Appendix F NRW Surface Water Flood Depth Mapping

Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

- Site Boundary

Surface Water Flood Depth (m)

- <= 0.3
- 0.3 - 0.6
- 0.6 - 0.9
- 0.9 - 1.2
- > 1.2

New line markings to create 5no Additional bays and 9 replacement bays

Existing School Building

Compensatory tree planting as landscape architect's drawings

Proposed retaining and new boundary fence

3700

Works to be part of phase 2 package shown hatched

M.U.G.A.

0 10 20 30 40 m



CLIENT:
Read Construction Ltd

waterco
www.waterco.co.uk

SCHEME:
Ysgol I. D. Hooson, Wrexham

PLOT TITLE:
Surface Water Flood Depth 3.33% AEP + Central CC Event (2120)

PLOT STATUS:	DATE:
FINAL	25-03-2025

DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
AM	AW	NJ	1:600

PLOT NAME:	REVISION:
16126_0.33%+CC_Surface_Water_Depth	-

CONTAINS OS DATA © CROWN COPYRIGHT (2022)

Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

- Site Boundary

Surface Water Flood Depth (m)

- <= 0.3
- 0.3 - 0.6
- 0.6 - 9
- 0.9 - 1.2
- > 1.2

New line markings to create 5no Additional bays and 9 replacement bays

Existing School Building

Compensatory tree planting as landscape architect's drawings

Proposed retaining and new boundary fence

3700

Works to be part of phase 2 package shown hatched

M.U.G.A.

0 10 20 30 40 m



CLIENT:
Read Construction Ltd

waterco
www.waterco.co.uk

SCHEME:
Ysgol I. D. Hooson, Wrexham

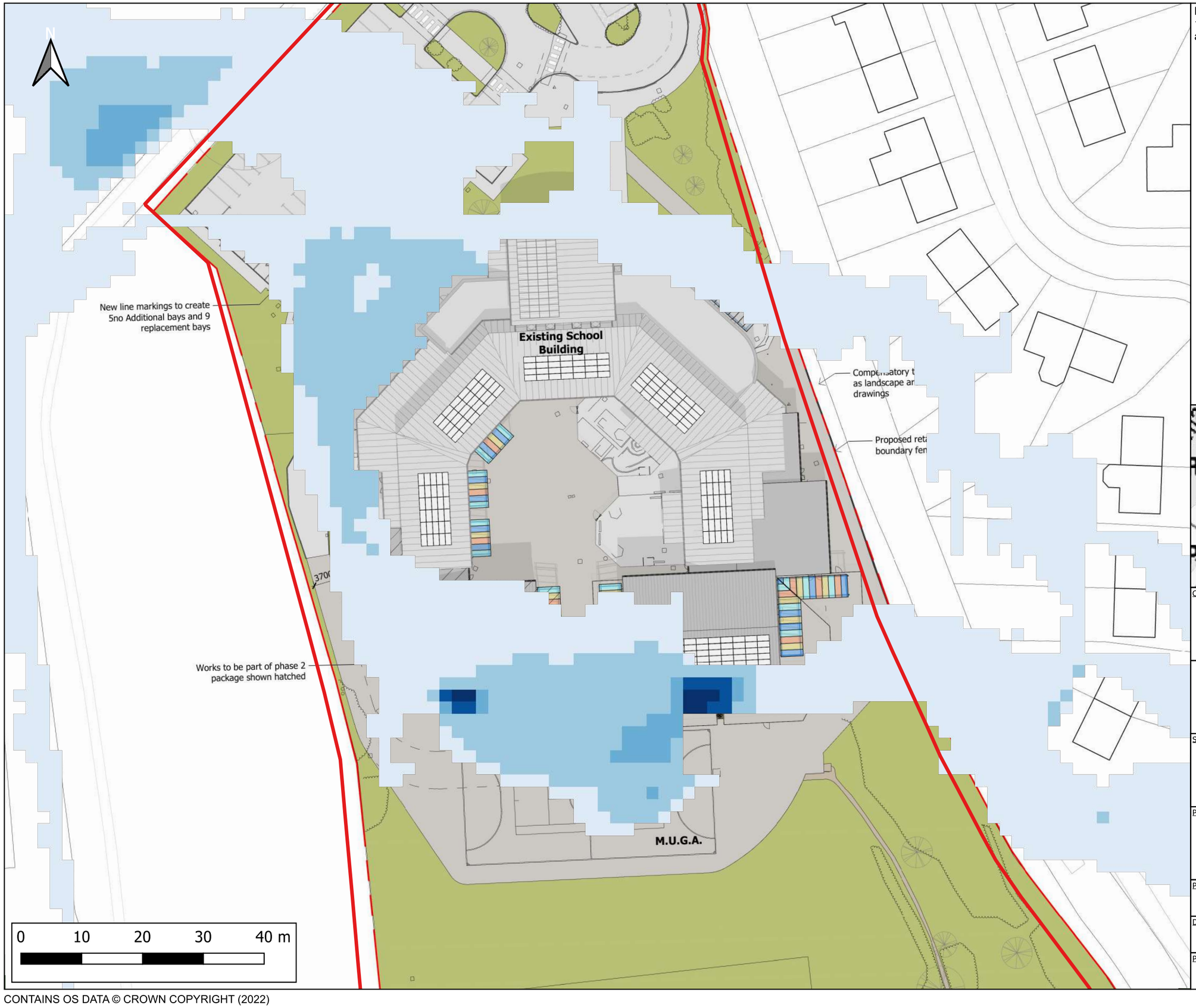
PLOT TITLE:
Surface Water Flood Depth
1% AEP + Central CC Event
(2120)

