services, refer to the utility company record drawings. All existing services are to be located and marked on the ground prior to any construction commencing
- Cover levels to be adjusted to suit new carriageway/footway levels
- Pavement construction thicknesses are based on a CBR value of ≤2%. Laboratory CBR Tests are to be carried out and results reported to the Engineer prior to construction in order for the design to be confirmed. CBR tests are to be carried out following proof rolling of the subgrade
- All new HB2 kerbing to have 125mm upstand on main carriageway and 50mm upstand on table tops unless noted otherwise
- All tactile paving slabs should be laid so that the blisters are aligned in the direction of travel to the opposite crossing point
- For construction details refer to West Sussex County Council (WSCC) construction details (references shown in brackets)
- Refer to WSCC detail (S278/38/20/B) option 1 for carriageway tie in details
- Refer to drawing CV8140927/613 for table top and ramp details
- All signs and road markings shall be in accordance with the 'Traffic Signs Regulations and General Directions' 2002 (TSRGD 2002)
- All road markings shall be in white thermoplastic reflectonised material or paint in accordance with BS EN 1871 and to cl.1212 with ballotini glass beads unless otherwise noted
- Contractor to include for ducting for the electronic supply to street lighting

P2	Impermeable membrane added to road construction.	09.09.15	JTH	SH
P1	Block paved construction added to key	30.06.15	MP	SH
Rev.	Description	Date	Chkd	



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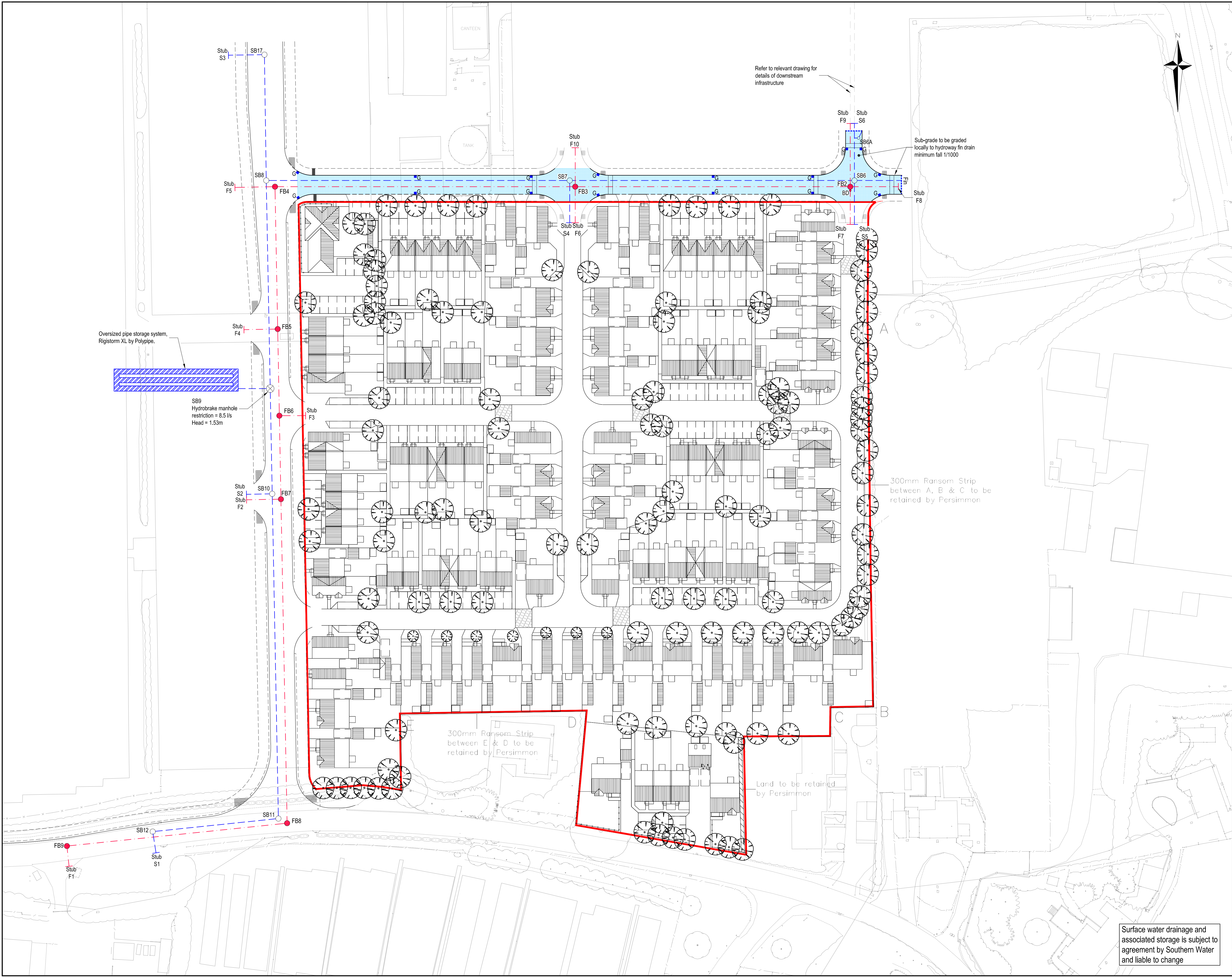
Client :
 **PERSIMMON**

