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20 St Andrews Crescent Cardiff CF10 3DD	Estuary View Business Park Phase 1 and 2	
Date <del>Oct-2018</del> <b>JAN 2019</b>	Designed by NJP	
File PHT DESIGN SWN1_2.mdx	Checked by NJP	
Micro Drainage	Network 2016.1	

Summary of Critical Results by Maximum Level (Rank 1) for Surface Network 1

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000  
Hot Start (mins) 0 MADD Factor \* 10m<sup>3</sup>/ha Storage 2.000  
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 Storage Structures 2  
Number of Online Controls 2 Number of Time/Area Diagrams 0  
Number of Offline Controls 0 Number of Real Time Controls 0

Synthetic Rainfall Details


Rainfall Model FSR Ratio R 0.400  
Region England and Wales Cv (Summer) 0.750  
M5-60 (mm) 19.700 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 150.0 DVD Status OFF  
Analysis Timestep Fine Inertia Status OFF  
DTS Status ON

Profile(s)


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.
2.000	1	15 Winter	100	+40%	100/15 Winter			
2.001	2	15 Winter	100	+40%	100/15 Summer			
3.000	3	15 Winter	100	+40%	30/15 Winter			
3.001	EX S201	240 Winter	100	+40%	1/30 Winter			
3.002	EX S2	15 Winter	100	+40%	100/15 Winter			
2.002	3	15 Winter	100	+40%	100/15 Summer			
2.003	4	15 Winter	100	+40%	100/15 Summer			
2.004	5	15 Winter	100	+40%	100/15 Summer			
2.005	6	15 Winter	100	+40%	30/15 Summer			
2.006	EX S6	15 Winter	100	+40%	100/15 Summer			
2.007	EX S5	15 Winter	100	+40%	100/15 Summer	100/15 Winter		
2.008	EX S4	15 Winter	100	+40%	100/15 Summer			
2.009	EX S3A	15 Winter	100	+40%	100/15 Summer			
2.010	EXS3	15 Winter	100	+40%	100/15 Summer	100/15 Summer		
2.011	EXS2	15 Winter	100	+40%	30/15 Summer			
2.012	EXS1	15 Winter	100	+40%				
4.000	EXS103	15 Winter	100	+40%	30/15 Summer			
4.001	EXS102	120 Winter	100	+40%	30/15 Winter			
4.002	EXS101	120 Winter	100	+40%				
4.003	EXS1	120 Winter	100	+40%				
4.004	EXS132	15 Winter	100	+40%				
4.005	EXS131	15 Winter	100	+40%				

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Date <del>Oct 2010</del> <b>JAN 2015</b> File PHT DESIGN SWN1_2.mdx	Designed by NJP Checked by NJP	
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Summary of Critical Results by Maximum Level (Rank 1) for Surface Network 1

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Overflow Cap. (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
2.000	1	47.692	0.042	0.000	0.69	11.4	SURCHARGED	
2.001	2	47.560	0.310	0.000	1.03	19.7	SURCHARGED	
3.000	3	51.935	0.435	0.000	1.96	360.2	SURCHARGED	
3.001	EX S201	51.841	0.791	0.000	0.29	13.6	SURCHARGED	
3.002	EX S2	47.552	0.002	0.000	0.24	10.5	SURCHARGED	
2.002	3	47.541	0.491	0.000	0.62	37.8	SURCHARGED	
2.003	4	47.537	0.537	0.000	0.70	57.5	SURCHARGED	
2.004	5	47.497	0.697	0.000	1.01	73.6	SURCHARGED	
2.005	6	47.398	0.803	0.000	2.26	164.3	SURCHARGED	
2.006	EX S6	46.982	0.482	0.000	0.81	213.2	SURCHARGED	
2.007	EX S5	45.502	1.297	0.234	1.17	254.3	FLOOD	1
2.008	EX S4	43.753	0.723	0.000	0.88	255.7	SURCHARGED	
2.009	EX S3A	43.351	0.876	0.000	0.81	276.1	SURCHARGED	
2.010	EXS3	42.561	1.406	1.351	1.10	391.9	FLOOD	2
2.011	EXS2	41.349	1.244	0.000	2.27	486.6	SURCHARGED	
2.012	EXS1	36.690	-0.085	0.000	0.95	504.2	OK	
4.000	EXS103	52.356	2.306	0.000	3.18	623.7	SURCHARGED	
4.001	EXS102	50.388	0.728	0.000	0.09	27.4	SURCHARGED	
4.002	EXS101	47.708	-0.192	0.000	0.28	27.4	OK	
4.003	EXS1	46.994	-0.186	0.000	0.31	27.4	OK	
4.004	EXS132	46.897	-0.093	0.000	0.80	117.3	OK	
4.005	EXS131	46.557	-0.093	0.000	0.80	116.5	OK	

