SHEEPY PARISH COUNCIL

THE VILLAGES OF

Sheepy Magna, Sheepy Parva, Sibson, Wellsborough, Upton, Pinwall and Cross Hands

*Sheepy Parish Council Sibson Flooding Issue CCTV Survey December 2022 (updated 01 August 2023)**

** Section numbers added to Table 1*

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1.0 Background

The Parish Council like many of its parishioners is concerned about flooding within the Parish. One of the areas of concern over recent years is the flooding that occurs on Sheepy Road Sibson; this has affected a number of properties within this area during times of heavy rainfall (diagram 1).

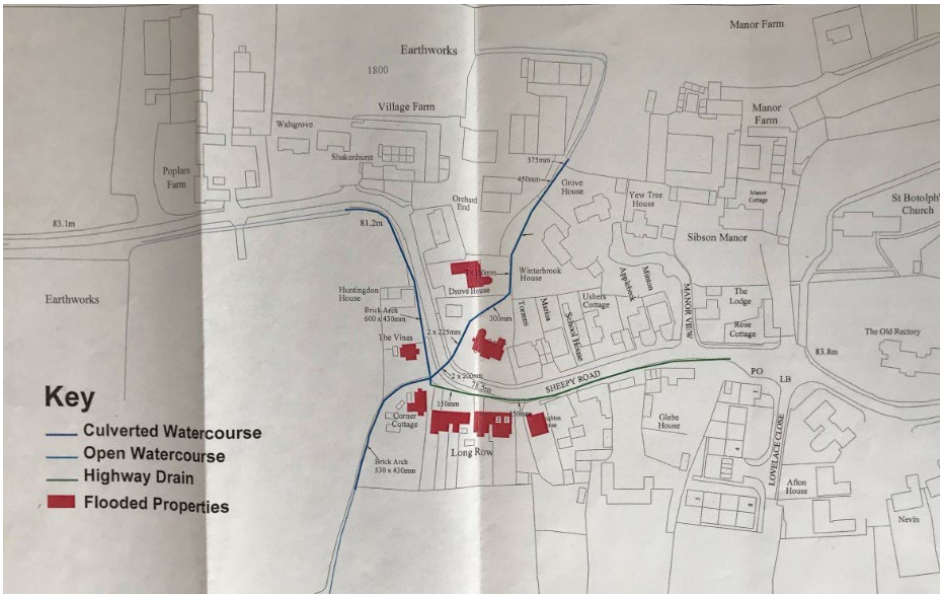

Diagram 1. Properties that have experienced flooding on Sheepy Road, Sibson (HBBC report, 2002).

After a severe flooding event during Christmas of 1998, the Environment Agency (EA) and Hinckley and Bosworth Borough Council (HBBC) commissioned two reports (diagrams 2 and 3) to investigate the cause of the flooding and to recommend solutions to hopefully resolve the flooding issue in the area.

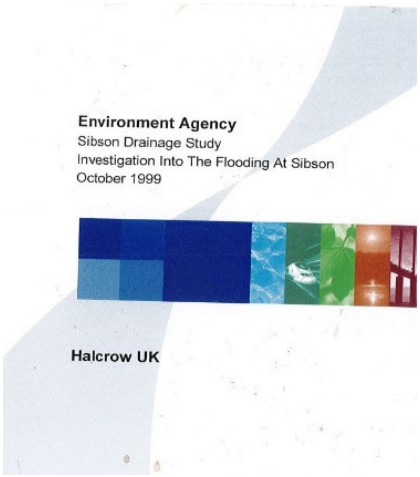

Diagram 2. EA Report, October 1999.

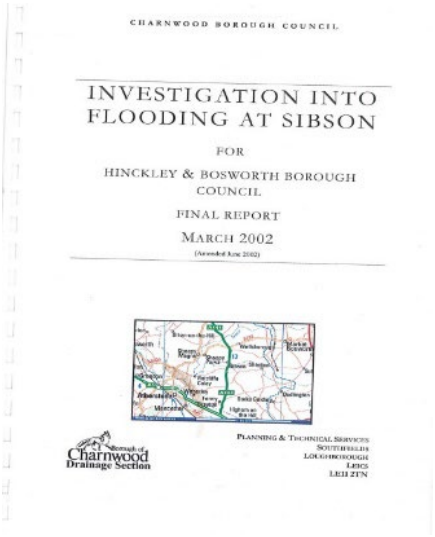

Diagram 3. HBBC Report, March 2002.