Project :
**Toddington Lane
North Littlehampton**

Title :
**B3 / B5 Access Road
Construction Plan**

Project Engineer : S. Hudson Scale : 1:250 @ A1
Project Director : K. Rayner Date : March 2015
Status : **PRELIMINARY**

Drawing No. CV8140927/611 Rev **P2**



NOTES

1. This drawing to be read in conjunction with all relevant documents and specifications
2. Dimensions not to be scaled
3. All adoptable works to be carried out in accordance with Sewers for Adoption 5th Edition
4. For details on the location of existing services, refer to the utility company record drawings. All existing services are to be located and marked on the ground prior to any construction commencing
5. All manhole covers to be installed parallel to final kerbs, edgings, paving joints, or building lines as appropriate
6. 150mmØ to 225mmØ pipework for adoption to be vitrified clay (VC) pipes, Kitemark certified with flexible spigot and socket joints and shall comply with the requirements of BS EN 295 and BS 65 (surface water only)
7. 300mmØ and above pipework for adoption to be concrete, Kitemark certified with flexible spigot and socket joints and shall comply with the requirements of BS EN 1916 and BS 5911 Part 1
8. Private pipework may be either VC or thermoplastic structured wall sewer pipe and shall comply with WIS 4-35-01. Pipes shall be BSI Kitemarked, or have equivalent third part certification
9. Refer to drainage schedules 8140927/SB1 and 8140927/FB1 for size, diameter, and inverts of all drainage stubs for future connection
10. For finished road levels refer to drawings CV8140927/615-617
11. For drainage construction details refer to drawing 8140927/614 and 8140927/FB1 and 8140927/SB1 for schedules

KEY

- FB3 Proposed Foul Water Manhole and Sewer
- BD Back Drop Manhole
- SB3 Proposed Surface Water Manhole and Sewer
- Hydrobrake Control Chamber
- Proposed Type 2 Surface Water Inspection Chamber
- Fin Proposed 300mm deep hydroway fin drain, Duodrain 25 strip by Geosynthetics or similar approved
- G Proposed Road Gully
- Geocellular Storage Tank
- Denotes area of Porous Sub-base. Refer to CV8140927/613 for construction details

P1	Stub S1 realigned, manhole SB6a added and oversized pipe storage system added.	09.09.15 JTH	SH
Rev.	Description	Date	Chkd



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Client :

**PERSIMMON**

Project :

**Toddington Lane
North Littlehampton**

Title :

