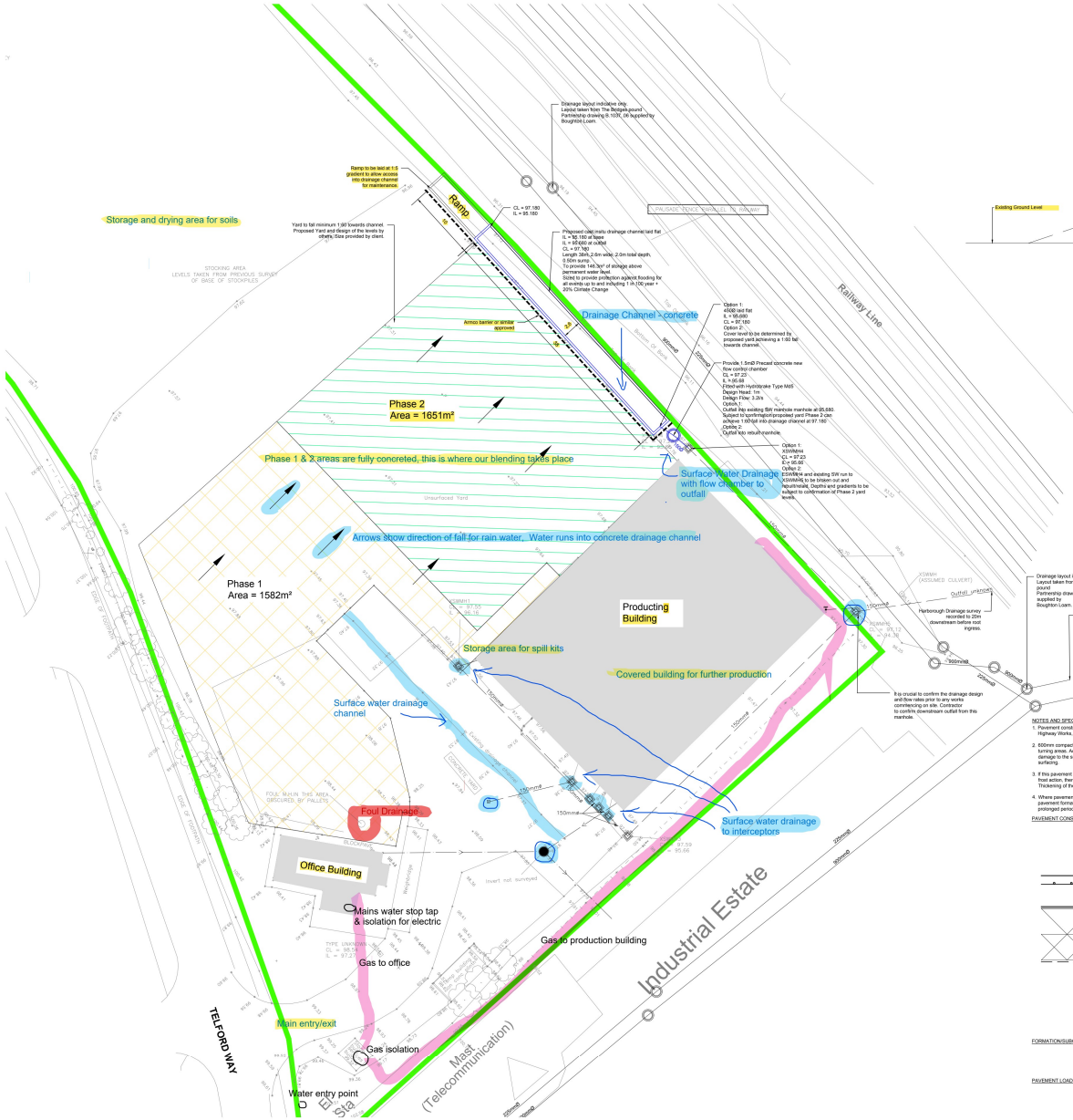
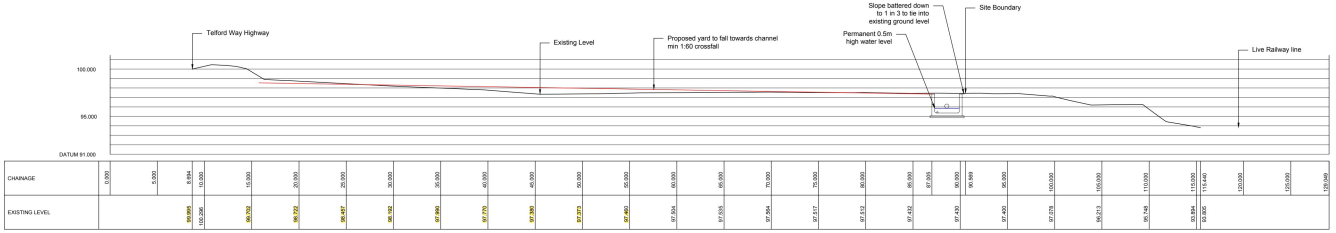
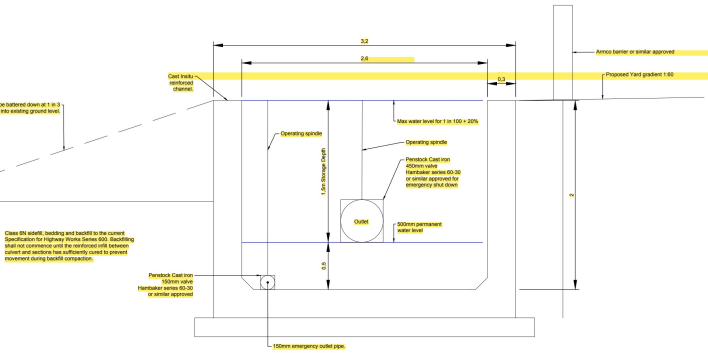




