



Drainage Compliance Note

Davidsons

Lutterworth Road, Burbage Phase 2

July 2025

Ref: PJS21-065-DOC-02

As part of the full planning application for the Phase 2 development of Lutterworth Road, Burbage (ref: 24/00139/FUL) for the provision of an additional 23 homes, the Lead Local Flood Authority (LLFA) has provided consultation feedback recommending the following condition.

- 1. No development approved by this planning permission shall take place until such time as a surface water drainage scheme has been submitted to, and approved in writing by, the Local Planning Authority. The development must be carried out in accordance with these approved details and completed prior to first occupation.*

This condition has been recommended by the LLFA and have requested further clarification on how phase 2 hydraulically functions in combination with phase 1. Their pre application feedback states the following

- 1. The hydraulic calculations provided for Networks 3 and 4 have been modelled in isolation with a free-flowing outfall. It is not considered representative of the real-life conditions to model the network without taking into consideration Phase 1. Downstream water levels will have an impact upstream. Please re-run the Phase 1 model, incorporating the Phase 2 drainage and provide the latest Section 104 drainage drawing for Phase 1.*
- 2. The model indicates flooding during the 1 in 100 year (plus 40% climate change) scenario, yet the water level is lower than the cover levels shown on the Section 104 drawing. Please can you provide the manhole schedule output for the model or provide reasoning as to why the model is indicating flooding when water is below cover level. A flood flow routing plan is required and if flooding occurs by design during the 1 in 100 year (plus 40% climate change) scenario, then please provide an indicative area where this water will be stored on the plan.*
- 3. Finally, please provide some commentary on whether the attenuation basin provided for Phase 1 is appropriately sized or whether amendments are required to retain the necessary freeboard and approved runoff rate. If amendments are required, please provide a revised cross-sectional detail of both the attenuation basin and/or the flow-control chamber*

The purpose of this drainage compliance note is to address the above points by hydraulically modelling the combined network to assess the impact and provide suitable evidence that the system performs to a satisfactory standard.

The LLFA requested in point 1 that the Phase 2 hydraulic model be integrated into the existing Phase 1 system in order to assess downstream water levels and their impact on the upstream network. In response, we have produced a combined hydraulic model. Supporting calculations can be found in **Appendix 1**.

To support this, a surface water drainage schematic has been included in **Appendix 2**, aligning pipe coding with the revised model inputs. The results demonstrate that the composite model of phase 1 & 2 networks performs within acceptable standards, with no flooding during a 1-in-30-year storm event.

As part of the updated modelling and addressing point 2, localised flooding in a 1-in-100-year storm event occurs at chambers S44, S46, and S47 to a volume of less than 6m³ combined. Flooding at S44 and S46 will be directed to the adjacent open space near the shared drive and away from residential plots. Flooding at S47 will be contained within the highway and directed to a low point south of Phase 2, where it will re-enter the surface water system at a low point adjacent to MH S8. Overland flow routing is shown in **Appendix 3** to support this.

The LLFA also noted discrepancies between the cover levels used in the Phase 2 modelling and those on the S104 drawings. This has been addressed by updating the model cover levels to align with the latest design. As a result, no further action is required on this matter.

Point 3 relates to the performance of attenuation basins in Phase 1, following the inclusion of the Phase 2 drainage flows. During the original Phase 1 design, an allowance was made for Phase 2 runoff at the connection points. The attenuation basins were sized accordingly.

Following the combined hydraulic modelling, the basins within Phase 1 continue to perform within design parameters. The maximum water level does not exceed 74.5mAOD and the discharge rate remains at 21.9 l/s as set out within the initial design. No further action is required regarding the attenuation basins.

To Conclude, following the hydraulic assessment, it is confirmed that The Phase 1 water level have a negligible effect on the phase 2 surface water system with minor discrepancies in the in the cover levels now resolved. Flooding that occurs with the system is sufficiently managed on site and poses no threat to plots. The attenuation basins perform in line with original design expectations.

Therefor it is believed that the combined model and evidence provided in this technical note set out should satisfy the LLFA's pre-application concerns and should therefore no longer require a condition relating to drainage.