**B3 / B5 Access Road
Drainage Plan**

Project Engineer : S. Hudson Scale : 1:250 @ A1

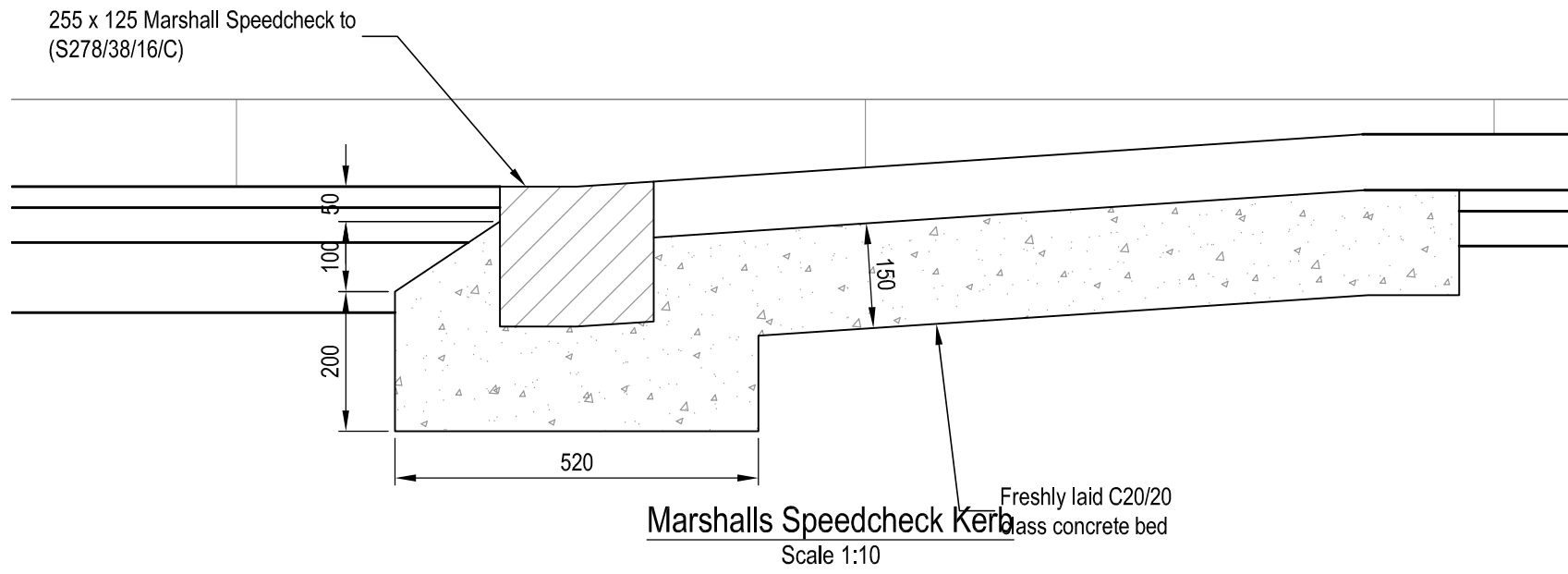
Project Director : K. Rayner Date : March 2015

Status : PRELIMINARY

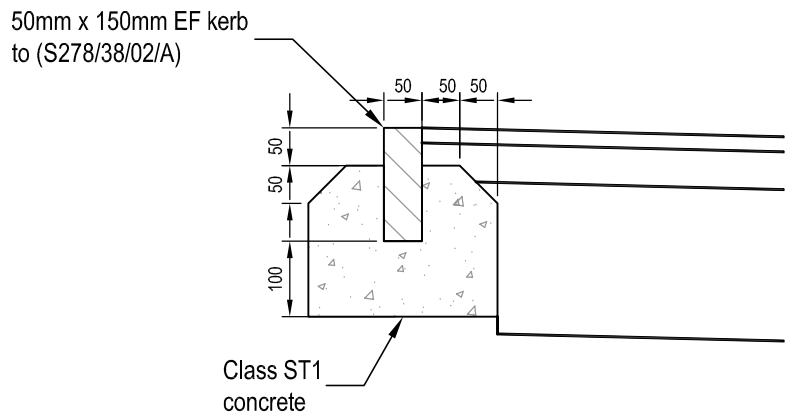
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Rev P1

