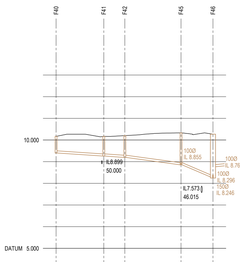
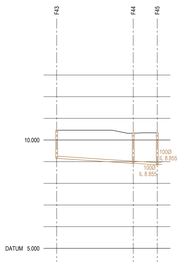


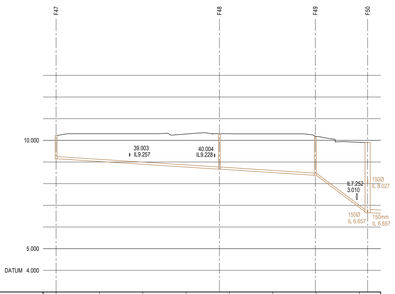
GROUND LEVEL	10.155	10.241	10.319	10.316	10.244
FOULWATER COVER LEVEL	10.155				10.270
FOULWATER INVERT	8.850				8.296
FOULWATER DETAILS		15.000 1000 uPVC 1:78			
FOULWATER LENGTHS		43.836			



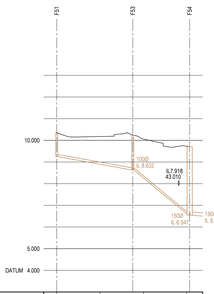
GROUND LEVEL	10.166	10.155	10.268	10.305	
FOULWATER COVER LEVEL	10.166	10.188	10.203	10.339	10.270
FOULWATER INVERT	8.400	8.750 9.100	8.750 9.100	8.650 8.800	8.296
FOULWATER DETAILS		16.000 1000 uPVC 1:78	16.001 1000 uPVC 1:78	16.002 1000 uPVC 1:36	16.003 1000 uPVC 1:13
FOULWATER LENGTHS		11.013	4.854	12.965	7.371



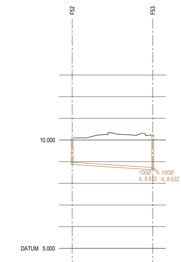
GROUND LEVEL	10.453	10.453	10.333
FOULWATER COVER LEVEL	10.453	10.318	10.339
FOULWATER INVERT	9.150	8.650 8.800	8.800
FOULWATER DETAILS		17.000 1000 uPVC 1:78	17.001 1000 uPVC 1:80
FOULWATER LENGTHS		17.661	5.541



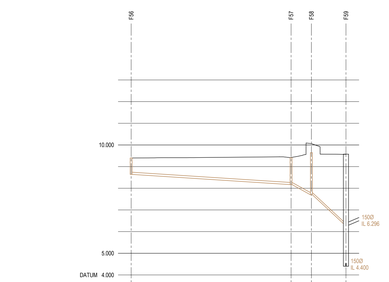
GROUND LEVEL	10.217	10.305	10.305	10.393	10.306	10.301	10.183	9.999
FOULWATER COVER LEVEL	10.217				10.306		10.175	9.956
FOULWATER INVERT	9.150				8.650 8.800		8.367 8.517	8.707
FOULWATER DETAILS			18.000 1000 uPVC 1:78			18.001 1000 uPVC 1:78		18.002 1000 uPVC 1:7
FOULWATER LENGTHS			37.681			22.132		12.073



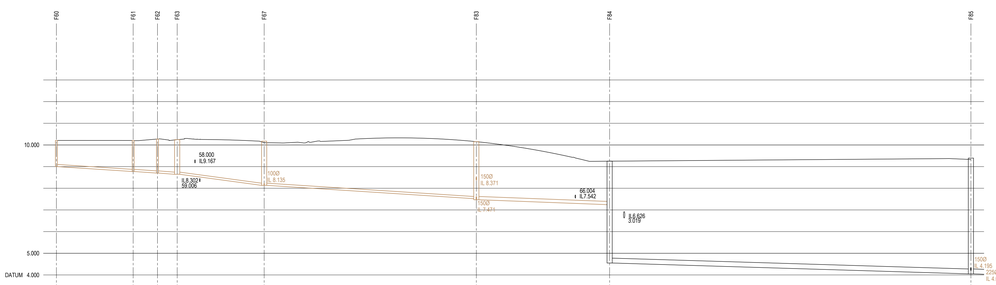
GROUND LEVEL	10.340	10.178	10.093	9.727
FOULWATER COVER LEVEL	10.265	10.178	10.228	9.705
FOULWATER INVERT	9.250	8.650 8.800	8.650 8.800	8.650
FOULWATER DETAILS		19.000 1000 uPVC 1:28	19.001 1000 uPVC 1:6	
FOULWATER LENGTHS		17.548	13.126	