APPENDIX 1 – MicroDrainage Calculations



Micro
Drainage

PJS Consulting Engineers Limited		Page 4																				
Unit 4 Winking Hill Farm Kingston-on-Soar, Nottingham Nottinghamshire NG11 0DP	Lutterworth Road Burbage																					
Date 09/07/2025 12:44	Designed by david.carey																					
File Phase 1 & 2 composite St...	Checked by																					
Innovyze		Network 2019.1																				
<u>Synthetic Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FSR</td> <td>Profile Type</td> <td>Summer</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Region</td> <td>England and Wales</td> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>M5-60 (mm)</td> <td>19.600</td> <td>Storm Duration (mins)</td> <td>30</td> </tr> <tr> <td>Ratio R</td> <td>0.402</td> <td></td> <td></td> </tr> </table>			Rainfall Model	FSR	Profile Type	Summer	Return Period (years)	100	Cv (Summer)	0.750	Region	England and Wales	Cv (Winter)	0.840	M5-60 (mm)	19.600	Storm Duration (mins)	30	Ratio R	0.402		
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Online Controls for Surface Water Network Orifice Manhole: S41, DS/PN: 4.003, Volume (m³): 39.2 Diameter (m) 0.150 Discharge Coefficient 0.600 Invert Level (m) 110.840 Orifice Manhole: S43, DS/PN: 4.005, Volume (m³): 110.2 Diameter (m) 0.150 Discharge Coefficient 0.600 Invert Level (m) 107.950 Hydro-Brake® Optimum Manhole: S35, DS/PN: 1.015, Volume (m³): 9.6 Unit Reference MD-SHE-0201-2190-1400-2190 Design Head (m) 1.400 Design Flow (l/s) 21.9 Flush-Flo™ Calculated Objective Minimise upstream storage Application Surface Sump Available Yes Diameter (mm) 201 Invert Level (m) 106.100 Minimum Outlet Pipe Diameter (mm) 225 Suggested Manhole Diameter (mm) 1500 <table><tr><th>Control Points</th><th>Head (m)</th><th>Flow (l/s)</th><th>Control Points</th><th>Head (m)</th><th>Flow (l/s)</th></tr><tr><td>Design Point (Calculated)</td><td>1.400</td><td>21.9</td><td>Kick-Flo®</td><td>0.936</td><td>18.1</td></tr><tr><td>Flush-Flo™</td><td>0.425</td><td>21.9</td><td>Mean Flow over Head Range</td><td>-</td><td>18.8</td></tr></table> The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated <table><tr><th>Depth (m)</th><th>Flow (l/s)</th><th>Depth (m)</th><th>Flow (l/s)</th><th>Depth (m)</th><th>Flow (l/s)</th><th>Depth (m)</th><th>Flow (l/s)</th></tr><tr><td>0.100</td><td>6.9</td><td>1.200</td><td>20.4</td><td>3.000</td><td>31.5</td><td>7.000</td><td>47.5</td></tr><tr><td>0.200</td><td>19.0</td><td>1.400</td><td>21.9</td><td>3.500</td><td>34.0</td><td>7.500</td><td>49.1</td></tr><tr><td>0.300</td><td>21.5</td><td>1.600</td><td>23.3</td><td>4.000</td><td>36.2</td><td>8.000</td><td>50.7</td></tr><tr><td>0.400</td><td>21.9</td><td>1.800</td><td>24.7</td><td>4.500</td><td>38.3</td><td>8.500</td><td>52.2</td></tr><tr><td>0.500</td><td>21.8</td><td>2.000</td><td>26.0</td><td>5.000</td><td>40.3</td><td>9.000</td><td>53.6</td></tr><tr><td>0.600</td><td>21.5</td><td>2.200</td><td>27.2</td><td>5.500</td><td>42.2</td><td>9.500</td><td>55.1</td></tr><tr><td>0.800</td><td>20.3</td><td>2.400</td><td>28.3</td><td>6.000</td><td>44.1</td><td></td><td></td></tr><tr><td>1.000</td><td>18.7</td><td>2.600</td><td>29.4</td><td>6.500</td><td>45.8</td><td></td><td></td></tr></table> ©1982-2019 Innovyze			Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)	Design Point (Calculated)	1.400	21.9	Kick-Flo®	0.936	18.1	Flush-Flo™	0.425	21.9	Mean Flow over Head Range	-	18.8	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	0.100	6.9	1.200	20.4	3.000	31.5	7.000	47.5	0.200	19.0	1.400	21.9	3.500	34.0	7.500	49.1	0.300	21.5	1.600	23.3	4.000	36.2	8.000	50.7	0.400	21.9	1.800	24.7	4.500	38.3	8.500	52.2	0.500	21.8	2.000	26.0	5.000	40.3	9.000	53.6	0.600	21.5	2.200	27.2	5.500	42.2	9.500	55.1	0.800	20.3	2.400	28.3	6.000	44.1			1.000	18.7	2.600	29.4	6.500	45.8		
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Storage Structures for Surface Water Network

