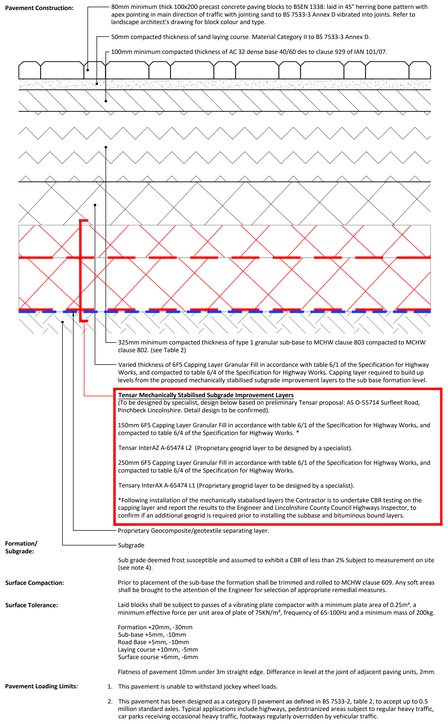
Notes & Specification

1. Pavement construction shown below shall be generally carried out in accordance with the current Highways Agency Specification for Highway Works (MCHW) in particular series 600, 700, 800, 900 and 1000 clauses, BS 7533 Pavements constructed with clay, natural stone or concrete pavers. The precast concrete paving and kerb association.
2. Bituminous materials shall be to BN EN 13108.
3. Granular sub-base has not been designed to carry construction traffic. Any surface damage to the sub-base due to the construction traffic shall be repaired to the satisfaction of the Engineer prior to the placement of the bound materials.
4. The subgrade CBR shall be measured and reported to the Engineer to check the pavement design prior to construction.
5. Turning movements of loaded heavy goods vehicles may cause movements of blocks if jointing sand is lost. It is important therefore that jointing sand is replenished periodically to avoid movement of blocks.
6. Where pavements are constructed on subgrades that have volume change potential and where roots vegetation penetrate below the pavement formation, there is a risk that movement may occur resulting in deformation being evident in the surface, particularly during prolonged periods of dry weather. To reduce this risk, the thickness of the subbase shall be increased.

Concrete Block Paving
Physical properties tested in accordance with BSEN 1338

Tensile splitting strength and failure load	Abrasion	Skid / Slip (pendulum value)	Freeze / Thaw (kg/m²)
No block shall have a tensile strength less than 3.6mPa for a failure load less than 250N/mm	≤20	45 min	≤1.0

Pavement Construction:



Formation/ Subgrade:

Sub grade deemed frost susceptible and assumed to exhibit a CBR of less than 2% Subject to measurement on site (see note 4).

Surface Compaction:

Prior to placement of the sub-base the formation shall be trimmed and rolled to MCHW clause 609. Any soft areas shall be brought to the attention of the Engineer for selection of appropriate remedial measures.

Surface Tolerance:

Laid blocks shall be subject to passes of a vibrating plate compactor with a minimum plate area of 0.25m², a minimum effective force per unit area of plate of 75kN/m², frequency of 65-100Hz and a minimum mass of 200kg.

Formation +20mm, -30mm
Sub-base +5mm, -10mm
Road Base +5mm, -10mm
Laying course +10mm, -5mm
Surface course +6mm, -6mm

Flatness of pavement 10mm under 3m straight edge. Differance in level at the joint of adjacent paving units, 2mm.

Pavement Loading Limits:

1. This pavement is unable to withstand jockey wheel loads.
2. This pavement has been designed as a category II pavement as defined in BS 7533-2, table 2, to accept up to 0.5 million standard axles. Typical applications include highways, pedestrianized areas subject to regular heavy traffic, car parks receiving occasional heavy traffic, footways regularly overridden by vehicular traffic.

