Haigh Huddleston & Associates
Civil & Structural Engineering Consultants
Firth Buildings, 99 - 101 Leeds Road, Dewsbury, WF12 7BU
t 01924 464342 f 01924 450662 e trevor.haigh@haighhuddleston.co.uk

Our Ref: E17/6960/MD/003

7th October 2020

FAO – Rosie Carr
C/O Marcus Walsh
Martin Walsh Architectural
Firth Buildings
99-103 Leeds Road
Dewsbury
WF12 7BU

Dear Madam,

Re: Proposed Development at Clough House, Leeds Road, Batley

Further to your request for the drainage proposals for the above development, please find enclosed a copy of our drawing No. E17/6960/18/01 showing the existing impermeable area and existing drainage runs for the development.

Existing Site

From the site visit, the majority of the site area is grassed with no drainage. The two garages/sheds to the northwest of the main building had roof drainage with downpipes that discharged directly to the grassed areas.

The driveway serving the existing property has no gullies or aco drain serving it. Instead the surface water run-off falls southwards towards Leeds Road where it will enter the adopted sewer system via the existing road gullies.

Positive drainage has been proved for the main building, the smaller building directly north of this and the area of hardstanding between them. In addition to this, a connection was proved leading to the former piggeries that were to the north east of Clough House, shown on the attached historical plan. The private drainage runs to the east and south-east to the eastern-most corner of the site, see drawing E1769601801 for details. From here the drainage leaves the site to the south-east and discharges to the adopted 300mm diameter foul sewer recorded in Leeds Road.

The existing combined lateral connection from the site is shown connecting to the 300mm diameter “foul” sewer located in Leeds Road. In addition to this, adopted combined lateral connections are shown from the residential development to the west of the site, and the residential properties to the south of Leeds Road, as shown on the attached sewer records. We would therefore consider that the existing 300mm diameter “foul” sewer has been mis-labelled as foul and should be shown as combined.

From consulting drawing E17/6960/18/01 we see the contributing impermeable areas are:

Positively drained area:	357m^2
Surface flow to adopted sewers:	554m^2

Taking into account for 50% loss from surface flow to surrounding ground

Total impermeable area: 357 + (0.5 x 554) = 634m^2

= **0.063ha**

Based on a 50mm/hr rainfall intensity, discharge rates from the existing site for the 1 in 1 year storm event can be calculated as follows:

2.78 x 0.063ha x 50mm/hr = **8.75 l/s**

Proposed Development

In accordance with Yorkshire Water policy, we would therefore recommend that the proposed discharge rate for the development is a 30% reduction of existing which works out at:

8.75 x 0.7 = **6.1 l/s**

The proposed drainage/sewer system for the development should therefore be designed with a maximum discharge rate of 6.1 l/s with attenuation provided to cater for storm events up to 1 in 100 year + 30% climate change. This will need to be agreed with the Lead Local Flood Authority and Local Water Authority.

