Appendix B Existing Site Drainage

Farrow Walsh Consulting		Page 1						
62 Highcross Street								
Leicester								
LE1 4NN		Micro						
Date 06/03/2019 09:40	Designed by Calum.Bodell							
File FW1677 EXISTING DISCHARGE.MDX	Checked by	Dialitaye						
Innovyze	Network 2018.1.1							
STORM SEWER DESIGN by the Modified Rational Method								
Design Criteria for Storm								
Pipe Sizes F	Private Manhole Sizes Private							
FSR Rainfal Return Period (years M5-60 (mm Ratio) Maximum Rainfall (mm/hr Maximum Time of Concentration (mins Foul Sewage (1/s/ha Volumetric Runoff Coeff	<pre>11 Model - England and Wales) 2 PIMP (%)) 20.500 Add Flow / Climate Change (%) R 0.437 Minimum Backdrop Height (m)) 50 Maximum Backdrop Height (m)) 30 Min Design Depth for Optimisation (m)) 0.000 Min Vel for Auto Design only (m/s) . 0.750 Min Slope for Optimisation (1:X)</pre>	100 0 0.200 1.500 1.200 1.00 500						
Designed with Level Soffits								
Simulation Criteria for Storm								
Volumetric Runoff Coeff Areal Reduction Factor Hot Start (mins) Hot Start Level (mm) Manhole Headloss Coeff (Global) Foul Sewage per hectare (1/s) Number of Input Hydrographs 0 Number	0.750 Additional Flow - % of Total Flow 0.0 1.000 MADD Factor * 10m ³ /ha Storage 2.0 0 Inlet Coefficient 0.8 0 Flow per Person per Day (1/per/day) 0.0 0.500 Run Time (mins) 0.000 Output Interval (mins) r of Offline Controls 0 Number of Time/Area Di	00 00 00 60 1 agrams 0						
Number of Online Controls 0 Number	of Storage Structures U Number of Real Time Co	ntrols U						
Synche	tic Rainiali Detalis							
Rainfall Model Return Period (years) Region Engl M5-60 (mm) Ratio R	FSR Profile Type Summer 2 Cv (Summer) 0.750 land and Wales Cv (Winter) 0.840 20.000 Storm Duration (mins) 30 0.400							

Farrow Walsh Consulting		Page 2				
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<u>Summary Wizard of 15</u>	minute 1 year Winter I+0%	for Storm				
S Areal Reduction Factor Hot Start (mins) Hot Start Level (mm) Manhole Headloss Coeff (Global) Foul Sewage per hectare (1/s)	imulation Criteria 1.000 Additional Flow - % of 0 MADD Factor * 10m ² 0 Inlet 0 0.500 Flow per Person per Day 0.000	f Total Flow 0.000 ³ /ha Storage 2.000 Coeffiecient 0.800 (l/per/day) 0.000				
Number of Input Hydrographs 0 Number Number of Online Controls 0 Number	of Storage Structures 0 Number	of Real Time Controls 0				
<u>Synth</u> Rainfall Model Region England and Margin for Flood Risk War Analysis I I	etic Rainfall Details FSR M5-60 (mm) 20.500 Cv (S Wales Ratio R 0.437 Cv (W ming (mm) Timestep 2.5 Second Increment TS Status VD Status	Summer) 0.750 Jinter) 0.840 300.0 (Extended) ON ON				
Inert	ia Status	ON				
Durat Return Peri Clima	Profile(s) Winter tion(s) (mins) 15 od(s) (years) 1, 2, 30, 100 te Change (%) 0, 0, 0, 0					
Water Surch	arged Flooded	Pipe				
US/MH Storm Level Dep DN Name Bank (m) ((oth Volume Flow / Overflow	Flow				
1.000 ex1 4 9.215	0.065 0.000 1.23	19.3 SURCHARGED				
1.001 ex2 4 9.114	0.027 0.000 1.24	19.4 SURCHARGED				