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Summary of Critical Results by Maximum Level (Rank 1) for Surface Network 1

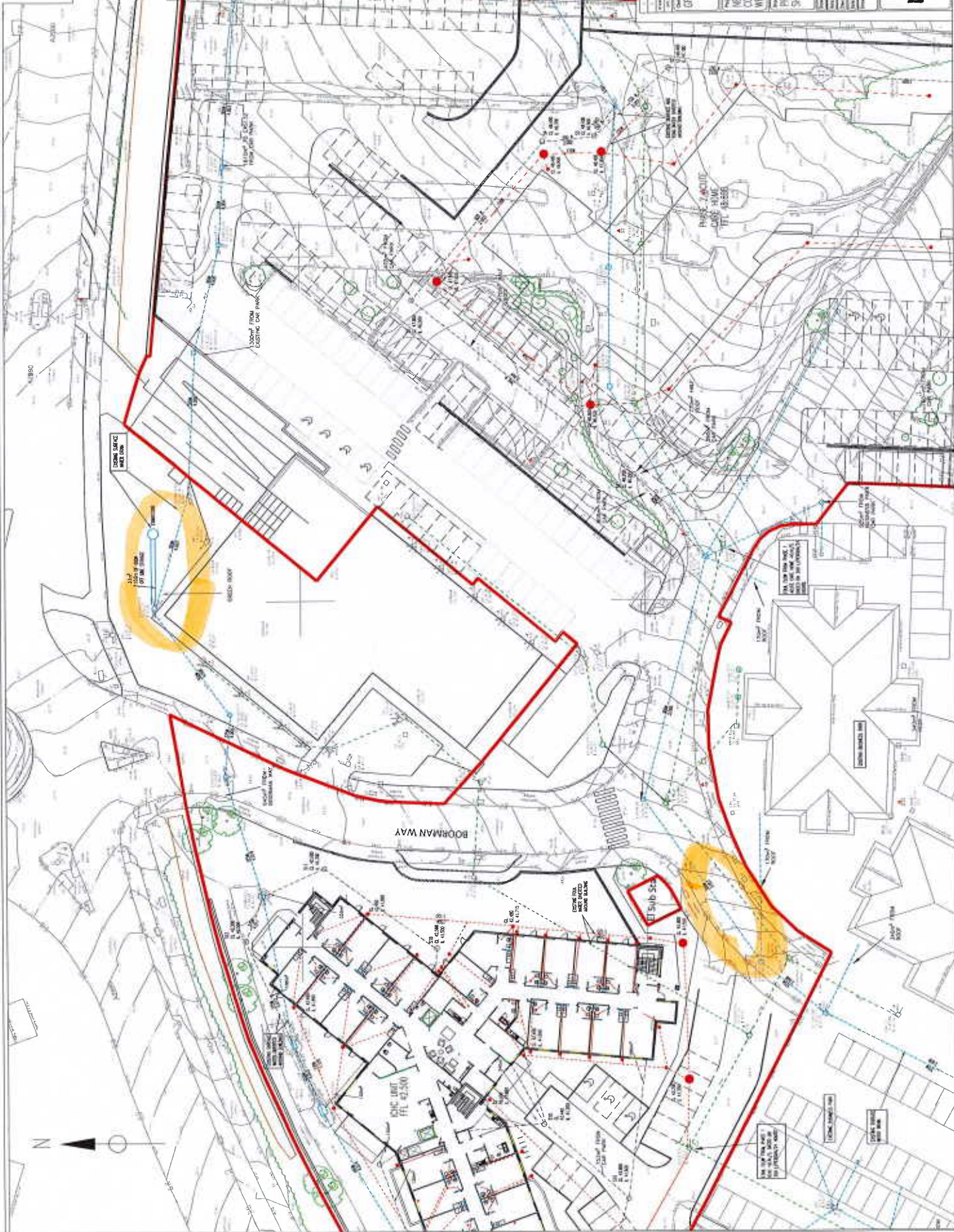
PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
4.006	EXS130	15 Winter	100	+40%	100/15 Summer			
4.007	EXS129A	15 Winter	100	+40%	100/15 Summer	100/15 Summer		
4.008	EXS129	15 Summer	100	+40%	100/15 Summer			
4.009	EXS128	15 Winter	100	+40%	30/15 Summer			
4.010	EXS27	15 Winter	100	+40%	30/15 Summer			
4.011	EXS26	15 Winter	100	+40%	30/15 Summer			
4.012	12	15 Winter	100	+40%	100/15 Summer			
4.013	EXS25	15 Winter	100	+40%	100/15 Summer			
4.014	EXS24	15 Winter	100	+40%	100/15 Summer			
4.015	EXS23	15 Winter	100	+40%	100/15 Summer			
4.016	13	15 Winter	100	+40%	30/15 Winter			
5.000	15	15 Winter	100	+40%				
4.017	14	15 Winter	100	+40%	100/15 Summer			
4.018	EXS23B	15 Winter	100	+40%				
4.019	EXS23C	15 Winter	100	+40%				