Private Non-Permeable Block Paved Shared Driveway

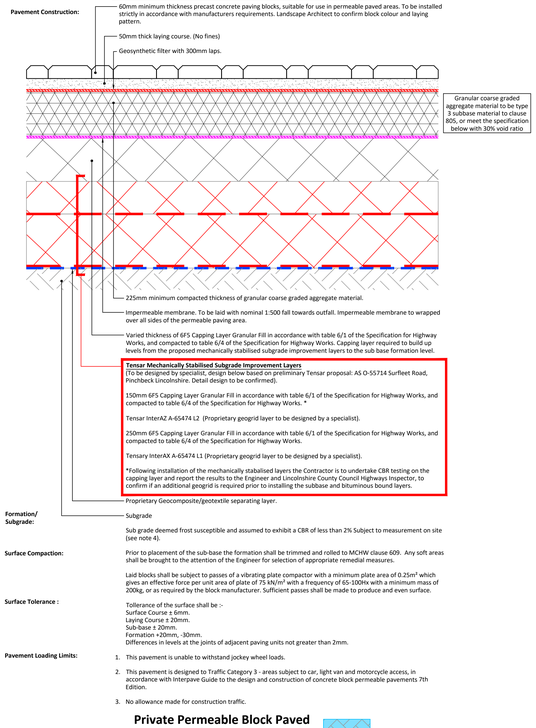
Notes & Specification

1. Pavement construction shown below shall be generally carried out in accordance with the current Highways Agency Specification for Highway Works (MCHW) in particular series 600, 700, 800, 900 and 1000 clauses, BS 7533 Pavements constructed with clay, natural stone or concrete pavers. The precast concrete paving and kerb association.
2. Granular sub-base has not been designed to carry construction traffic. Any surface damage to the sub-base due to the construction traffic shall be repaired to the satisfaction of the Engineer prior to the placement of the bound materials.
3. The subgrade CBR shall be measured and reported to the Engineer to check the pavement design prior to construction.
4. Turning movements of loaded heavy goods vehicles may cause movements of blocks if jointing sand is lost. It is important therefore that jointing sand is replenished periodically to avoid movement of blocks.
5. Where pavements are constructed on subgrades that have volume change potential and where roots vegetation penetrate below the pavement formation, there is a risk that movement may occur resulting in deformation being evident in the surface, particularly during prolonged periods of dry weather. To reduce this risk, the thickness of the subbase shall be increased.

Concrete Block Paving
Physical properties tested in accordance with BSEN 1338

Tensile splitting strength and failure load	Abrasion	Skid / Slip (pendulum value)	Freeze / Thaw (kg/m²)
No block shall have a tensile strength less than 3.6mPa for a failure load less than 250N/mm	≤20	45 min	≤1.0

Pavement Construction:



Formation/ Subgrade:

Sub grade deemed frost susceptible and assumed to exhibit a CBR of less than 2% Subject to measurement on site (see note 4).

Surface Compaction:

Prior to placement of the sub-base the formation shall be trimmed and rolled to MCHW clause 609. Any soft areas shall be brought to the attention of the Engineer for selection of appropriate remedial measures.

Laid blocks shall be subject to passes of a vibrating plate compactor with a minimum plate area of 0.25m² which gives an effective force per unit area of plate of 75 kN/m² with a frequency of 65-100Hx with a minimum mass of 200kg, or as required by the block manufacturer. Sufficient passes shall be made to produce and even surface.

Surface Tolerance :

Tolerance of the surface shall be :-
Surface Course ± 6mm.
Laying Course ± 20mm.
Sub-base ± 20mm.
Formation +20mm, -30mm.
Differences in levels at the joints of adjacent paving units not greater than 2mm.

Pavement Loading Limits:

1. This pavement is unable to withstand jockey wheel loads.
2. This pavement is designed to Traffic Category 3 - areas subject to car, light van and motorcycle access, in accordance with Interpave Guide to the design and construction of concrete block permeable pavements 7th Edition.
3. No allowance made for construction traffic.

Private Permeable Block Paved Single Driveway

Notes and specification for permeable block paving

1. Permeable block paving construction shall generally be carried out in accordance with the current Highways Agency Specification for Highway Works (MCHW) and BS7533. Guide to the design, construction and manufacture of concrete block permeable pavements produced by Interpave.
2. The coarse graded aggregate subbase has not been designed to carry construction traffic. It is vital that subbase is kept free from traffic and construction debris. If the subbase is required to be used for construction traffic, the Engineer shall be consulted prior to trafficking.
3. Due to the nature of the coarse graded aggregate, the Contractor shall construct a trial area (min. 10mx10m) and test typical construction plant on this area to determine suitability. The Contractor shall consult with all sub-contractors to ensure they are satisfied their plant can be used on the subbase materials prior to construction.
4. Coarse graded aggregate shall comply with BS EN 13242 and shall be designated Type 4/20 and shall meet the following physical properties:-