PLOT STATUS:	DATE:
FINAL	25-03-2025

DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
AM	AW	NJ	1:600

PLOT NAME:	REVISION:
16126_1%+CC_Surface_Water_Depth	-

CONTAINS OS DATA © CROWN COPYRIGHT (2022)



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

- Site Boundary

Surface Water Flood Depth (m)

- <= 0.3
- 0.3 - 0.6
- 0.6 - 9
- 0.9 - 1.2
- > 1.2



CLIENT:
Read Construction Ltd

waterco
www.waterco.co.uk

SCHEME:
Ysgol I. D. Hooson, Wrexham

PLOT TITLE:
Surface Water Flood Depth
0.1% AEP + Central CC Event
(2120)

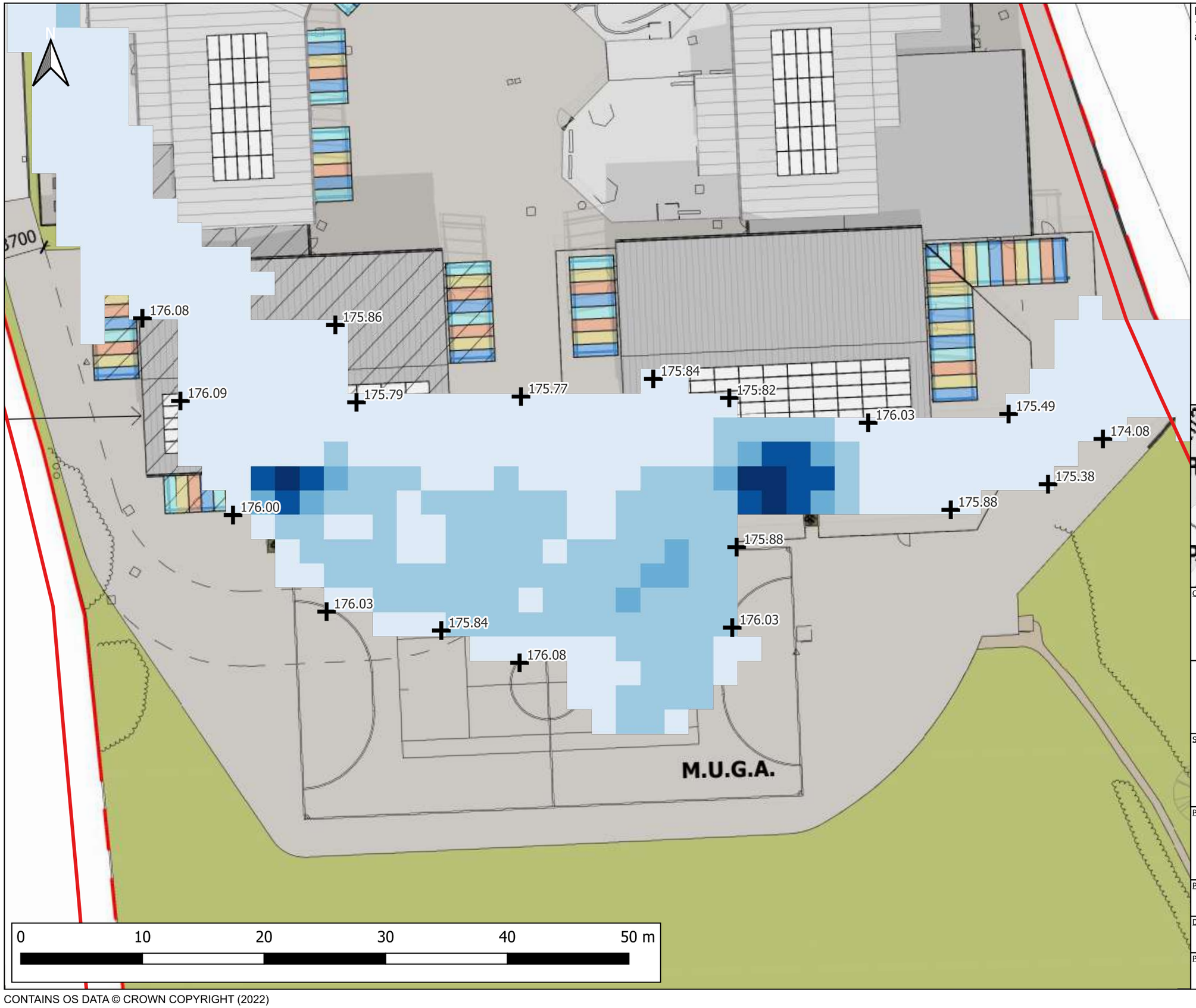
PLOT STATUS:	DATE:
FINAL	25-03-2025

DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
AM	AW	NJ	1:600

PLOT NAME:	REVISION:
16126_0.1%+CC_Surface_Water_Depth	-

CONTAINS OS DATA © CROWN COPYRIGHT (2022)

Appendix G Surface Water Flood Extent with LiDAR Overlay