The reports showed that the flooding is caused by overland flow of flood water emanating from manholes in the gardens of Willowbrook House (identified as Winterbrook House on the diagrams) and Swiss Cottage. The flood water flows were unable to re enter the drainage system on Sheepy Road and consequently several properties were flooded.

The reports recommended that the system be thoroughly cleansed, and that the highway drainage should be improved. It was also recommended that changes/improvements be made to the drainage pipework and highway drainage. These were presented as a number of options and schemes (diagram 4): Scheme 1 aimed to provide protection for up to a 1 in 20-year flood event and Scheme 1 plus Scheme 2 (with all options implemented) to provide protection against a 1 in 100-year flood event.

The Borough Council implemented Scheme 1 only and this led to 20m of the twin 150mm diameter pipe passing through Willowbrook House and Drove House properties being replaced, 25m of the 300mm pipe within Swiss Cottage property being replaced by 375mm pipe plus associated manhole construction/improvement carried out.

Even though the remedial work was carried out, a flooding problem still exists, with some of the parishioners using pumps (purchased at their own expense) to intercept and remove surface water from the system during heavy rainfall events and discharging the water to adjacent fields. The need for this action is increasing in frequency. This coupled with recent proposals for new nearby development in the village has led to increasing parishioner concern about future flooding of their properties and increased risk.

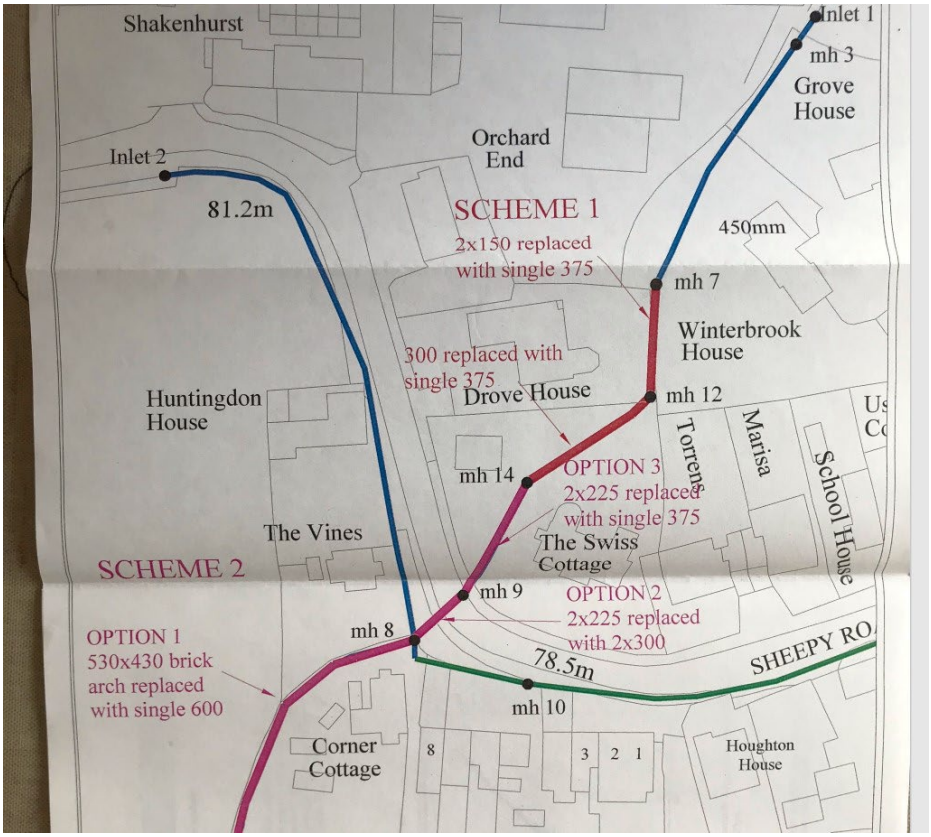

Diagram 4. Recommended Options contained in HBBC report (2002).