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62 Highcross Stree	et									
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Summary Wizard of 15 minute 2 year Winter I+0% for Storm										
Simulation Criteria Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000 Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 2.000 Hot Start Level (mm) 0 Inlet Coefficcient 0.800 Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (1/per/day) 0.000 Foul Sewage per hectare (1/s) 0.000 Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0										
Number of C	Online	Contro	ls O Nu	mber of Sto	rage Str	uctures	0 Number	of Re	al Time Cor	ntrols 0
R	Synthetic Rainfall Details Rainfall Model FSR M5-60 (mm) 20.500 Cv (Summer) 0.750 Region England and Wales Ratio R 0.437 Cv (Winter) 0.840									
	Margin for Flood Risk Warning (mm) 300.0 Analysis Timestep 2.5 Second Increment (Extended) DTS Status ON DVD Status ON Inertia Status ON									
			Return	Pro Duration(s) n Period(s) Climate Cha	ofile(s) (mins) (years) ange (%)	1, 2, 3	Winter 15 30, 100), 0, 0			
	US/MH	Storm	Water Level	Surcharged Depth	Flooded Volume	Flow /	Overflow	Pipe Flow		
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(1/s)	(1/s)	Status	
1.000 1.001	ex1 ex2	3 3	9.325 9.168	0.175 0.081	0.000 0.000	1.54 1.55		24.3 24.3	SURCHARGEI SURCHARGEI	

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TIMOVYZE				Netwo	JIK ZUI	0.1.1				
<u>S</u>	Summar	<u>y Wiz</u>	ard of	15 minute	<u>e 30 ye</u>	<u>ar Win</u>	ter I+0%	for	<u>Storm</u>	
Simulation Criteria Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000 Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 2.000 Hot Start Level (mm) 0 Inlet Coefficcient 0.800 Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (1/per/day) 0.000 Foul Sewage per hectare (1/s) 0.000										
Number of (Dut Hyc Dnline	Contro	ls O Nu	mber of Sto	rage Str	uctures	0 Number 0 Number	of Re	al Time Con	ntrols 0
R	<u>Synthetic Rainfall Details</u> Rainfall Model FSR M5-60 (mm) 20.500 Cv (Summer) 0.750 Region England and Wales Ratio R 0.437 Cv (Winter) 0.840									
	Margin for Flood Risk Warning (mm) 300.0 Analysis Timestep 2.5 Second Increment (Extended) DTS Status ON DVD Status ON Inertia Status ON									
	Profile(s) Winter Duration(s) (mins) 15 Return Period(s) (years) 1, 2, 30, 100 Climate Change (%) 0, 0, 0, 0									
			Water	Surcharged	Flooded			Pipe		
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Flow		
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(1/s)	(l/s)	Status	
1.000 1.001	ex1 ex2	2 2	9.920 9.466	0.770 0.379	0.000	2.66 2.66		41.8 41.7	FLOOD RISH SURCHARGEI	К Э

Farrow Walsh Consulting		Page 5						
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Summary Wizard of 15 minute 100 year Winter I+0% for Storm								
Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000 Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 2.000 Hot Start Level (mm) 0 Inlet Coefficcient 0.800 Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (1/per/day) 0.000 Foul Sewage per hectare (1/s) 0.000								
Number of Input Hydrographs 0 Numbe Number of Online Controls 0 Number	r of Offline Controls 0 Number of Storage Structures 0 Number	of Time/Area Diagrams 0 of Real Time Controls 0						
<u>Synth</u> Rainfall Model Region England and	<u>hetic Rainfall Details</u> FSR M5-60 (mm) 20.500 Cv (S [.] Wales Ratio R 0.437 Cv (W	ummer) 0.750 inter) 0.840						
Margin for Flood Risk War Analysis I I I Inert	rning (mm) 5 Timestep 2.5 Second Increment DTS Status DVD Status tia Status	300.0 (Extended) ON ON ON						
Durat Return Peri Clima	Profile(s) Winter tion(s) (mins) 15 tod(s) (years) 1, 2, 30, 100 te Change (%) 0, 0, 0, 0							
Water Surch US/MH Storm Level De PN Name Rank (m) (1	narged Flooded pth Volume Flow / Overflow m) (m³) Cap. (1/s)	Pipe Flow (1/s) Status						
1.000 ex1 1 10.003 1.001 ex2 1 9.510	0.853 2.550 2.80 0.423 0.000 2.81	44.0 FLOOD 44.0 SURCHARGED						