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

- Site Boundary
- Site Levels (m AOD)

Surface Water Flood Depth (m)

- <= 0.3
- 0.3 - 0.6
- 0.6 - 0.9
- 0.9 - 1.2
- > 1.2



CLIENT:
Read Construction Ltd

waterco
www.waterco.co.uk

SCHEME:
Ysgol I. D. Hooson, Wrexham

PLOT TITLE:
Surface Water Flood Extent with LiDAR Overlay

PLOT STATUS:	DATE:
FINAL	26-03-2025

DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
AM	AW	NJ	1:300

PLOT NAME:	REVISION:
16126_Surface_Water_LiDAR_Overlay	-

CONTAINS OS DATA © CROWN COPYRIGHT (2022)

Appendix H Existing Drainage Plan

ACO DRAINAGE CHANNELS

RUN1	N100K 30.0 WITH NK900+820 OUTLET
RUN2	N100K 10.0 WITH NK900+820 OUTLET
RUN3	N100K 0.0 WITH NK900+820 OUTLET
RUN4	N100K 0.0 WITH NK900+820 OUTLET

NOTE

ALL COVER LEVELS TO BE CONFIRMED BY ARCHITECT. IF LEVELS ARE VERY DIFFERENT TO THOSE INDICATED PLEASE CONSULT ENGINEER.