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Overflow Cap. (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
4.006	EXS130	45.004	0.174	0.000	0.64	194.4	SURCHARGED	
4.007	EXS129A	44.107	1.277	7.126	1.22	185.8	FLOOD	3
4.008	EXS129	43.664	1.264	0.000	0.87	211.8	FLOOD RISK	
4.009	EXS128	42.832	1.637	0.000	2.45	245.5	SURCHARGED	
4.010	EXS27	41.829	0.794	0.000	1.92	257.3	SURCHARGED	
4.011	EXS26	41.399	0.484	0.000	2.71	275.0	SURCHARGED	
4.012	12	40.913	0.038	0.000	1.04	276.7	SURCHARGED	
4.013	EXS25	40.448	0.113	0.000	0.66	270.2	SURCHARGED	
4.014	EXS24	40.225	0.415	0.000	1.25	273.7	SURCHARGED	
4.015	EXS23	39.978	0.328	0.000	1.12	281.8	SURCHARGED	
4.016	13	39.728	0.278	0.000	1.61	286.8	SURCHARGED	
5.000	15	41.724	-0.101	0.000	0.58	91.6	OK	
4.017	14	39.469	0.119	0.000	1.19	353.7	SURCHARGED	
4.018	EXS23B	38.844	-0.186	0.000	0.65	352.6	OK	
4.019	EXS23C	37.852	-0.238	0.000	0.43	426.1	OK	



NOTES

- 1. ALL NEW WORK SHALL BE SHOWN AND DIMENSIONS SHOWN IN RED.
- 2. ALL DIMENSIONS TO FACE UNLESS NOTED OTHERWISE.
- 3. ALL DIMENSIONS TO FACE UNLESS NOTED OTHERWISE.
- 4. ALL DIMENSIONS TO FACE UNLESS NOTED OTHERWISE.



GRAMHAM LAND AND DEVELOPMENT

FOR THE  
NEW CARE DEVELOPMENT, INTEGRATED  
COMMUNITY HEALTHCARE CENTRE  
WHARFEDALE WHISTLEABLE

PROPOSED DRAINAGE LAYOUT  
SHEET 1 OF 3

Client Ref:	10378-511
Project Ref:	
Drawn By:	
Checked By:	
Date:	