Tank or Pond Manhole: S33, DS/PN: 1.013

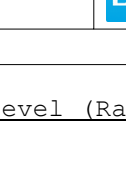
Invert Level (m) 106.400

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	175.0	1.200	638.0

Tank or Pond Manhole: S35, DS/PN: 1.015

Invert Level (m) 106.100

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	791.8	0.500	992.5	1.000	1206.7	1.500	1434.5
0.100	830.9	0.600	1034.2	1.100	1251.2	1.600	1481.7
0.200	870.4	0.700	1076.5	1.200	1296.2	1.700	1529.3
0.300	910.6	0.800	1119.4	1.300	1341.7		
0.400	951.3	0.900	1162.8	1.400	1387.8		

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Surface Water Network

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	0.000
Hot Start Level (mm)	0	Inlet Coefficient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Offline Controls	5	Number of Time/Area Diagrams	0
Number of Online Controls	3	Number of Storage Structures	2	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.401
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	19.600	Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	300.0	DVD Status	OFF
Analysis Timestep	Fine	Inertia Status	OFF
DTS Status	OFF		

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 960, 1440
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
1.000	S4	15 Winter	1	+0%	100/15 Summer				113.916
1.001	S5	15 Winter	1	+0%	100/15 Summer				112.714
1.002	S6	15 Winter	1	+0%	30/15 Summer				112.039
1.003	S7	15 Winter	1	+0%	100/15 Summer				111.725
2.000	S46	15 Winter	1	+0%	30/15 Winter	100/15 Summer			115.613
2.001	S47	15 Winter	1	+0%	30/15 Summer	100/15 Summer			115.004
2.002	S48	15 Winter	1	+0%	100/15 Summer				114.429
2.003	S1	15 Winter	1	+0%	100/15 Summer				113.422
2.004	S2	15 Winter	1	+0%	100/15 Summer				112.761
2.005	S3	15 Winter	1	+0%	100/15 Summer				111.593
1.004	S8	15 Winter	1	+0%	30/15 Summer				111.261
1.005	S9	15 Winter	1	+0%	100/15 Summer				111.026
1.006	S10	15 Winter	1	+0%	100/15 Summer				110.307
1.007	S11	15 Winter	1	+0%	100/15 Summer				108.852
1.008	S12	15 Winter	1	+0%	30/15 Summer				107.207
3.000	S13	15 Winter	1	+0%					110.643
3.001	S14	15 Winter	1	+0%					109.537

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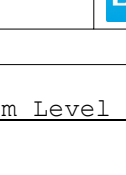
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Unit 4 Winking Hill Farm Kingston-on-Soar, Nottingham Nottinghamshire NG11 0DP	Lutterworth Road Burbage	
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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for
Surface Water Network

PN	US/MH Name	Surcharged		Flooded		Pipe		Level Exceeded
		Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	Status	
1.000	S4	-0.159	0.000	0.19		14.3	OK	
1.001	S5	-0.161	0.000	0.17		15.9	OK	
1.002	S6	-0.106	0.000	0.55		19.7	OK	
1.003	S7	-0.290	0.000	0.12		34.1	OK	
2.000	S46	-0.132	0.000	0.34		17.1	OK	3
2.001	S47	-0.111	0.000	0.51		30.5	OK	2
2.002	S48	-0.206	0.000	0.21		41.4	OK	
2.003	S1	-0.253	0.000	0.23		52.4	OK	
2.004	S2	-0.254	0.000	0.23		68.1	OK	
2.005	S3	-0.312	0.000	0.20		77.7	OK	
1.004	S8	-0.189	0.000	0.62		121.7	OK	
1.005	S9	-0.283	0.000	0.29		129.8	OK	
1.006	S10	-0.312	0.000	0.21		132.8	OK	
1.007	S11	-0.448	0.000	0.14		159.8	OK	
1.008	S12	-0.343	0.000	0.36		174.9	OK	
3.000	S13	-0.182	0.000	0.08		7.5	OK	
3.001	S14	-0.228	0.000	0.13		22.7	OK	