Section A-A



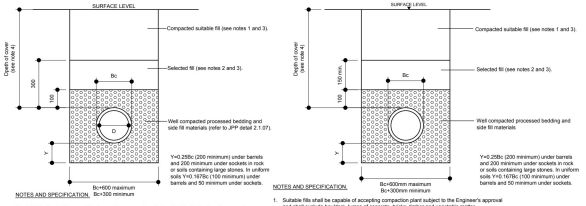
Notes:

1. Do not scale from this drawing.
2. All dimensions given are in metres unless otherwise stated.
3. Topographical survey information taken from Barton Plant Drawing 'Update to yards and drains 20' dated 22.01.2015
4. Existing drainage levels supplied by Barton Plant drawing 'Update to yards and drains 20' dated 22.01.2015.
5. Background information off site taken from Ordnance survey data and is for reference only.

Drawing Key:

XFWMH — Existing Foul
Existing Storm
Proposed Yard Extension
Proposed Storm
Site Boundary taken from title plan and overlaid by best fit only. Title plan supplied by Boughton Loam. Drawing not to be used for conveyancing.
Existing building to remain
As built Phase 1 Yard extension

Typical cross section of Proposed Cast Insitu Drainage Channel



NOTES AND SPECIFICATION

1. Suitable fills shall be capable of accepting compaction plant subject to the Engineer's approval and shall exclude boulders, lumps of concrete, bricks, timber and vegetable matter.
2. Selected fill shall be readily compatible material free from roots, organic material, building material, and shall be in an unfrozen condition. Selected fill shall exclude clay lumps exceeding 25mm size. Selected fill shall be carefully compacted around and above the pipe, taking care not to damage the pipe.
3. Where the pipe is installed in areas which are paved or future settlement of back fills is not acceptable then back filling of the trench shall be carried out using type 1 sub-base to Highways Agency specification for Highway Works compacted to the same specifications.
4. Minimum cover:
   Cover shall be greater than:
   2000mm in areas subject to heavy construction plant.
   1000mm in areas subject to normal construction traffic.
   1200mm to finished level of new main road pavements.
   600mm in landscape areas, foot ways, gardens or fields
   Otherwise use class 2 bedding and surround or bridging slab if drainage is to be adopted by a Water Company
5. Flexible pipes shall be unplasticised UPVC to BS EN 13598
6. Construction, subsequent testing, operation and maintenance shall be carried out in accordance with BS EN 752. Sewers to be adopted by water companies shall be installed in accordance with the current edition of 'Sewers for Adoption' produced by the Water Services Association. Sewers to be adopted by highway authorities shall be installed in accordance with the authority's specification.
7. Workmanship shall be in accordance with BS 8000 - 14:1989

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   Otherwise use class 2 bedding and surround or bridging slab if drainage is to be adopted by a Water Company
5. Rigid pipes shall be:
   (i) Clay pipes with min PN of 40 to BS En 295 and BS65.
   (ii) Concrete pipes to BS 5911 and BS EN 1916.
   Concrete pipes shall not be used for foul sewers unless otherwise stated.
6. Construction, subsequent testing, operation and maintenance shall be carried out in accordance with BS EN 752. Sewers to be adopted by water companies shall be installed in accordance with the current edition of 'Sewers for Adoption' produced by the Water Services Association. Sewers to be adopted by highway authorities shall be installed in accordance with the authority's specification.
7. Workmanship shall be in accordance with BS 8000 - 14:1989

FLEXIBLE CARRIER DRAIN, CLASS S BEDDING, SURROUND AND SIDEFILL.