SURFACE WATER MANHOLE SCHEDULE

MANHOLE REF	COVER LEVEL	MANHOLE DEPTH	DIA (mm)	PIPES OUT IL (m)	PIPES OUT Dia (mm)	PIPES IN IL (m)	PIPES IN Dia (mm)
S1	176.620	1.380	1050	175.240	150		
S2	176.275	1.310	1050	174.965	150		
S3	176.150	1.700	1050	174.450	225	174.450	150
						174.450	150
S4	176.110	2.005	1050	174.105	225	174.105	225
S5	176.335	2.715	1200	173.620	225	173.620	225
S6A	175.970	1.140	1050	174.830	225		
S6	175.725	2.325	1050	173.400	300	173.400	225
						174.685	225
S7	175.890	INTERCEPTOR		173.260	300	173.160	300
S9A	176.000	1.330	1200	174.670	150		
S10A	176.080	1.630	1050	174.450	150	174.450	150
S10	176.240	1.850	1050	174.390	150	174.390	150
S12	176.050	1.000	1050	175.050	150		
S13	176.080	1.250	1050	174.830	150	174.830	150
S14*	176.080	1.180	1050	174.900	150	174.900	150
S15	176.080	1.510	1050	174.570	150	174.570	150
S16	175.950	1.590	1200	174.360	150	174.360	150
S11A	176.460	2.280	1200	174.180	225	174.180	150
						174.180	150
S11	176.320	2.740	1200	173.580	225	173.580	225
S17	175.900	2.450	1200	173.450	225	173.450	225
						173.450	110
S18A	176.050	1.840	1050	174.210	150		
S18	175.980	1.860	1050	174.120	150	174.120	150
S19	176.020	2.000	1050	174.020	150	174.020	150
S20	175.680	1.740	1050	173.940	150	173.940	150
S8A	175.453	1.713	1050	173.740	150	173.740	150
S8*	175.905	2.765	1350	173.140	375	173.140	300
						173.140	225
						173.140	150
S21	–	NOT	USED	–			
S22	174.800	2.660	1200	171.500	375	171.500	375
S23	170.660	2.000	1200	169.700	375	169.700	375
S23a	–	AWAITING	ENVIRONMENT AGENCY	APPROVAL		–	–
S23b	–	AWAITING	ENVIRONMENT AGENCY	APPROVAL		–	–
WILO FILTER	175.800	2.020	PROPRIETRY	173.780	225	173.780	225
				173.630	150		

FOUL WATER MANHOLE SCHEDULE

MANHOLE REF	COVER LEVEL	MANHOLE DEPTH	DIA (mm)	PIPES OUT IL (m)	PIPES OUT Dia (mm)	PIPES IN IL (m)	PIPES IN Dia (mm)
F1	176.010	0.950	1050	175.060	150		
F2	176.030	1.130	1050	174.900	150	174.900	150
F3	176.160	1.410	1050	174.750	150	174.750	150
F4	176.110	1.430	1050	174.680	150	174.680	150
F5	176.020	1.400	1050	174.620	150	174.620	150
F6	176.130	1.600	1050	174.530	150	174.530	150
F7	175.990	1.980	1050	174.010	150	174.010	150
						174.860	150
F7A	176.135	1.095	1050	175.040	150		
F8	176.025	2.435	1200	173.590	150	173.590	150
						174.100	150
F9	176.110	1.580	1050	174.530	150		
F10	176.135	1.835	1050	174.300	150	174.300	150
F11	175.840	2.450	1200	173.390	150	173.390	150
						174.000	150
F12	176.015	1.035	1050	174.980	150		
F13	176.100	1.180	1050	174.920	150	174.920	150
F14	176.065	1.315	1050	174.750	150	174.750	150
F15	176.025	1.815	1200	174.210	150	174.210	150
F16	176.025	1.920	1200	174.105	150	174.105	150
F17	175.750	2.630	1050	173.120	150	173.120	150
F18	173.660	2.160	1200	171.500	150	172.100	150
F19	170.000	1.250	1050	168.750	150	168.750	150

NOTES

1. LOCATIONS OF FOUL AND SURFACE WATER CONNECTIONS BETWEEN, ABOVE AND BELOW GROUND DRAINAGE TO BE SET OUT AND CONFIRMED BY ARCHITECT.
2. ALL INTERNAL SURFACE WATER CONNECTIONS MUST BE CONNECTED TO AN EXTERNAL MANHOLE.
3. ALL OTHER DRAIN BRANCHES TO HAVE RODDABLE ACCESS POINTS.