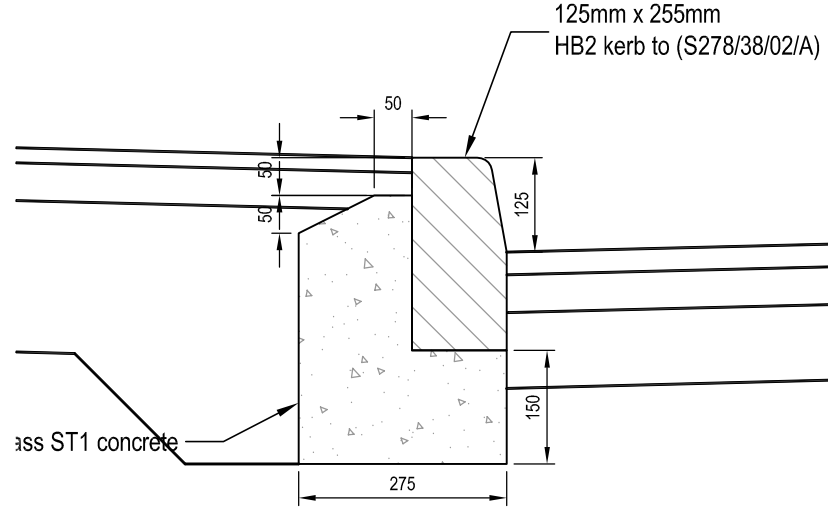
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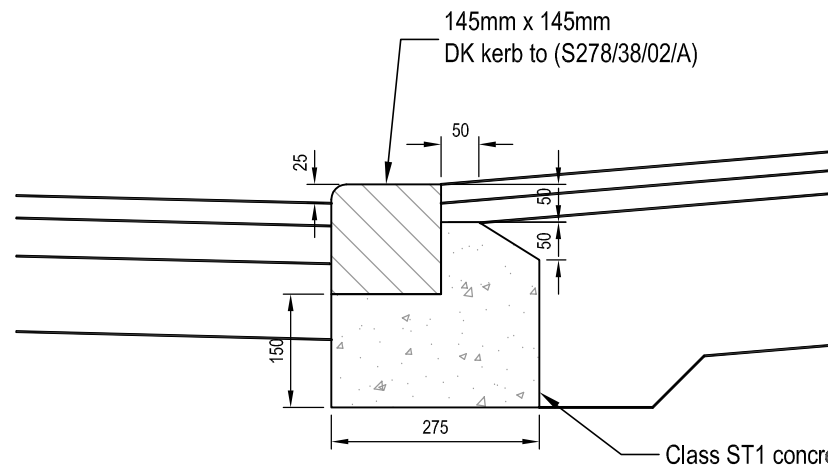
Marshall's Speedcheck Kerb
Scale 1:10