Sieve Size mm (nearest UK equivalent)	Coarse aggregate 40mm to 5mm
40	100
31.5	98 - 100
20	90 - 99
10	25 - 70
4	0 -15
2	0 - 5

Properties	Category to BS EN 13242 or BS 12620
Grading	4/20 (preferred) or 4/40, Gc BS-1S, GTc 20/17.5
Fines Content	f_4
Shape	FI_{35}
Resistance to Fragmentation	LA_{30}
Durability: Water absorption to BS EN 1097-6:2000, Clause 7 - for WA > 2%	$WA_{24}2$
Magnesium Sulphate Soundness	MS_{18}
Resistance to Wear	Mcr^{36}
Acid Soluble Sulphate Content: - Aggregates other than air-cooled blast-furnace slag - Air-cooled blast-furnace slag	$AS_{0.2}$ $AS_{1.0}$
Total Sulphur: - Aggregates other than air-cooled blast-furnace slag - Air-cooled blast-furnace slag	≤ 1% by mass ≤ 2% by mass
Volume Stability of Blast-Furnace and Steel Slags: - Air-cooled blast-furnace slag - Steel slag	Free from dicalcium silicate and iron disintegration in accordance with BS EN 13242 : 2002, 6.4.2.2 V_5
Leaching of Contaminates	Blast furnace slag and other recycled materials should meet the requirements of the Environment Agency 'Waste Acceptance Criteria' for inert waste when tested in accordance with BS EN 12457-3.
10% Fines	100kN
Other Properties	Particals shall be rough and angular to provide good interlocking between particles. Sands and gravels with rounded particles shall not be used.

5. Bituminious materials shall be to BS EN 13108.
6. The laying course material shall comply with the requirements of a material of type 2/6.3 Gc 80/20 to BS EN 13242, graded as follows:-

BS Sieve Size (mm)	Percentage passing by mass (%)
14	100
10	98 - 100
6.3	80 -99
2.0	0 - 20
1.0	0 - 5
0.063	0 - 2 (BS EN 12620 fines category f1)

A trial area (minimum 10m x 10m) shall be laid with blocks and compacted to determine suitability of material in order to achieve the required levels.

7. Precast concrete blocks shall comply with BS EN 1338 and shall be suitable for use for permeable pavements. Precast concrete blocks shall have the following physical properties:-

Tensile Splitting Strengths & Failure Level	Abrasion	Skid/Slip (pendulum value)	Freeze/Thaw (kg/m²)
No block shall have a tensile strength less than 3.6mPa for a failure load less than 250N/mm.	≤ 20	45 min	≤ 1.0

8. The geosynthetic filter shall be a polyethylene mono-filament with the following properties:-

Mass / unit area	(EN 965)	greater than 100g/m2
Tensile strength	(EN ISO 10319)	Longitudinal - greater than 25kN/m Transverse - greater than 25kN/m
Elongation at break	(EN ISO 10319)	Longitudinal - less than 25% Transverse - less than 25%
Opening size	(EN ISO 12956)	Approx. 0.45mm
Water permeability	(EN ISO 11058)	greater than 200 x 10-3 m/s

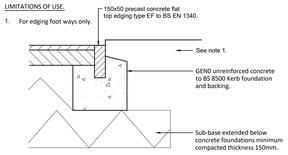
9. The tensile properties of the material shall be measured in accordance with EN ISO 10319. All vehicles shall be prevented from trafficking directly over the material. The material shall be protected from ultra-violet light
10. Where pavements are constructed on subgrades that have volume change potential and where roots vegetation penetrate below the pavement formation, there is a risk that movement may occur resulting in deformation being evident in the surface, particularly during prolonged periods of dry weather. To reduce this risk, the thickness of the subbase shall be increased.

NOTES.

1. Kerb backing normally brought up to 50mm below top of edging but where foot way surface is flagged haunch shall finish 75mm below top of edging.
2. Gap between edgings shall be 1 to 2 mm.
3. Precast concrete edgings shall be cut to accommodate tight radii.