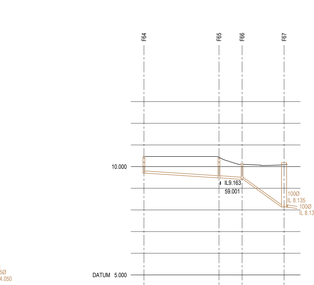
GROUND LEVEL	10.056	10.290
FOULWATER COVER LEVEL	10.056	10.228
FOULWATER INVERT	8.810	8.810
FOULWATER DETAILS		20.000 1000 uPVC 1:78
FOULWATER LENGTHS		18.599



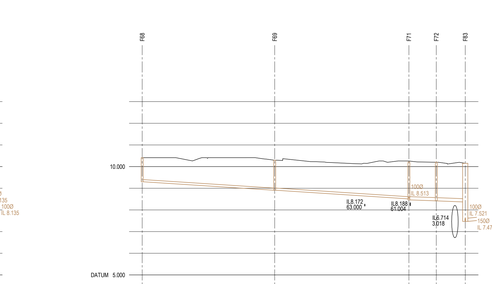
GROUND LEVEL	9.398	9.412			9.501
FOULWATER COVER LEVEL	9.397			9.465	9.443 9.575
FOULWATER INVERT	8.648			8.650 8.800	8.701 8.851 8.371
FOULWATER DETAILS		21.000 1000 uPVC 1:78		21.001 1000 uPVC 1:10	21.002 1000 uPVC 1:6
FOULWATER LENGTHS		36.904		4.686	7.980



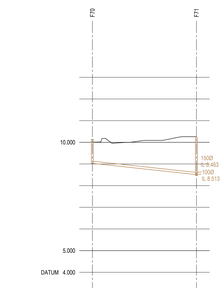
GROUND LEVEL	10.209	10.207		10.296	10.217	10.274	10.344	10.300	10.200	10.174	10.095	10.172	10.282	10.337	10.261	10.063	9.789	9.386	9.250	9.339
FOULWATER COVER LEVEL	10.209			10.296		10.274										10.152				9.339
FOULWATER INVERT	9.000			9.274	8.700 8.850	9.024	8.646	8.646		8.150	8.150					7.421			7.242	4.050
FOULWATER DETAILS		22.000 1000 uPVC 1:78		22.001 1000 uPVC 1:78	22.002 1000 uPVC 1:78		22.003 1000 uPVC 1:39				22.004 1000 uPVC 1:80					22.005 1500 uPVC 1:136				
FOULWATER LENGTHS		17.712		5.608	4.548		20.073				48.958					30.756				EXISTING



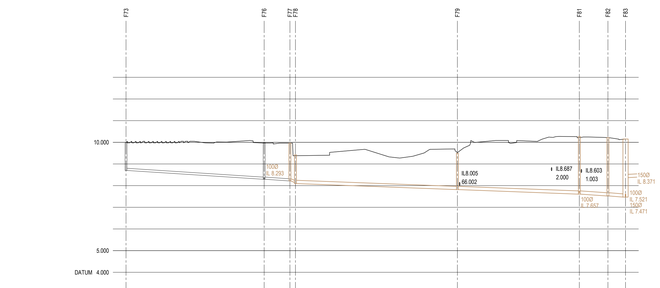
GROUND LEVEL	10.458	10.467		10.064
FOULWATER COVER LEVEL	10.468		10.371	10.150 10.174
FOULWATER INVERT	9.700		9.700 9.750	8.411 8.561 8.135
FOULWATER DETAILS		23.000 1000 uPVC 1:78	23.001 1000 uPVC 1:78	23.002 1000 uPVC 1:8
FOULWATER LENGTHS		17.321	5.328	9.758



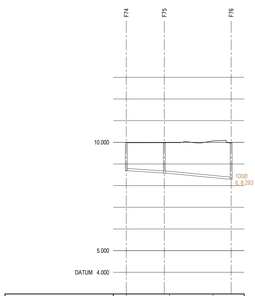
GROUND LEVEL	10.411	10.325	10.413	10.350	10.228	10.151	10.290	10.155
FOULWATER COVER LEVEL	10.411			10.276			10.299	10.203 10.152
FOULWATER INVERT	9.300			8.810 8.960		8.810 8.960	8.421 8.571	8.371
FOULWATER DETAILS		24.000 1500 uPVC 1:78			24.001 1000 uPVC 1:76		24.002 1500 uPVC 1:150	24.003 1500 uPVC 1:150
FOULWATER LENGTHS		30.579			30.970		6.315	6.685