[illegible]

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<u>30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Surface Water Network</u>								
<u>Simulation Criteria</u>								
Areal Reduction Factor		1.000	Additional Flow - % of Total Flow		0.000			
Hot Start (mins)		0	MADD Factor * 10m³/ha Storage		0.000			
Hot Start Level (mm)		0	Inlet Coefficient		0.800			
Manhole Headloss Coeff (Global)		0.500	Flow per Person per Day (l/per/day)		0.000			
Foul Sewage per hectare (l/s)		0.000						
Number of Input Hydrographs		0	Number of Offline Controls		5	Number of Time/Area Diagrams		0
Number of Online Controls		3	Number of Storage Structures		2	Number of Real Time Controls		0
<u>Synthetic Rainfall Details</u>								
Rainfall Model		FSR	Ratio R		0.401			
Region England and Wales Cv (Summer)		0.750						
M5-60 (mm)		19.600	Cv (Winter)		0.840			
Margin for Flood Risk Warning (mm)		300.0	DVD Status		OFF			
Analysis Timestep		Fine	Inertia Status		OFF			
DTS Status		OFF						
Profile(s)		Summer and Winter						
Duration(s) (mins)		15, 30, 60, 120, 240, 360, 480, 960, 1440						
Return Period(s) (years)		1, 30, 100						
Climate Change (%)		0, 0, 40						

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Innovyze		Network 2019.1

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Surface Water Network

Simulation Criteria

Areal Reduction Factor 1.000	Additional Flow - % of Total Flow 0.000
Hot Start (mins) 0	MADD Factor * 10m³/ha Storage 0.000
Hot Start Level (mm) 0	Inlet Coefficient 0.800
Manhole Headloss Coeff (Global) 0.500	Flow per Person per Day (l/per/day) 0.000
Foul Sewage per hectare (l/s) 0.000	

Number of Input Hydrographs 0 Number of Offline Controls 5 Number of Time/Area Diagrams 0
Number of Online Controls 3 Number of Storage Structures 2 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R 0.401
Region England and Wales Cv (Summer)	0.750	
M5-60 (mm)	19.600 Cv (Winter)	0.840

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF
Analysis Timestep Fine Inertia Status OFF
DTS Status OFF

Profile(s) Summer and Winter
Duration(s) (mins) 15, 30, 60, 120, 240, 360, 480, 960, 1440
Return Period(s) (years) 1, 30, 100
Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
1.000	S4	15 Winter	100	+40%	100/15 Summer				114.237
1.001	S5	15 Winter	100	+40%	100/15 Summer				113.582
1.002	S6	15 Winter	100	+40%	30/15 Summer				113.276
1.003	S7	15 Winter	100	+40%	100/15 Summer				112.787
2.000	S46	15 Winter	100	+40%	30/15 Winter	100/15 Summer			117.124
2.001	S47	15 Winter	100	+40%	30/15 Summer	100/15 Summer			116.422
2.002	S48	15 Winter	100	+40%	100/15 Summer				114.893
2.003	S1	15 Winter	100	+40%	100/15 Summer				114.307
2.004	S2	15 Winter	100	+40%	100/15 Summer				113.816
2.005	S3	15 Winter	100	+40%	100/15 Summer				112.966
1.004	S8	15 Winter	100	+40%	30/15 Summer				112.673
1.005	S9	15 Winter	100	+40%	100/15 Summer				111.803
1.006	S10	15 Winter	100	+40%	100/15 Summer				110.908
1.007	S11	15 Winter	100	+40%	100/15 Summer				110.093
1.008	S12	15 Winter	100	+40%	30/15 Summer				109.542
3.000	S13	15 Winter	100	+40%					110.695
3.001	S14	15 Winter	100	+40%					109.702