2.0 Proposed Works

At the Sheepy Parish Council meeting in August 2022 it was agreed that the Council would commission a specialist contractor to survey the drainage system to ascertain the structural integrity and serviceability of the pipework and also to confirm the size of the pipework. The survey also aimed to confirm what works had previously been carried out. The commission was awarded to OnSite Central Ltd, an experienced and NQA accredited company.

The agreed extent of the survey work can be seen in Diagram 5.

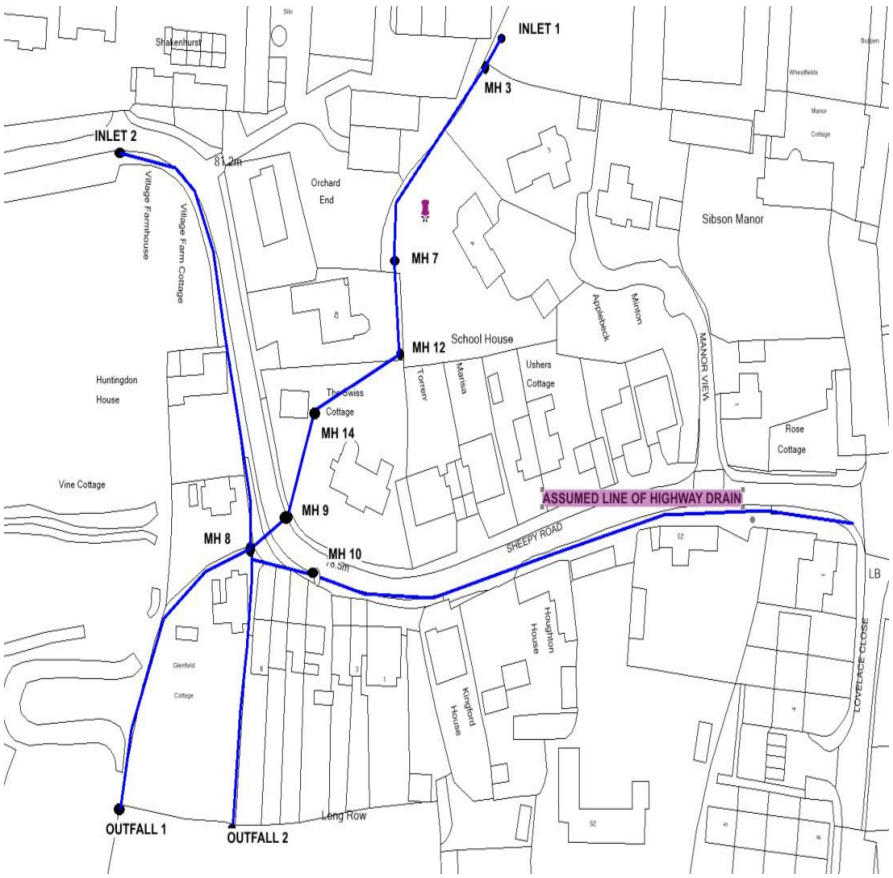

Diagram 5. Extent of the survey work (HBBC report, 2002).

3.0 Findings and Outcomes

The CCTV survey was carried out on the 26th October 2022 and the Parish Council would like to thank the parishioners of Sibson in the survey area for their co-operation and also to those parishioners who helped gain access to all of the properties concerned to enable the survey to take place effectively and efficiently.

The findings of the CCTV survey are summarised in Diagram 6 and Table 1.

Diagram 7 shows further details of the pipes which have structural or serviceability issues that require remediation and the recommended urgency of the works.

The survey has also confirmed all of the pipe sizes, which indicates that the Scheme 1 recommended work was carried out with the pipe size from MH14 to MH3 now 375mm diameter. None of the Scheme 2 works appear to have been carried out.