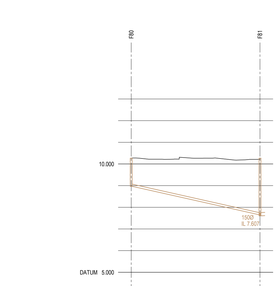
GROUND LEVEL	10.033	10.055	10.228
FOULWATER COVER LEVEL	10.139		10.209
FOULWATER INVERT	9.650		8.613
FOULWATER DETAILS		25.000 1000 uPVC 1:47	
FOULWATER LENGTHS		24.013	



GROUND LEVEL	10.000	10.055		9.964		9.862			9.988		9.971		9.664		10.037		9.966	10.270		10.227
FOULWATER COVER LEVEL	9.975				9.979		9.960 10.010												10.206	10.213 10.152
FOULWATER INVERT	8.700				8.753 8.903		8.818 8.968	8.818 8.968							7.617 7.917				7.607 7.757	7.523 7.673 7.471
FOULWATER DETAILS			26.000 1000 uPVC 1:78			26.001 1000 uPVC 1:78	26.002 1000 uPVC 1:18			26.003 1500 uPVC 1:134						26.004 1500 uPVC 1:134			26.005 1500 uPVC 1:78	26.006 1500 uPVC 1:78
FOULWATER LENGTHS			31.875			5.946	1.271			37.372						28.134			6.605	4.058



GROUND LEVEL	9.988	9.986	10.062
FOULWATER COVER LEVEL	9.988	9.971	9.978
FOULWATER INVERT	8.800	8.650 8.800	8.793
FOULWATER DETAILS		27.000 1000 uPVC 1:78	27.001 1000 uPVC 1:54
FOULWATER LENGTHS		8.773	15.430



GROUND LEVEL	10.222	10.226	10.263
FOULWATER COVER LEVEL	10.206		10.088
FOULWATER INVERT	8.968		7.692
FOULWATER DETAILS		28.000 1000 uPVC 1:23	
FOULWATER LENGTHS		29.714	

LONGITUDINAL SECTIONS
SCALE 1:500(H) 1:100(V)

GENERAL NOTES

1. The contractor is to check and verify all buildings and site dimensions and levels, including existing sewer invert levels, before works start on site. The contractor is to comply in all aspects with the current building legislation, British Standards, building regulations etc.
2. Positions of existing services/statutory undertakers apparatus adjacent to or crossing proposed excavations are to be checked by the contractor prior to starting work.
3. This drawing is to be read in conjunction with and checked against all other drawings, engineering details, specifications and any structural, geotechnical or other specialist document provided.
4. This drawing is schematic for clarity only, positions of pipe runs and manholes may vary on site due to site conditions.
5. Where trees adjacent to the highway are proposed, root barriers of an approved type are required to prevent future structural damage to the highway.
6. Any anomaly or contradictions between any of the above is to be reported immediately to PHG Consulting Engineers.

ROAD AND SEWER ADOPTIONS

1. All works for adoption under a Section 38 agreement shall be carried out to the Highway Authority Specification for Road Construction in Residential Areas and to the approval of the Area Highway Authority.
2. All works for adoption under a Section 104 agreement shall be carried out to the National Water Council guide "Sewers for Adoption" 7th Edition and shall be in accordance with the Drainage Authority's additions and amendments.
3. All surface water drainage works subject to SAB approval. No work to commence prior to agreement from the SAB Authority.
4. Any works carried out on site prior to confirmation of technical approval for Section 104 and Section 38 Agreements (including street lighting approval) are entirely at the developers risk.
5. Street lighting positions to be pegged on site and agreed by the Local Authority PRIOR to erection commencing.
6. A clause is to be included within the Section 38 Agreement requiring that, prior to adoption, the developer is to process a Traffic Regulation Order covering whatever restrictions may be determined to be necessary in relation to on-street parking restrictions within the site roads. The situation will be monitored once all new dwellings are occupied.
7. A clause is to be included within the Section 38 Agreement requiring that additional speed reducing measures are to be implemented if judged necessary by the Highway Authority in the event that excessive vehicle speeds become evident prior to adoption of the works.