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Innovyze	Network 2019.1	

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Surface Water Network

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
3.002	S15	15 Winter	100	+40%	100/15 Summer			
1.009	S16	15 Winter	100	+40%	30/15 Summer			
1.010	S17	15 Winter	100	+40%	30/15 Summer			
1.011	S18	15 Winter	100	+40%	30/15 Summer			
4.000	S38	15 Winter	100	+40%				
4.001	S39	15 Winter	100	+40%			1/15 Summer	54
4.002	S40	15 Winter	100	+40%			1/15 Summer	54
4.003	S41	15 Winter	100	+40%			1/15 Summer	54
4.004	S42	15 Winter	100	+40%			1/15 Summer	54
4.005	S43	15 Winter	100	+40%			1/15 Summer	54
1.012	S32	30 Winter	100	+40%	100/15 Summer			
5.000	S22	15 Winter	100	+40%	100/15 Summer			
5.001	S23	15 Winter	100	+40%	30/15 Summer			
6.000	S44	15 Winter	100	+40%	30/15 Summer	100/15 Winter		
6.001	45	15 Winter	100	+40%	100/15 Summer			
6.002	23A	15 Winter	100	+40%	100/15 Summer			
6.003	29	15 Winter	100	+40%	30/15 Summer			
5.002	S24	15 Winter	100	+40%	30/15 Summer			
5.003	S25	15 Winter	100	+40%				
5.004	S26	15 Winter	100	+40%	100/15 Summer			
5.005	S27	15 Winter	100	+40%	30/15 Summer			
5.006	S28	15 Winter	100	+40%	30/15 Summer			
5.007	S29	15 Winter	100	+40%	30/15 Summer			
5.008	S30	15 Winter	100	+40%	30/15 Summer			
5.009	S31	30 Winter	100	+40%	30/15 Summer			
1.013	S33	30 Winter	100	+40%	30/15 Summer			
1.014	S34	480 Winter	100	+40%	30/30 Winter			
1.015	S35	480 Winter	100	+40%	30/120 Winter			
1.016	S36	960 Summer	100	+40%				

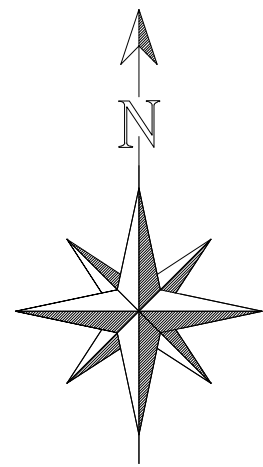
PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
3.002	S15	109.479	0.419	0.000	0.58		144.2	SURCHARGED	
1.009	S16	109.087	1.773	0.000	3.13		831.2	SURCHARGED	
1.010	S17	108.431	1.188	0.000	3.91		840.1	SURCHARGED	
1.011	S18	108.031	0.813	0.000	2.79		830.3	SURCHARGED	
4.000	S38	111.737	-0.573	0.000	0.04		112.3	OK	
4.001	S39	111.346	-0.514	0.000	0.06	14.1	99.9	OK	
4.002	S40	111.343	-0.487	0.000	0.03	17.3	87.4	OK	
4.003	S41	111.340	-0.200	0.000	0.01	30.6	30.6	FLOOD RISK	

PJS Consulting Engineers Limited		Page 18
Unit 4 Winking Hill Farm Kingston-on-Soar, Nottingham Nottinghamshire NG11 0DP	Lutterworth Road Burbage	
Date 09/07/2025 12:44 File Phase 1 & 2 composite St...	Designed by david.carey Checked by	
Innovyze	Network 2019.1	