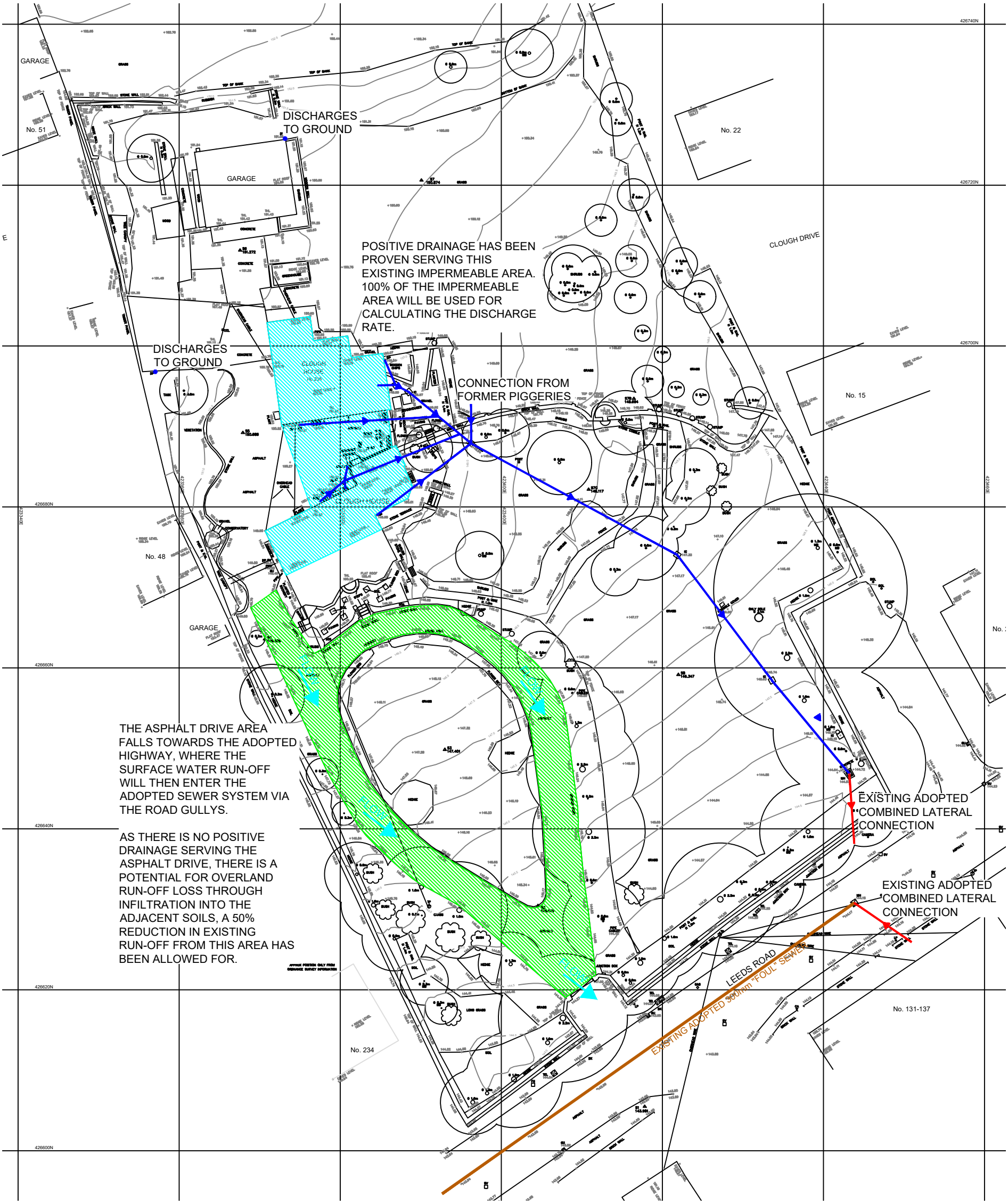
I trust the above and attached are sufficient for your current requirements. However should you wish to discuss the above please do not hesitate to contact me.

Yours Faithfully

REDACTED

MICHAEL DEAN BSc HND
m.dean@haighhuddleston.co.uk

Enclosures



THE ASPHALT DRIVE AREA FALLS TOWARDS THE ADOPTED HIGHWAY, WHERE THE SURFACE WATER RUN-OFF WILL THEN ENTER THE ADOPTED SEWER SYSTEM VIA THE ROAD GULLYS.

AS THERE IS NO POSITIVE DRAINAGE SERVING THE ASPHALT DRIVE, THERE IS A POTENTIAL FOR OVERLAND RUN-OFF LOSS THROUGH INFILTRATION INTO THE ADJACENT SOILS, A 50% REDUCTION IN EXISTING RUN-OFF FROM THIS AREA HAS BEEN ALLOWED FOR.

KEY:

- POSITIVELY DRAINED SURFACE AREA - 357m²
- AREA CONTRIBUTING TO SURFACE FLOW TO ADOPTED SEWER - 554m²

DISCHARGE RATE CALCULATIONS

TOTAL CONTRIBUTING IMPERMEABLE AREA:
357 + (0.5 x 554) = 634m²
= 0.063ha

EXISTING DISCHARGE RATE:
2.78 x 50 x 0.063 = 8.75 l/s

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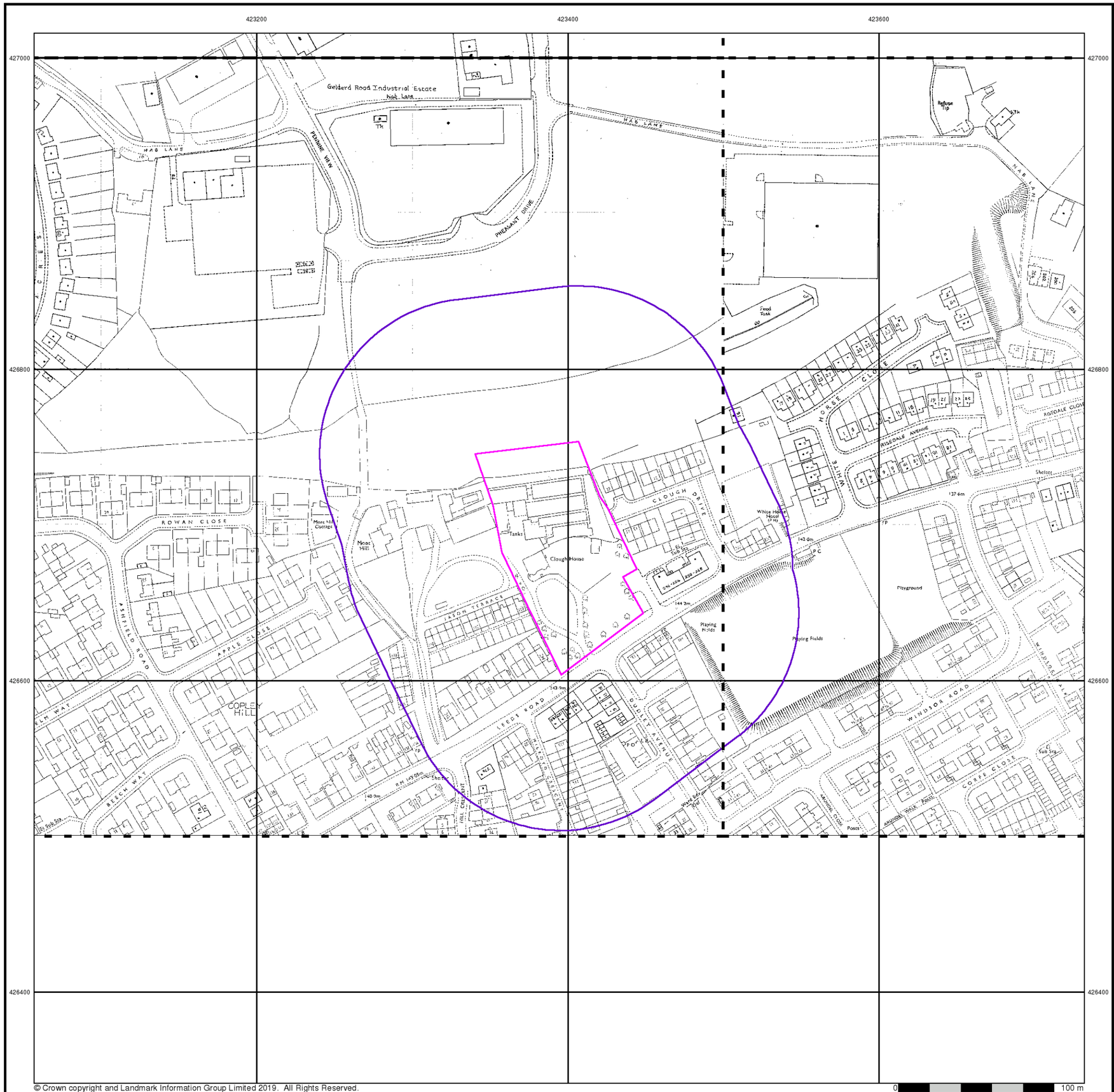
Client	ROSIE CARR
Project	CLOUGH HOUSE, LEEDS ROAD
Detail	EXISTING IMPERMEABLE AREA
Scale / Dwn / Chkd / Date / Dwg No.	1:500 / MD / / Oct'20 / E17/6960/18/01

PRELIMINARY ISSUE



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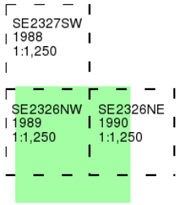
Additional SIMs

Published 1988 - 1990

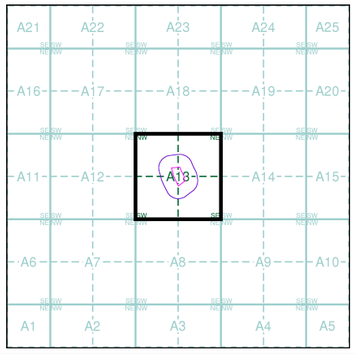
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	226382729_1_1
Customer Ref:	44688
National Grid Reference:	423390, 426680
Slice:	A
Site Area (Ha):	0.93
Search Buffer (m):	100

Site Details

Site at 423390, 426690

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Fax: 0844 844 9951
Web: www.envirocheck.co.uk

423202 : 426557	Map Name : SE2326NW	Title	Partial Key Foul Sewer = F Combined Sewer = C Surface Water Sewer = SW Trade Sewer = TD Partially Separate = PS
Yorkshire Water, PO Box 500, Halifax Road, Bradford BD6 2LZ Contact Name : YorMap Advisor C ROBERTS Contact Tel : 87 2582		Notes	This plan is furnished as a general guide only and no warranty as to its correctness is given or implied. This plan must not be relied upon in the event of excavations or other works made in the vicinity of public sewers. No house or property connections are shown.
			Date Req : 13/06/2017, 10:45:50 Source : Sewer Network Enquiry
			Date Gen : 13/06/2017, 10:46:29

UPN: Undefined Originator: C ROBERTS, YorMap, 87 2582