NOTES AND SPECIFICATION

1. Processed granular bedding and side fill materials shall include aggregates to BS EN 12620 + A1 and lightweight aggregates to BS EN 13055-1 and shall be graded as defined in the following tables:

TABLE 1

Pipe Nominal Size (mm)	Maximum Partical Size (mm)	Class of Bedding	Maximum CF Value	Material
100	10	S B	0.15 0.30	10mm nominal single size
over 100 to 150	15	S B	0.15 0.30	10 or 14mm nominal single size or 14 to 5mm graded.
over 150 to 300	20	S B	0.15 0.30	10, 14 or 20mm nominal single size or 14 to 5mm graded or 20mm to 5mm graded.
over 300 to 550	20	S B	0.15 0.30	14 or 20mm nominal single size or 14 to 5mm graded or 20mm to 5mm graded.
over 550	40	S B	0.15 0.30	14, 20 or 40mm nominal single sized crushed rock or 14 to 5mm graded or 20mm to 5mm graded or 40 to 5mm graded.

2. The sulphate content of bedding and side fill materials shall not be greater than 0.3% as sulphur trioxide.
3. The above specification has been produced based on the Water Industry specification publication No. 4-08-01 (issue 4) February 1994.
4. Compaction factor (CF) shall be determined in accordance with water industry publication No 4-08-02 (issue 1) February 1994 - appendix B.

SPECIFICATION FOR BEDDING AND SIDEFILL MATERIALS FOR RIGID PIPES (CLASS S & B BEDDING)

RIGID CARRIER DRAIN - CLASS S, BEDDING, SIDEFILL AND BACKFILL.

NOTES AND SPECIFICATION

1. Processed granular bedding and side fill materials shall include aggregates to BS EN 12620 + A1 and lightweight aggregates to BS EN 13055-1 and shall be graded as defined in the following tables:

TABLE 1

Pipe Nominal Size (mm)	Maximum Partical Size (mm)	Maximum CF Value	Material
100	10	0.15	10mm nominal single size
over 100 to 150	15	0.15	10 or 14mm nominal single size or 14 to 5mm graded.
over 150 to 300	20	0.15	10, 14 or 20mm nominal single size or 14 to 5mm graded or 20mm to 5mm graded.
over 300 to 550	20	0.15	14 or 20mm nominal single size or 14 to 5mm graded or 20mm to 5mm graded.
over 550	40	0.15	14, 20 or 40mm nominal single size or 14 to 5mm graded or 20mm to 5mm graded or 40 to 5mm graded.

2. The sulphate content of bedding and side fill materials shall not be greater than 0.3% as sulphur trioxide.
3. The above specification has been produced based on the Water Industry specification publication No. 4-08-01 (issue 4) February 1994.
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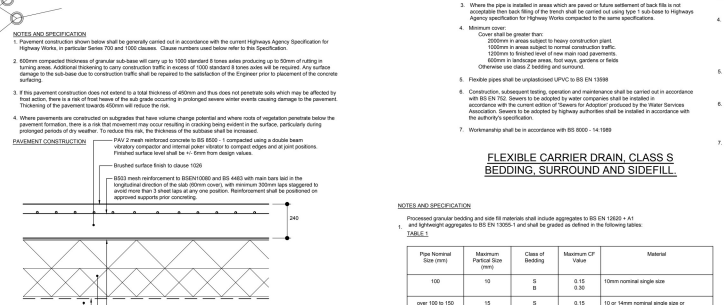
SPECIFICATION FOR BEDDING AND SIDEFILL MATERIALS FOR FLEXIBLE PIPES (CLASS S & B BEDDING)



PAVEMENT CONSTRUCTION

FORMATION/SUBGRADE

Sub grade deemed frost susceptible and assumed to exhibit a CBR value of 2 %. Contractor to confirm existing subgrade and ground conditions prior to any works commencing on site.

Prior to placement of the sub-base the formation shall be trimmed and rolled to clause 616. Any soft areas shall be brought to the attention of the Engineer for selection of appropriate remedial measures. Surface level tolerance shall be +20mm and -30mm from design levels.

The sub grade CBR shall be measured and reported to the Engineer to check the pavement design prior to construction.

PAVEMENT LOADING

1. Pavement has been designed to accommodate a maximum of 18.5 million standard axles before failure due to loading.
2. The pavement is unable to accommodate jockey wheel/pad loads.

JOINTED REINFORCED CONCRETE PAVEMENT CONSTRUCTION WITH TAMPED SURFACE FINISH

FOR TENDER

Rev A — Design amended following comments from Boughton Loam. Drawing updated to suit. — Date 13.01.2016

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F: (01604) 781999 W: www.jppuk.net

Client BOUGHTON LOAM

Project YARD EXTENSION
BOUGHTON LOAM
KETTERING

Title PROPOSED DRAINAGE DESIGN

Scale at A0	1:250	Drawn by	TL	Checked by	TH	Date	FEBRUARY 2015
Status	FOR TENDER	Project ref	T7566/PH	Drawing no.	D03	Revision	A