Type EF Kerb
Scale 1:10



Type HB2 Kerb
Scale 1:10



Type DK Kerb
Scale 1:10

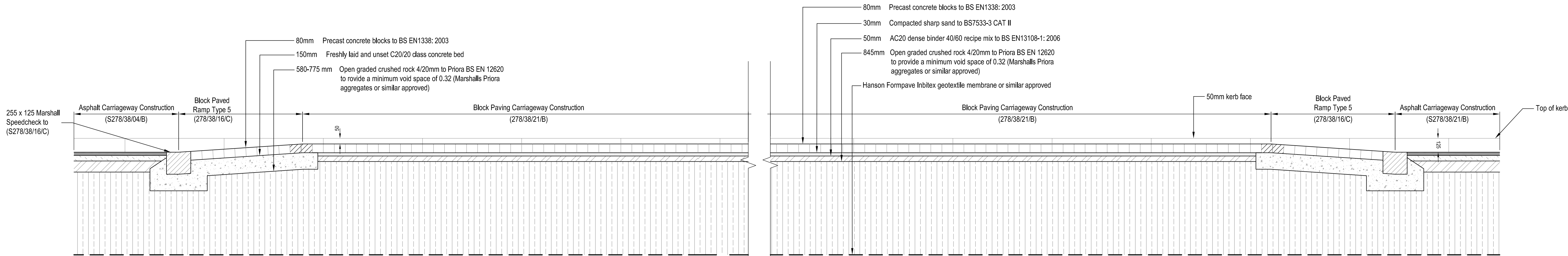
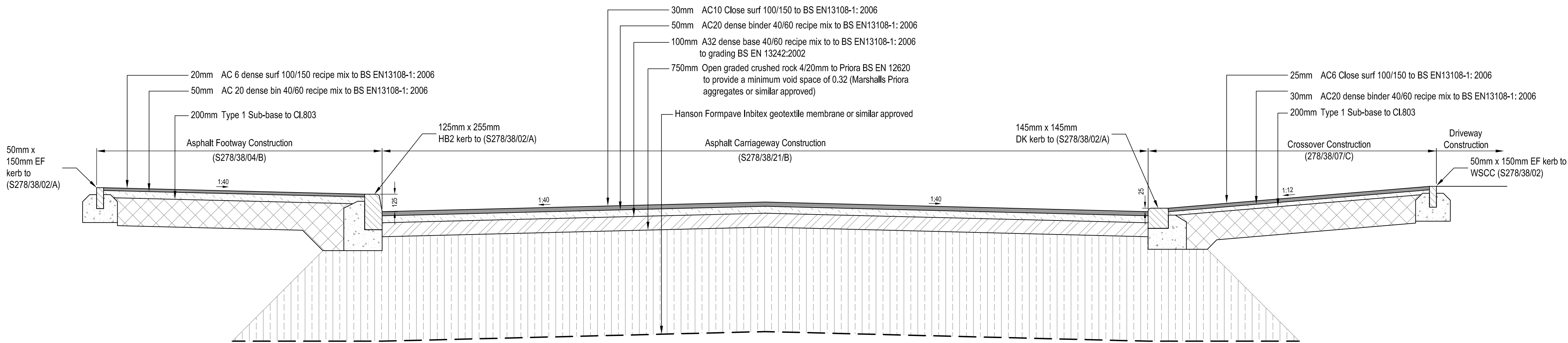


Table Top Detail
Scale 1:20



Carriageway Detail
Scale 1:20

NOTES

1. This drawing to be read in conjunction with all relevant documents and specifications
2. Dimensions not to be scaled
3. The works shall be carried out in accordance with Volume 1 of the Manual of Contract Documents for Highway Works - Specification for Highway Works
4. For details on the location of existing services, refer to the utility company record drawings. All existing services are to be located and marked on the ground prior to any construction commencing
5. Pavement construction thicknesses are based on a CBR value of $\leq 2\%$. Laboratory CBR Tests are to be carried out and results reported to the Engineer prior to construction in order for the design to be confirmed. CBR tests are to be carried out following proof rolling of the subgrade
6. All new HB2 kerbing to have 125mm upstand on main carriageway and 50mm upstand on table tops unless noted otherwise
7. For construction details refer to West Sussex County Council (WSCC) construction details (References shown in brackets)
8. Refer to WSCC detail (S278/38/20/B) option 1 for carriageway tie in details
9. Refer to drawing CV8140927/611 for Construction Plan

Rev.	Description	Date	Chkd
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Client :  **PERSIMMON**

Project : **Toddington Lane
North Littlehampton**

Title : **B3/B5 Access
Highway Construction Details**

Project Engineer : S. Hudson Scale : As Shown @ A1

Project Director : K. Rayner Date : May 2015

Status : **PRELIMINARY**

Drawing No. **CV8140927/613** Rev -