LIMITATIONS OF USE.

1. For edging foot ways only.



Precast Concrete Footway Edging Detail

General Notes

1. **All dimensions are in metres unless otherwise stated.**
2. **All levels are in metres.**
3. **This drawing is to be read in conjunction with all relevant Engineers and Architect's drawings, Specifications, Reports and Engineering Details.**
4. **Do not scale from this drawing.**

Health, safety & the environment

In accordance with the Construction (Design and Management) Regulations 2015, the designs and details on this drawing have been the subject of a Designers Risk Assessment, to identify risks in the construction, use, or demolition of the scheme.

It is not considered necessary for Designers to highlight obvious and/or common risks (such as deep excavations, manual handling and working around heavy plant) which Contractors should be familiar with, and be able to control by good management and site practice.

So far as is reasonably practicable, the risks inherent in the design have been eliminated. Where it has been considered that elimination of a risk (or part of a risk) is not reasonably practicable, it has been reduced.

This drawing has been based/developed using the following external drawings

Type	Company	Drawing date	Drawing title	Date received	Rev
Site Layout	JGA Architects	02.05.2023	23301 1000-P02 GA Site Layout	02.05.2023	P02
Topographical survey	EMP Surveys LTD	July 2022	1021_Pinchbec k Topographical Survey_Final	04.01.2023	P05
Utilities and Drainage Survey	Survey Solutions	26.06.2023	48518NGUG-01 & 02	26.06.2023	B

GEOGRID REQUIRED TO ALL PAVED AREAS - TO BE DESIGNED BY A SPECIALIST

Table 1: Permeable Paving Construction Capping Thickness

* Where CBR values are less than 2% possible requirement for additional capping material and/or georid reinforcement subject to specialist design

CBR Value (%)	Total capping thickness required (mm)
Less than 2%	subgrade improvement *
2% - 3%	350
3% - 4%	250
4% - 5%	200
Greater than 5%	150

Table 2: Standard (non-permeable) Paving Construction Sub-base Thickness

CBR Values	Minimum thickness (mm) of sub-base (consolidated in accordance with MCHW Volume 1 clause 801, table 8/4)
Less than 2%	Subgrade requires improvement
2-3%	325
3-5%	250
5-7%	150
7-20%	100

Maintenance required	Description	Surface or subsurface	Regular	Remedial
Inspection	Inspect catchments at outlets once a year (if appropriate)	Surface	Yes	
Surface cleaning	To minimise clogging, clean dirt and other matter from the surface at least twice a year by sweeping, early spring (after winter) and autumn (after leaf fall).	Surface	Yes	
Managing vegetation	Strimming of weeds between blocks (use non-toxic biodegradable weedkillers)	Surface	Yes	
Re-establish infiltration capacity	For block surfaces, lift surface and replace gravel bedding and geotextile as necessary. For continuous concrete permeable surfaces, replace gravel infill. For continuous porous surfaces, replace surface. Set likely to be after a period of about 10-20 years.	Sub-surface		Yes Yes Yes
Screen runoff from adjacent areas	Pass through screens on downpipes, filters or use gully silt traps.	Surface	Yes	
Good housekeeping	Minimise use of salt or grit for de-icing, keep landscaped areas well maintained and prevent soil being washed on to pavement.	Surface	Yes	

Permeable Block Paving Maintenance Schedule

Rev	B	Driveway construction amended to show Tensar preliminary mechanical stabilised layers. Taken from Tensar preliminary proposal: AS O-55714.	By SH Checked LC 12.09.2023
Rev	A	Drawing updated in accordance with Burmor Construction comments recieved 14.03.2023	By AD Checked LC 31.03.2023

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- Infrastructure Design
- Structural Engineering
- Development Planning
- Geotechnical & Environmental
- Surveying
- Professional Advice

Drawn By:	AD	**Client**	Burmor Construction
Chkd By:	LC	**Project**	Land East of Surfleet Road Pinchbeck
Scale @ A0:	NTS	**Title**	Private Pavement Construction Details
Date:	February 2023		
Status:	FOR PLANNING		
Project No.:	26043	**Drawing No:** 120	**Rev:** B