NOTES

1. TO BE READ IN CONJUNCTION WITH ARCHITECTS AND SERVICE ENGINEERS DRAWINGS.
2. TO BE READ IN CONJUNCTION WITH DRAINAGE DETAILS SHEETS 1–4, DWG NO.S 13533–ST–WM–210, ST–WM–211, ST–WM–212 AND ST–WM–213.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE CHECKING OF INVERT AND SIZES OF EXISTING PIPES/MANHOLES PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE ENGINEER.
4. CO–ORDINATION WITH THE APPROPRIATE DRAINAGE AUTHORITY IS REQUIRED AND WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THEIR REQUIREMENTS DURING CONSTRUCTION.
5. ALL MAIN BRANCH CONNECTIONS TO BE 150mm DIAMETER. FOUL CONNECTIONS TO HAVE 1:40 FALL TO FIRST MANHOLE. SURFACE WATER CONNECTIONS TO HAVE MINIMUM 1:150 FALL.
6. VITRIFIED CLAY PIPEWORK TO BE IN ACCORDANCE WITH BS EN 295–1:1991/BS 65 AS APPROPRIATE AND TO BE KITEMARKED. FOR STRENGTH CLASSES REFER TO THE SPECIFICATION.
7. CONCRETE FOR GENERAL DRAINAGE WORKS DESIGNATED MIX GEN 1 TO BS 8500–1:2002, BS EN 206–1:2000 AND ENGINEERS SPECIFICATION.
8. ALL MANHOLES TO BE PRECAST CONCRETE IN ACCORDANCE WITH BS 5911–3:2002, BS EN 1917:2002 AND TO BE KITEMARKED.
9. MANHOLE COVERS TO BE HEAVY DUTY C250 AND TO BE SET SQUARE TO THE BUILDING.
10. COVERS OF EXISTING MANHOLES TO BE ADJUSTED TO MATCH FINAL GROUND LEVELS.
11. PIPE GRADIENTS INDICATED ARE APPROXIMATE, REFER TO MANHOLE SCHEDULE FOR DETAILS.
12. MAXIMUM DISTANCE BETWEEN MANHOLES TO BE 90m.
13. PIPES HAVE NOT BEEN DESIGNED TO ACCOMODATE CONSTRUCTION TRAFFIC LOADING. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE PROTECTION DURING CONSTRUCTION.
14. ALL DRAINAGE HAS BEEN DESIGNED WITH LEVEL INVERTS.
15. ALL DRAIN BRANCHES TO BE PROVIDED WITH ABOVE GROUND RODDABLE ACCESS POINTS.
16. ALL PIPEWORK TO BE SURROUNDED IN CONCRETE WHERE:
IN LANDSCAPING COVER LESS THAN 900mm
IN ROADWAYS/HARDSTANDING COVER LESS THAN 1200mm.
17. ALL SPECIFIED PRODUCTS MAY BE REPLACED WITH SIMILAR PRODUCTS APPROVED BY THE ENGINEER. THE CONTRACTOR MUST SUBMIT DOCUMENTATION TO DEMONSTRATE SUITABILITY OF THE SUBSTITUE PRODUCT.

KEY

- ■SWCP = EXISTING SURFACE WATER CATCHPIT MANHOLE
- ■FDCP = EXISTING FIELD DRAIN CATCHPIT MANHOLE
- S4 = PROPOSED SURFACE WATER MANHOLE
- = EXISTING SURFACE WATER RUN
- = PROPOSED SURFACE WATER RUN
- F6 = PROPOSED FOUL WATER MANHOLE
- = PROPOSED FOUL WATER RUN
- = EXISTING FOUL WATER RUN
- DC = DRAINAGE CHANNEL LOCATION ACO N100K RANGE. SEE TABLE. C250 COVERS WITH HEELGUARD GRATING.
- □G = GULLY LOCATION
- S8* = CATCHPIT MANHOLE
- GT = GREASE TRAP

EXISTING FIELD DRAIN MANHOLE IL 175.790 (300 IN) IL 176.220 (150 IN) IL 175.790 OUT IL 175.660 SUMP

MANHOLE COVER TO BE LIFTED OR LOWERED TO SUIT NEW EXTERNAL LEVELS

EXISTING FIELD DRAIN MANHOLE IL 175.670 (150 IN) IL 175.580 (150 OUT) IL 175.270 SUMP

MANHOLE COVER TO BE LIFTED OR LOWERED TO SUIT NEW EXTERNAL LEVELS

GREASE TRAP ACO GCO–FPI NS1 INCOMING PIPE = 175.300 OUTGOING PIPE = 175.200 COVER LEVEL = 176.050

2 No. 150mm SQUARE NON TRAPPED GULLIES CAST INTO CONCRETE SLAB WITH 100mm DIAMETER OUTFALL INTO CATCHPIT MANHOLE

LINE OF EXISTING 150mmø FIELD DRAIN TO BE REMOVED

EXISTING FIELD DRAIN MANHOLE IL 174.110 (300 IN) IL 174.700 (150 IN) IL 174.070 OUT IL 173.830 SUMP

MANHOLE COVER TO BE LIFTED OR LOWERED TO SUIT NEW EXTERNAL LEVELS

EXISTING 150mmø FIELD DRAIN.