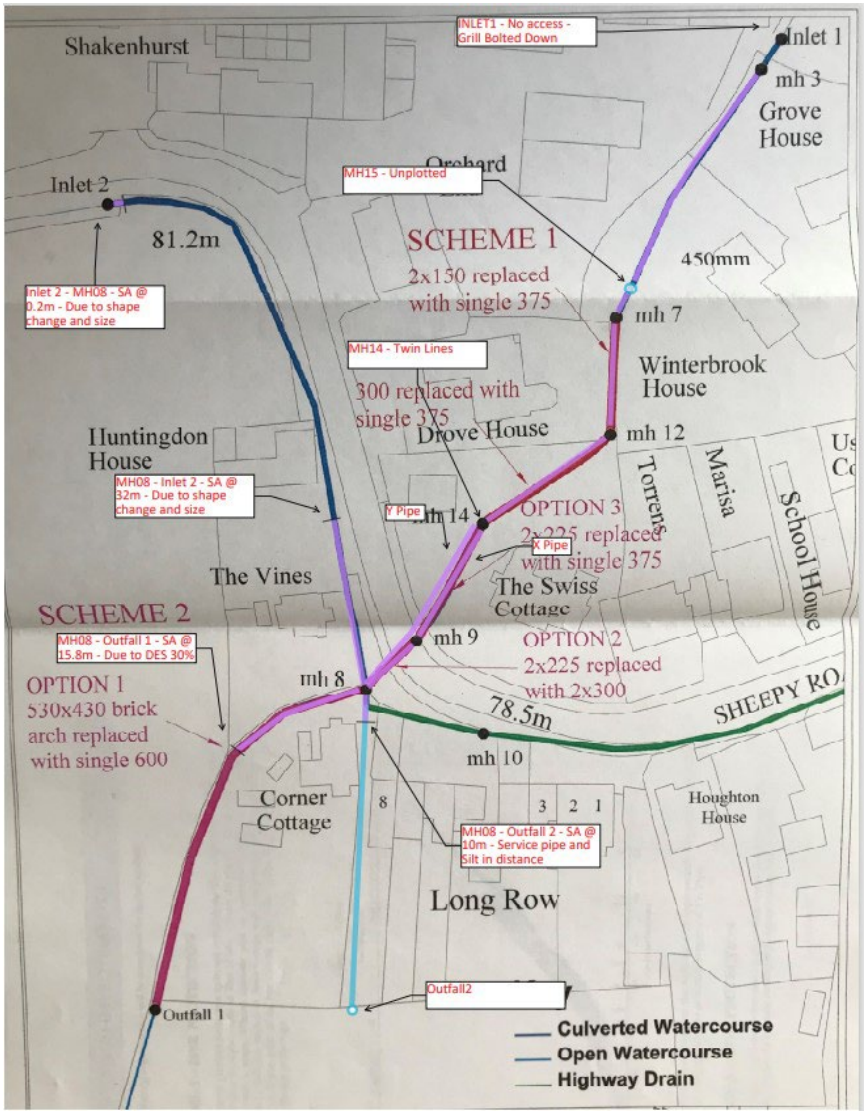

Diagram 6. CCTV Survey results (2022). Key: MH – inspection chamber, SA – survey aborted.

Table 1. CCTV Survey summary results (Sheepy Parish Council investigation, 2022).

Pipe Length	***Section***	***Diameter***	***Findings***
MH14x to MH9	*1*	*225mm*	*No Issues*
MH8 to Outfall 1	*2*	*490mm*	*Displaced and missing bricks, Fine roots and survey was abandoned at 15.8m due to 30% debris in pipe*
MH8 to Outfall 2	*3*	*460mmx430mm*	*5% debris, intruding connection, Survey was abandoned at 1m due to a Service Pipe obstruction*
MH8 to Inlet 2	*4*	*600mm x 580mm*	*5% debris displaced brick, intruding connection, Fine roots. Survey abandoned at 32m due to change in shape of sewer*

Pipe Length	*Section*	*Diameter*	*Findings*
Inlet 2 to MH8	*5*	*300mm*	*Survey abandoned at 0.2m due to change in material*
MH14 to MH12	*6*	*375mm*	*No Issues*
MH12 to MH7	*7*	*375mm*	*No Issues.*
MH7 to MH15	*8*	*375mm*	*No Issues*
MH15 to MH3	*9*	*375mm*	*Broken Pipe and mass roots*
MH14x to MH9	*10*	*225mm*	*No Issues*
MH14y to MH9	*11*	*225mm*	*No Issues*
MH9x to main	*12*	*225mm*	*Broken pipe, connects to main without manhole at 11.4m*
Mh9y to main	*13*	*225mm*	*Settled deposits, connection to main with manhole at 11.4m*

Table 2. Pipes/culverts with defects identified during the 2022 CCTV survey that require remediation as recommended by OnSite Central Ltd.