DRAINAGE NOTES

1. All private drainage shall be in accordance with BS8301 and relevant sections of Approved Document H of the Building Regulations.
2. The contractor is to check the level of existing sewers being used as outfalls or crossing proposed drainage runs PRIOR to laying any pipes. Any discrepancies are to be reported to PHG Consulting Engineers.
3. Position of soil pipes, stubstacks, WC outlets, rainwater downpipes, etc., positions are to be checked against the housetype working drawings.
4. Private house drainage will be flexibly jointed plastic or clay pipework. Diameter 100mm unless shown otherwise.
5. All connections for House Drainage shall be 100mm unless noted otherwise and must extend 500mm behind the back of footway/homezone road. All connections when laid shall be plugged, protected as necessary and marked with a stake for future use.
6. For private drains where cover to pipes is less than 900mm in vehicular areas or 500mm in other areas protection in the form of a 100mm thick concrete pad shall be provided over the pipe granular surround.
7. Where pipes pass through screen walls, footings or retaining walls, lintels are to be provided over. Under buildings pipes shall be surrounded with 150mm thickness of granular material. Where drains pass within 1m of buildings the wall foundation shall be taken down below the invert of the pipe.
8. Where drains do not exceed 600mm deep, plastic or clay access fittings minimum diameter 225mm shall be used. Elsewhere proprietary plastic or precast concrete inspection chambers shall be used. Unless shown otherwise FW inspection chambers are to be 750mm below dpc level and SW chambers and rodding eyes to be 600mm below dpc.
9. All gullies and rainwater downpipes connected directly to drains are to be roddable.
10. House levels shown are dpc and adjacent garage floors are to be 150mm lower unless shown otherwise. Levels at drainage access points are inverts.
11. Drainage runs should be laid at a minimum of 5.0m from the rear of properties where practical to allow for future extensions.
12. All drainage shall be laid upstream and each run between manholes shall be laid complete prior to backfilling. Where this is not practical trial holes or other means of identifying the line and level of services shall be carried out prior to works commencing.
13. All branch drains, or connections, are to discharge to the collectors obliquely, and in the direction of the main flow.
14. All bw spots on hardstanding areas to have yard gullies unlessspreeable paving is used.
15. The developer must self-vet and certify that the design criteria, material standards and workmanship specifications for the proposed adoptable sewers are in accordance with those set out in "Sewers for Adoption" 7th Edition, A Section 106 application to connect must be made to the water authority, the developer shall give 21 days' notice prior to connection, and the works may only be undertaken by a SSIP accredited contractor.
16. The foul sewers must achieve a minimum flow velocity of 0.75 m/s at one third design flow or when the sewer has a nominal internal diameter of 100mm or where 10 properties or less are connected the sewer must be laid at minimum of 1:80. Where the sewer has a nominal internal diameter of 150mm and at least 10 dwelling units are connected the sewer will be laid at a minimum gradient of 1:150. The maximum gradient a sewer can be laid is 1:5.
17. The surface water sewers must achieve a minimum flow velocity of 1 m/s at pipe full flow or when the sewer has a nominal internal diameter of 100mm the sewer must be laid at minimum of 1:100. Where the sewer has a nominal internal diameter of 150mm or greater the sewer will be laid at a minimum gradient of 1:150. The maximum gradient a sewer can be laid is 1:5.
18. All inspection chamber and manhole covers should adhere to BS EN 124 and be suitable for where the chambers and manholes are situated.
19. Where sewers are located in proximity or between buildings refer to Figures B.1 and B.2.

REV.	DATE	DETAILS	BY	CHK
		AMENDMENTS		

CLIENT:

newport city homes
first for people, places and partnerships

CONSULTING ENGINEERS
PHG CONSULTING LTD
107 CONGRESS ROAD EAST
CARDIFF CF11 9AG
T : +44(0)29 2066 2621
E : enquiries@phg-consulting.com
W : www.phg-consulting.com
@PHG_consulting
www.linkedin.com/company/phg-consulting-engineers

PROJECT:

Old Town Dock

DRAWING TITLE:

Foul Drainage Longitudinal Sections Sheet 2 of 2

DRAWN:	CHK:	STATUS:	SCALE AT A0:
MP	SJD	PRELIMINARY	AS SHOWN

DATE:	JOB NO.	DWG. NO.	REV.
23.01.26	2579	2010-2	/