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Surface Water Network

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
4.004	S42	109.232	-0.608	0.000	0.02	4.8	66.5	OK	
4.005	S43	108.337	-0.313	0.000	0.00	26.2	26.2	OK	
1.012	S32	107.708	0.534	0.000	1.42		796.9	FLOOD RISK	
5.000	S22	112.665	0.670	0.000	1.06		70.0	SURCHARGED	
5.001	S23	111.786	0.551	0.000	1.99		71.6	SURCHARGED	
6.000	S44	114.468	1.443	0.064	1.77		69.8	FLOOD	1
6.001	45	112.734	0.249	0.000	0.97		60.5	SURCHARGED	
6.002	23A	111.995	0.300	0.000	1.02		64.1	SURCHARGED	
6.003	29	111.681	0.444	0.000	1.98		67.3	SURCHARGED	
5.002	S24	111.554	0.384	0.000	1.83		181.0	SURCHARGED	
5.003	S25	110.850	-0.165	0.000	0.59		200.0	OK	
5.004	S26	110.157	0.332	0.000	0.52		251.4	SURCHARGED	
5.005	S27	109.501	2.381	0.000	2.63		281.4	FLOOD RISK	
5.006	S28	109.015	1.953	0.000	3.45		292.2	SURCHARGED	
5.007	S29	108.476	1.457	0.000	2.27		298.8	SURCHARGED	
5.008	S30	108.209	1.245	0.000	2.26		314.9	SURCHARGED	
5.009	S31	107.849	0.966	0.000	2.05		300.0	SURCHARGED	
1.013	S33	107.445	0.466	0.000	2.07		710.2	SURCHARGED	
1.014	S34	107.371	0.442	0.000	0.34		145.6	SURCHARGED	
1.015	S35	107.368	0.593	0.000	0.05		21.9	SURCHARGED	
1.016	S36	106.188	-0.087	0.000	0.69		21.9	OK	

APPENDIX 2 – MicroDrainage Schematic Layout



- General Notes**
1. Do not scale this drawing. If in doubt, ask.
 2. This drawing is to be read in conjunction with all other relevant Engineers, Architects and specialist design drawings and details.
 3. All dimensions are in metres unless noted otherwise. All levels are in metres unless noted otherwise.
 4. Any discrepancies noted on site are to be reported to the Engineer immediately.
 5. This Sketch Drawing is for information purposes only

Rev	Date	Amendments	By	Chk

PJS CONSULTING ENGINEERS
Delivering Innovative Solutions

PJS Consulting Engineers Limited, Geneva II, Lakeview,
Sherwood Business Park, Nottingham, NG15 0ED.
Registered number: 10815993 Tel: 0115 704 3669 Email: Enquiries@pjs-ee.co.uk

Client

Davidsons

Project

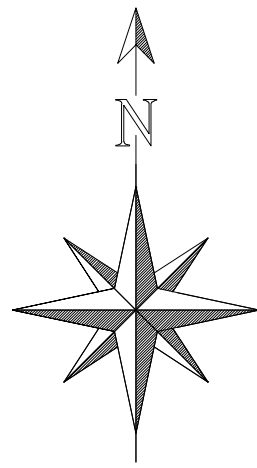
**Lutterworth Road,
Burbage**

Drawing Title

MicroDrainage Schematic

Initial	DC	JS	Information	NTS
Date	09/07/25	09/07/25	Project Number	Drawing Number
PJS21-065		SK-001		-

APPENDIX 3 – Overland Flow Routing



General Notes

1. Do not scale this drawing. If in doubt, ask.
2. This drawing is to be read in conjunction with all other relevant Engineers, Architects and specialist design drawings and details.
3. All dimensions are in metres unless noted otherwise. All levels are in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the Engineer immediately.
5. All works to be undertaken shall be in accordance with the Leicestershire Highway Design Guide, LCC Standard drawings / specifications and to the satisfactory of the LCC highways inspector.

Overland Flow Route Notes.

1. Flow routes are required to facilitate the potential route of flood flow in rainfall events exceeding the storm sewer design criteria as required by Sewers For Adoption 6th Edition and PPS25.
2. Flow routes illustrated on the drawings shall be kept clear of permanent physical obstructions which may impede the flow of surface water (ie. walls, retaining walls). Failure to do this will increase the risk of flooding to properties.
3. House slab levels, external works, drive and garden gradients shall be designed in such a way as to minimise the risk of flooding to properties immediately adjacent to flow routes.



