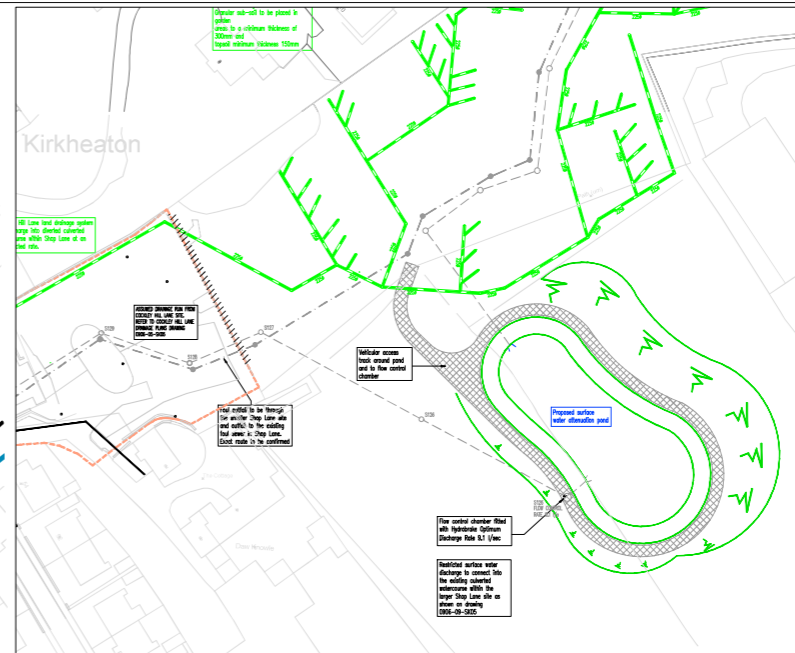


This Drawing shows proposed drainage only, for details of culvert diversions, flood routing and further drainage investigation refer to Drawing 906/09/SK7



N O T E S

ATTENTION IS DRAWN TO THE REQUIREMENTS OF THE CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS 2015 AND THE DUTIES AND RESPONSIBILITIES CONTAINED THEREIN

- K E Y**
- Storm Water Manhole
 - Foul Water Manhole
 - Storm Water Sewer
 - Foul Water Sewer
 - Existing Combined Sewer
 - Existing Culverted Watercourse
 - Diverted Culverted Watercourse
 - CHL Storm Water Sewer
 - CHL Foul Water Sewer
 - Site Boundary
 - CHL Land Drainage
- DRAINAGE STRATEGY NOTES**

1. All proposals are subject to detailed investigation to prove the route, size, depth and structural condition of any culverted watercourse.
2. All proposals are subject to the approval of all regulatory bodies.
3. Survey is based on a 2016 topo survey before demolition. Contours within the site are approximate only and need to be resurveyed.

APPRAISAL NOTES

SURFACE WATER DRAINAGE

1. This appraisal assumes that infiltration drainage has been discounted as a viable option.
2. Allowable discharge rate for the main site has been calculated as 7.2 l/sec based on the Kirklees MDC consultation that a restricted rate of 5 l/s/ha should be applied. Discharge from the small site has been assumed unrestricted to balance the greenfield rate applied to the Main site. The connection from the Cockey Hill site is limited at greenfield and is shown in detail on separate 0905-05 drawings.
3. Surface water attenuation is up to and including all storms for 1 in 100 year return period + 30% allowance for climate change. An urban creep factor of 10% has been added for storms up to 30 years.
4. Storage requirements are met by a tank with a plan area 136.5m² and a height of 1.8m and a tank of 87.5m² and height 1.6m. Exact details are subject to detailed design and outcome of drainage surveys. The storage tank has been shown with an easement of 2m around the tank.
5. Due to the topography of the site, it is thought that an underground tank to accommodate the 1 in 100 year + 30% storm events would be a preferred option in lieu of a pond or detention basin. (THIS IS SUBJECT TO THE APPROVAL OF ALL PARTIES)
6. The Outfall from the Cockey Hill Lane Site is proposed to connect into the drainage system and thence discharge into the culvert watercourses.
7. Level and exact location of outfall to watercourse within the Shop Lane site is unknown but assumed to be 1000mm deep. The exact route, level and structural condition upstream and downstream will need to be determined before detailed design can be carried out.

FOUL DRAINAGE

1. The foul flows from the Cockey Hill Lane site will discharge to the new drainage system and thence into the Combined sewer in Shop Lane.
2. The connection to the existing combined sewer may be outside of the site boundary. If so then the adjacent landowner will have to be part to the Section 104 Agreement or Grant a Deed of Easement. Alternatively the off site element of the works can be requisitioned under Section 98 of the Water Industry Act 1991.
3. Unless shown otherwise all foul sewers are 150mm ϕ .
4. The Outfall is proposed to connect into the culvert watercourses in the Shop Lane Site.
5. The exact route, level and structural condition upstream and downstream of sewers and culverts will need to be determined before detailed design can be carried out.

EXISTING SEWERS

1. There are existing 150mm ϕ and 225mm ϕ combined sewers within the site boundary. These may require diverting to suit the proposed retaining wall layout for which a sewer diversion agreement under Section 185 of the Water Industry Act 1991 will be required.
2. A CCTV survey of the existing drainage will be required to prove connections to the sewer which will have to be accommodated into the diversion works.

GENERAL NOTES

1. Easements will be required to all sewers outside of adoptable highways. Easement to be 3m either side of pipes or 2m from the edge of the storage tank. (SUBJECT TO YORKSHIRE WATER APPROVAL)

E	MD	04.01.23	Drainage amended to suit LLFA comments	MI	MI
D	AT	05.10.21	Layout G.		
C	AT	23.03.21	Existing culvert info added		
B	AT	02.03.21	Levels updated, culvert moved		
A	AT	04.02.21	Levels updated, existing culvert		
/	AT	22.01.21	Issued for information	MI	
Rev	By	Date	Revision	Chk	Apvd

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TITLE
DRAINAGE LAYOUT

PROJECT
SHOP LANE, KIRKHEATON

CLIENT
HARTLEY PROPERTIES

DRAWING STATUS
PRELIMINARY

Scale: 1:500 @ A1 | Date: JAN 21 | Drawn: AT | Chk: MI

Dwg. No. 0906/09/SK5 | Rev E

DRAINAGE APPRAISAL		
Impermeable Area	0.57 ha	Based on Site Layout G 2021
Site Area	1.59 ha	
Discharge Rate	11.0 l/sec	As per LLFA email from Paul Farndale confirming 11.0 l/s from the Shop Lane site.
Climate Change	30%	Default LLFA Requirements and confirmed by Paul Farndale
Urban Creep	N/A	Default LLFA values
CV Values	0.75 / 0.84	Default LLFA values
Attenuation Size	205.2 m ³	Concrete adoptable tank depth @ 1.8 m depth

Design parameters are based on the latest information available and will be subject to change at detailed design / planning approval stage

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES