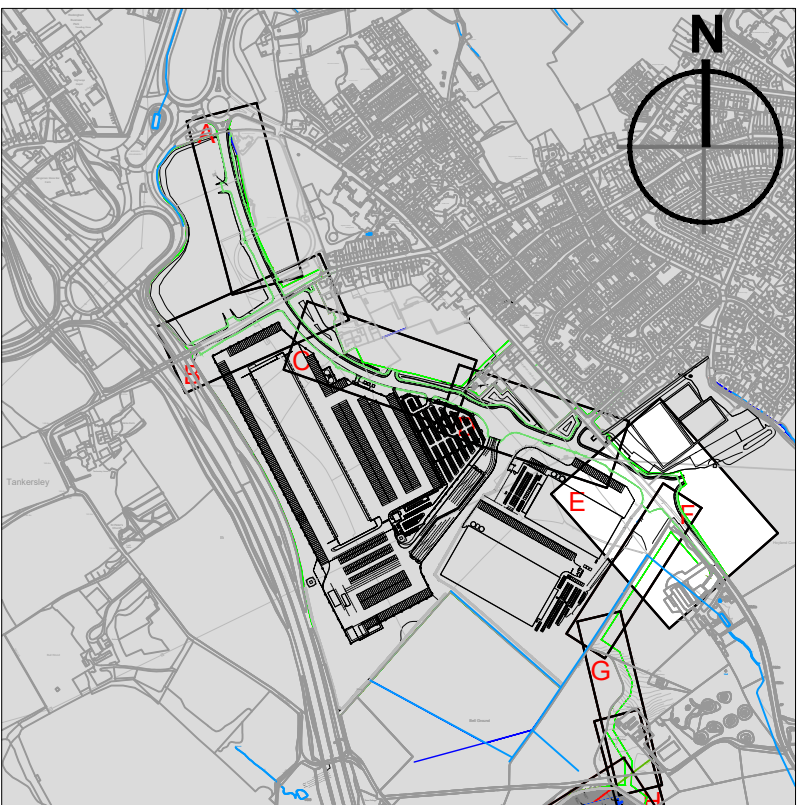


1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
2. If received electronically it is the recipient's responsibility to print to correct scale. Only written dimensions should be used.
3. This drawing should be read in conjunction with all relevant drawings and specifications.
4. Masterplan taken from PHW Drawing 4400-001 Rev P25, received 15/06/2020.
5. All works to be carried out in accordance with the Specification for Highway Works, the South Yorkshire Residential Design Guide and the requirements of Barnsley Metropolitan Borough Council.
6. Foul water designed in line with Sewer Sector Guidance. Flows from:
 - Industrial plots based on 0.6l/s/ha
 - Residential plots based on 4000l/unit/day peak flow.
7. Adopted Surface water designed in line with Sewer Sector Guidance.
8. Highway drains designed to DMRB and SSG specifications.
9. Kerb drainage based on detailed design by Marshalls Pl.C.
10. Embankment toe drains are connected to existing drainage outfalls to both provide a base flow for those habitats and to maintain ground water levels. Catchments for all toe drains connections are greatly reduced by the original site.

Key

- | | |
|---|--------------------------------------|
| | Planning Boundary |
|  | Proposed Highway Gully |
| | Proposed Kerb Drainage |
|  | Proposed Surface Water Sewer |
|  | Proposed Highway Surface Water Sewer |
|  | Proposed Private Surface Water Sewer |
|  | Proposed Foul Water Sewer |
|  | Proposed Foul Water Rising Main |
|  | Proposed highway French Drain |



Key Plan

Not to Scale

C07	Drainage and background updated to suit S104	SMC	ANT	07.12.21
C06	Highway Drainage Amended	SMC	ANT	30.06.21
C05	Highway Drainage Amended	SMC	ANT	22.06.21
C04	DRAFT Highway Drainage Amended	SMC	ANT	21.06.21
C03	Highway Drainage Amended	SMC	ANT	07.05.21
C02	Highway Drainage Amended	SMC	ANT	07.05.21
C01	Construction Issue	KA	ANT	13.01.21
Rev	Description	By	Ckd	Date



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Client



Project

Hoyland

Title

Highway Drainage
Layout
(Sheet 3 of 5)

RPS Project Number

NK020040

Task Team

Manager
EC

39

Status

A5 (Approved for Construction)
 Document Number:

HOVI A-BPS-SI-XX-DB-CB-51

Project Code - Originator - Zone - Level - Type - Role - Drawing

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$\mathbf{F} = \mathbf{g} \cdot \mathbf{r} = \mathbf{g} \cdot \mathbf{r} \cdot \mathbf{e}_r$

ate Created
08.07.2020

Task Information
Manager

BMC

207

French Drain Size Calculation
Allowance for a 150mm pipe within an aggregate area of 450mm wide x 600mm deep(Max water storage depth).

Equivalent pipe size = $0.6 \text{ m} \times 0.45 \text{ m} - (\pi \times 0.075 \text{ m}^2) = 0.252 \text{ m}^2$
 Area of porosity within the aggregate = $0.252 \text{ m}^2 \times 0.3 = 0.0756 \text{ m}^2$
 Full area = $0.0756 \text{ m}^2 + (\pi \times 0.075 \text{ m}^2) = 0.0933 \text{ m}^2$

Equivalent pipe diameter for french drain = $2 \times \sqrt{0.0933/\pi} = 0.344\text{mm}\varnothing$

Connection to existing
mm Land drain.
24.21m

Existing Catchment currently connected to this land drain is 28.665Ha. This is made up of field drains and a private surface water sewer collecting from parts of Hoyland and Sheffield Road.

The remaining catchment following c 3.22Ha. This is made up of 3.22Ha of green embankments and toe drains.

This equates to a reduction in Land drainage flow in the existing drainage network of -89%.

- Reprofile the existing field drain ditch to drain the embankment toe
Ditch to be minimum:
0.5m deep
0.3m base
1:2 side slopes

10m SCALE 1:500