Overland flow route (see notes)

C	31/03/25	Eastern footway amended to 1m.	LD	DC
B	21/02/25	updated to suit raised tables	DC	TN
A	28/11/24	Updated to latest layout.	LD	TN
Rev	Date	Amendments	By	Chk



PJS Consulting Engineers Limited, Geneva II, Lakeview,
Sherwood Business Park, Nottingham, NG15 0ED.
Registered number: 10815993 Tel: 0115 704 3969 Email: Enquiries@pjs-ce.co.uk

Client

Davidsons Homes

Project

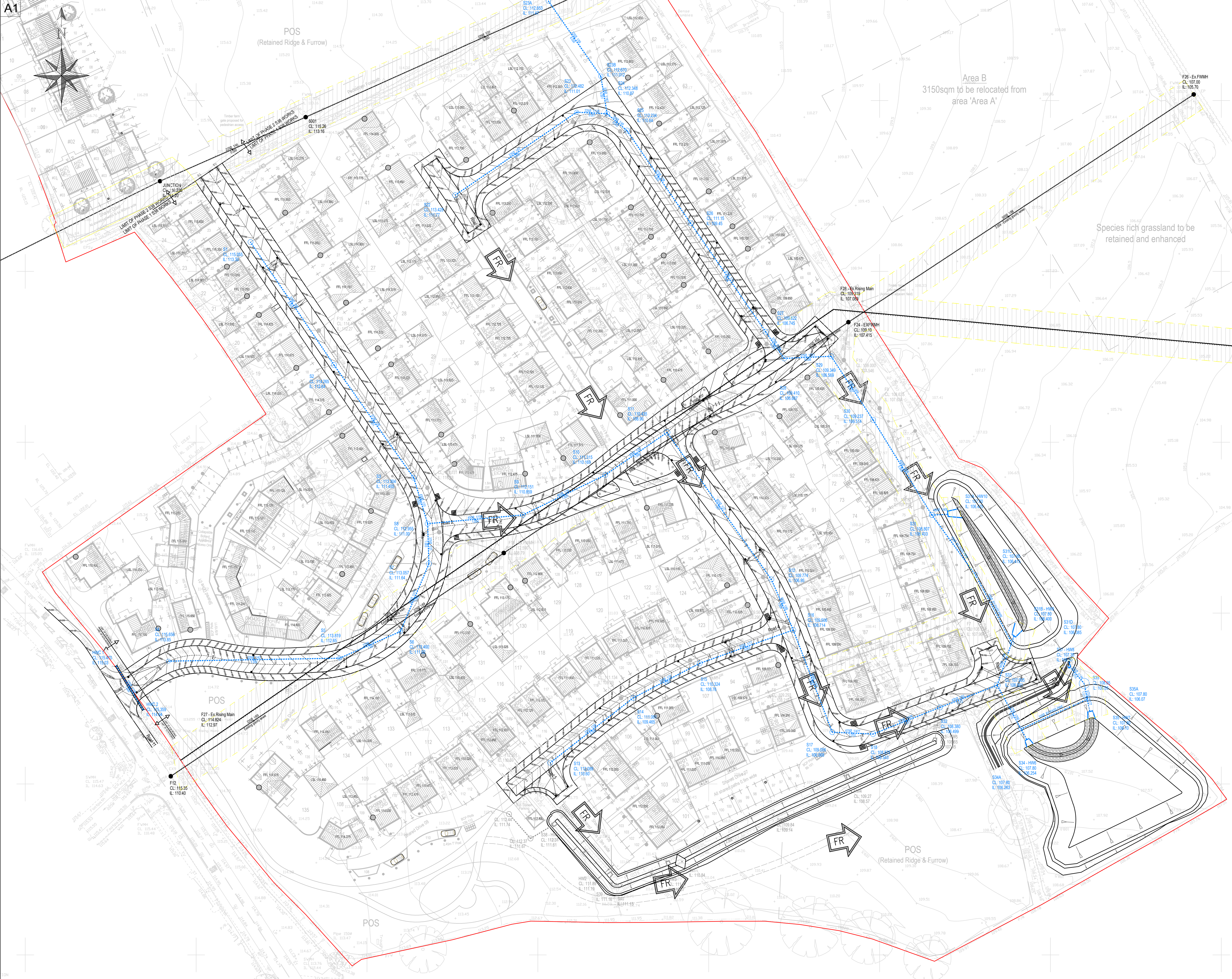
Lutterworth Road, Burbage

Drawing Title

Phase 2
Kerbing Layout

	Drawn	Checked	Status	Scale
Initial	LD	TN		
Date	30/05/24	30/05/24	Tender	1:500
Project Number	Drawing Number		Revision	
PJS21-065	DR-P2-502		C	