STRUCTURAL DEFECTS

Grade 3; Best practice suggests consideration to be given to repair in the medium term.
Grade 4; Best practice suggests consideration to be given to repair to avoid potential collapse.
Grade 5; Best practice suggests this pipe is at risk of collapse at any time; urgent consideration should be given to repair to avoid collapse.

Structural Defects

Section	PLR	Grade	Fault Description
2	MH08 X	4	Missing bricks at 2 o'clock
			Displaced bricks from 1 to 2 o'clock
			Displaced bricks from 11 to 1 o'clock, Start
			Missing bricks from 11 to 12 o'clock
			Displaced bricks from 11 to 1 o'clock, Finished
			Settled deposits fine 30% cross-sectional area loss
4	INLET 2 X	4	Missing bricks from 11 to 1 o'clock
9	MH03 X	4	Broken pipe from 10 to 12 o'clock - Remark: AT JOINT
			Broken pipe from 7 to 10 o'clock - Remark: AT JOINT
12	MH09 X X	4	Broken pipe from 9 to 6 o'clock - Remark: AT JOINT

SERVICE / OPERATIONAL DEFECTS

Grade 3; Best practice suggests consideration to be given to maintenance activities in the medium term.
Grade 4; Best practice suggests consideration to be given to maintenance to avoid potential blockage.
Grade 5; Best practice suggests this pipe is at risk of backing up / causing flooding.

Service Defects

Section	PLR	Grade	Fault Description
2	MH08 X	4	Missing bricks at 2 o'clock
			Displaced bricks from 1 to 2 o'clock
			Displaced bricks from 11 to 1 o'clock, Start
			Missing bricks from 11 to 12 o'clock
			Displaced bricks from 11 to 1 o'clock, Finished
			Settled deposits fine 30% cross-sectional area loss
3	MH08 X	5	Other obstacles, external pipe or cable from 9 to 4 o'clock 50% cross-sectional area loss
4	INLET 2 X	5	Other obstacles, external pipe or cable from 7 to 5 o'clock 5% cross-sectional area loss
9	MH03 X	3	Roots mass 10 cross-sectional area loss, at joint
			Fracture circumferential from 10 to 12 o'clock, at joint
13	MH09Y X	4	Settled deposits coarse 20% cross-sectional area loss

5.0 Recommendations

The Parish Council believes that all the pipework involved is owned and maintained by Leicestershire County Council and therefore any issues should be resolved by this authority as

the Lead Local Flood Authority (LLFA). It is therefore recommended that Sheepy Parish Council informs Leicestershire County of the report's findings and recommends that the remedial work is carried out as follows:

MH8 to Outfall 1 – Pipe is to be cleansed and a root cut undertaken, the remaining (unsurveyed) section of the pipe is then surveyed to ascertain its condition and further remedial work undertaken if necessary; a full reline of the pipe maybe required.

MH8 to Outfall 2 – A service pipe is visibly obstructing the surface water drainage pipe; this is to be removed and diverted with the remaining (unsurveyed) section of the pipe then surveyed to ascertain its condition and further remedial work undertaken if necessary.

Inlet 2 to MH8 - A service pipe is visibly obstructing the surface water drainage pipe, this is to be removed and diverted with the remaining (unsurveyed) section of the pipe then surveyed to ascertain its condition and further remedial work undertaken if necessary. Patch lining will be required where bricks are missing.

MH15 to MH 3 – Full cleansing of pipe and root cutting needs carrying out, patch lining where the pipe is also broken

MH9x,y to MH8 – Full cleansing of the pipework and patch lining where pipe is broken.

The Parish Council also recommends that the LLFA gives consideration to implementing the Scheme 2 improvements to further reduce flood risk thereby increasing protection of residential properties and infrastructure in the area and to contribute to the improved well-being of parishioners. As the original reports and recommendations were produced around 20 years ago, it is further recommended that hydraulic modelling is updated by the LLFA to incorporate the most recent climate data and the effects of climate change. This would ensure that the most effective measures are implemented and adequate protection provided for residents both now and should there be any approved new development in the area.

END