LINE OF EXISTING 150mmø FIELD DRAIN TO BE REMOVED

LINE OF EXISTING 150mmø FIELD DRAIN TO BE REMOVED

FOUL DRAINAGE TO BE POSITIONED BETWEEN FOUNDATIONS AND EXISTING 300mmø CARRIER PIPE

EXISTING FIELD DRAIN MANHOLE TO BE REMOVED

EXISTING 300mm ø CARRIER DRAIN TO REMAIN. CONTRACTOR TO CHESCK THAT THERE ARE NO DEFECTS.

EXISTING FDCP MANHOLE TO REMAIN CL 171.970m

VENT (INSTALLED TO MANUFACTURERS INSTRUCTIONS)

ZONE FOR POSSIBLE FUTURE EXTENSION

ZONE FOR POSSIBLE FUTURE EXTENSION

SPEL STORMCEPTOR CLASS 1 BY–PASS SEPARATOR NSB10 MODEL 210C1/SC/A 300/300 WITH SILT CAPACITY, 2x600 DIAMETER EXTENSION SHAFTS.

WILO 250mmø INLINE SUMP FILTER (IL:173.780)

GREYWATER STORAGE TANK CONSTRUCTION DETAILS TO BE CONFIRMED BY SUPPLIER

RODDING EYE

INVERT AT START OF CARRIER DRAIN=175.975 (MINIMUM COVER=600mm)

FOR DETAILS OF LAND DRAINAGE SYSTEM REFER TO DRAWING 13533–ST–WM–201

DESIGN TO BE CONFIRMED

#FOR CONTINUATION SEE PLAN X–X

PLAN
(Scale 1:250)

EXISTING FDCP MANHOLE TO REMAIN CL 172.200m IL 170.500m

MINIMUM COVER TO CARRIER DRAIN=600mm

NON PERFORATED CARRIER DRAIN TO MANHOLE WITH SILT TRAP

EXISTING FDCP1 MANHOLE TO REMAIN CL 171.470m IL 169.240m

WCBC DESIGN PROPOSED FWMH 5 CL 170.00m IL 168.75m

LD MH1* CL 174.630m IL 173.800m

PROP. FWMH 4 CL 168.85m IL 167.95m

CONCRETE FLOW CHANNEL 46000

GRASS SWALE/LAGOON 8000

EXISTING SWCP MANHOLE TO REMAIN

EXISTING SWCP2 MANHOLE TO REMAIN CL 168.530m IL 166.530m

EXISTING SWCP1A MANHOLE TO REMAIN

CATCHPIT/SILT TRAP WITH OVERFLOW

EXISTING SILT TRAP

EXISTING SW OUTFALL INTO STREAM

FOR DETAILS OF GRASS SWALE/LAGOON REFER TO DRAWING 13533–ST–WM–202

PROP. FWMH 3 CL 168.00m IL 167.00m

PROP. FWMH 2 CL 166.60m IL 165.60m

PROP. FWMH 1 CL 165.80m IL 165.00m

EXISTING FOUL PUBLIC SEWER

EXISTING WELSH WATER FOUL MANHOLE SJ28459799 CL 166.51m IL 164.76m

NOTE

MANHOLE DEATILS FROM F19 AND S23 TO OUTFALL DESIGNED BY WREXHAM COUNTY BOROUGH COUNCIL. CONTRACTOR TO CONFIRM THAT LEVELS ARE CORRECT AT EXISTING OUFALLS

PLAN X–X
(Scale 1:500)

Rev.	Drawn	Chkd.	Approved	Date	Description
X	LP	LH	JW	27.09.07	RECORD COPY – INFORMATION PROVIDED BY CONTRACTOR

Client: carillion

Project: WELSH MEDIUM SCHOOL

Drawing Title: DRAINAGE GENERAL ARRANGEMENT

Gifford
20 Nicholas Street, Chester, CH1 2NX
Tel : 01244 311888 Fax : 01244 314560 www.gifford.uk.com

Scale (at A0)	Date	Drawn
AS SHOWN	15.08.06	RS

Drg. no. 13533–ST–WM–200 Rev. X

10 0 10 20 50 100mm NATURAL SCALE

ORIGINAL DRAWING SIZE 1189 x 841