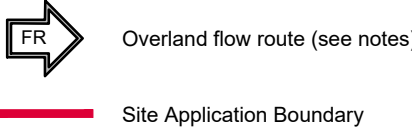
A1



- Notes.**
1. Do not scale this drawing. If in doubt, ask.
 2. This drawing is to be read in conjunction with all other relevant Engineers, Architects and specialist design drawings and details.
 3. All dimensions are in metres unless noted otherwise. All levels are in metres unless noted otherwise.
 4. Any discrepancies noted on site are to be reported to the Engineer immediately.
 5. Road markings shall comply with the requirements of chapters 3, 4 & 5 of the Traffic Signs Manual as modified by the Traffic Signs Regulations and General Directions 2002.
 6. All road markings shall be laid in thermoplastic screed with added ballast and shall comply with the requirements of cl. 1212 of the Specification for Highway Works.
 7. The Contractor shall check all tie-ins for line and level with existing before commencing any works. The Engineer shall be notified immediately in writing, should any errors be found.
 8. It is the responsibility of the Contractor to locate any service apparatus in the vicinity of the works. The client will accept no claims whatsoever in respect of any losses or damage caused in respect of such apparatus, however caused.
 9. It is the responsibility of the Contractor to execute the works at all times in strict accordance with the requirements of the Health and Safety at Work Act 1974, and the C.D.M. Regulations 2015. The Contractor will be deemed to have allowed for full compliance, including full liaison with the Principal contractor/designer, within his rates.
 10. The Contractor is responsible for ensuring that all works are to the satisfaction of the Engineer, and shall be deemed to have included within his rates for any necessary testing.
 11. The Contractor will be responsible for providing all necessary de-watering and trench support to execute the works in a satisfactory manner, and shall be deemed to have allowed for the same within his rates.
 12. All units supplied should comply with BS EN 124 as supplemented by BS 7903 and they also be supplied and installed following the guidance of Highways Advice Note HA104/02 within the DMRB Volume 4.
 13. All bollards and street signs to be a minimum 500mm clearance from the carriageway.
 14. All Manhole covers situated within adoptable road surfaces require anti-slip properties to be applied.

Overland Flow Route Notes.

1. Flow routes are required to facilitate the potential route of flood flow in rainfall events exceeding the storm sewer design criteria as required by Sewers For Adoption 6th Edition and PPS25.
2. Flow routes illustrated on the drawings shall be kept clear of permanent physical obstructions which may impede the flow of surface water (ie. walls, retaining walls). Failure to do this will increase the risk of flooding to properties.
3. House slab levels, external works, drive and garden gradients shall be designed in such a way as to minimise the risk of flooding to properties immediately adjacent to flow routes.



ANY WORKS CARRIED OUT ON SITE PRIOR TO RECEIVING TECHNICAL APPROVALS WILL BE UNDERTAKEN AT THE DEVELOPERS RISK

D	30.05.24	Updated to suit lie in to Phase 2.	LD	TN
C	20.04.23	F25 removed from drawing, updated with new layout.	SS	ML
B	15.01.23	Road 12 label changed to Road 9.	SS	ML
A	23.12.22	Latest FFLs, sewer layout and survey added.	ML	ML
Rev	Date	Amendments	By	CHK

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PJS Consulting Engineers Limited, Geneva II, Lakeview,
Sheffield Business Park, Nottingham, NG15 0ED.
Registered number: 10815983 Tel: 0115 704 3669 Email: Enquiries@pjs-ee.co.uk

Client

Davidsons Homes

Project

Lutterworth Road, Burbage

Drawing Title

Highway Contours Plan

Drawn	Checked	Status	Scale
Initial	ML	TN	Approval
Date	25/10/22	25/10/22	1:500
Project Number	Drawing Number	Revision	
PJS21-065	DR-503	D	

APPENDIX 4 – Phase 1 S104 General Arrangement