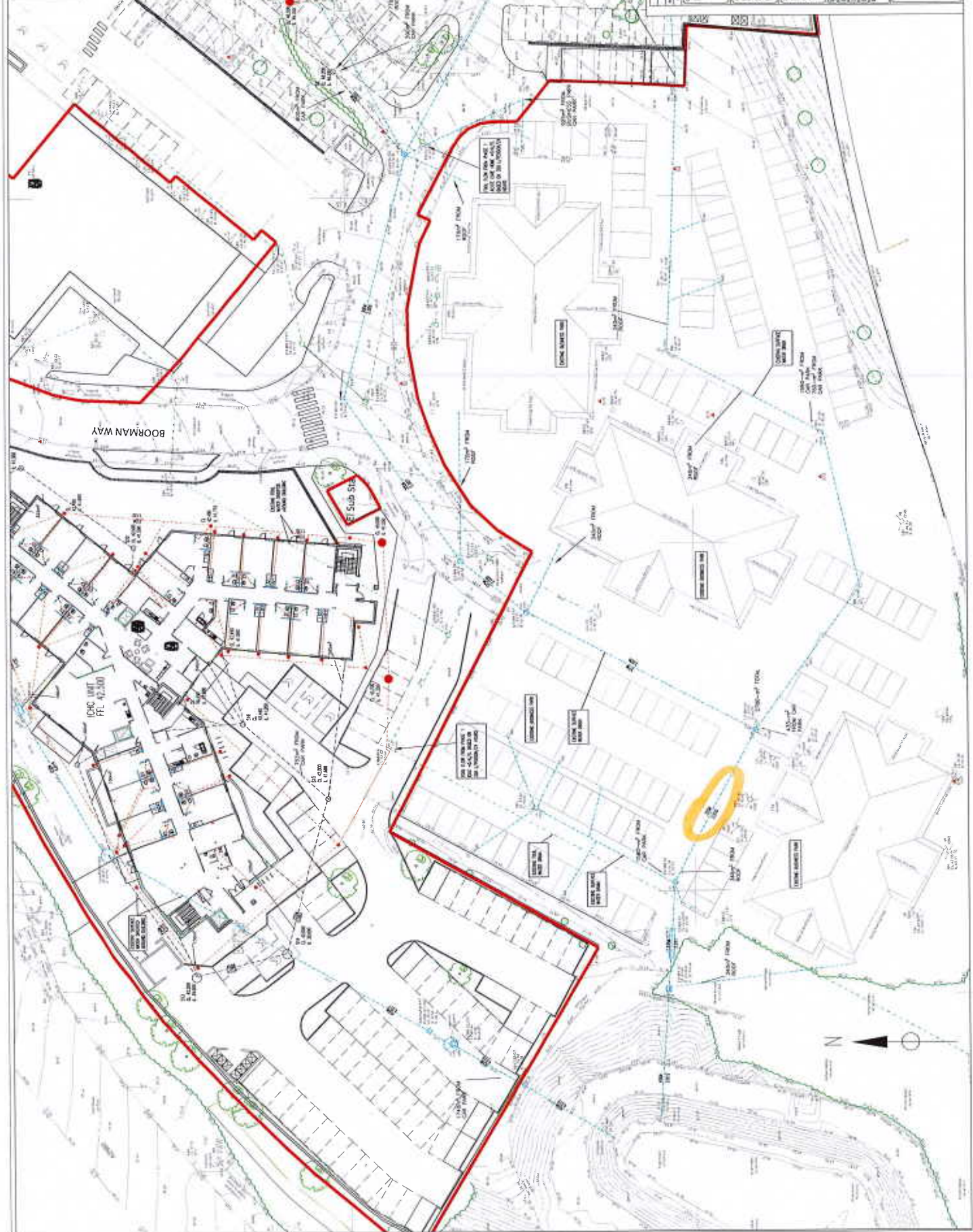
PLANNING

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**NOTES**  
 1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.  
 2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.  
 3. THE DIMENSIONS OF THE BUILDING ARE TO FACE UNLESS OTHERWISE SPECIFIED.  
 4. THE DIMENSIONS OF THE BUILDING ARE TO FACE UNLESS OTHERWISE SPECIFIED.



<b>GRAPHIC LAND AND DEVELOPMENT</b> NEW CARE DEVELOPMENT INTEGRATED COMMUNITY HEALTH CENTRE BREAK HALL WHITSTABLE PROPOSED DRAWING LAYOUT SHEET 2 OF 3	
Drawing No: 10378-511 Drawing Title: PLANNING Drawing Date: 10/08/2011 Drawing Scale: 1:1000 Drawing Status: Final	WJP WJP Consulting Engineers Limited 25 St. Andrew Street Southend-on-Sea, Essex SS16 5JG Tel: 020 303 8800 Fax: 020 303 8801 Web: www.wjp.co.uk