Land off Cross Common Road,

Dinas Powys, Vale of Glamorgan.

Edenstone Homes.

Drainage Statement

June 2017

PHOENIX DESIGN
Partnership Ltd.

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Document Control Sheet

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Contents

APPENDICES

1.0 INTRODUCTION

1.1 This statement provides updated information on the design strategy of the surface and foul water sewers to serve the proposed development off Cross Common Road, Dinas Powys, Vale of Glamorgan.

1.2 The details in this statement demonstrate how the drainage for the development will be discharged and how flows will be managed to prevent increased flood risk.

1.3 A full Drainage Strategy and Flood Risk Assessment was provided by Spring Design in October 2014 to support the sites Outline Planning Application 2015/00392/OUT. This report is referred to within the following text as it has set the main drainage strategy for this development.

2.0 KEY DESIGN CRITERIA

2.1 Existing Surface Water

The existing site is an undeveloped greenfield measuring circa 2.2 Ha located off Cross Common Road, Dinas Powys, Vale of Glamorgan (ST154705).

The site falls from a highpoint of circa 15.00m AOD along the eastern boundary down to 10.00m along the western boundary. The site falls at a constant grade of 1:30 and all existing greenfield run-off would tend to fall east to west.

All surface water crosses the site via an existing ditch network that are tributaries to the Cadoxton River to the west of the site.

Appendix A shows that there is no Flood Risk from the adjacent river as per Spring Designs 2014 Report. It also shows existing surface water run-off routes through the development with one route running along the southern boundary from Shortlands Wood and one from the north-east boundary running across the site.

2.2 Surface Water Sewer Design

Following site investigation the use of soakaways has been discounted for this development due to poor percolation rates.

The Spring Design 2014 Report confirmed that the surface water from the development shall discharge at a maximum QBar rate of 14 l/s which is equivalent to just over the existing 2 year storm event. In the first instance this

is more than 50% betterment from the existing Q100 (100 year event) of 30.4 l/s.

The proposed scheme shall be designed with a maximum discharge of 14 l/s.

In addition to the above and following pre-planning consultation with the Vale of Glamorgan Council's Coastal and Flood Risk Management Team we have been asked to consider the following:

- Discharge rate of 14 l/s is accepted, but full consideration of the existing surface water overland flow run-off / ditches be analysed.
- Existing contributing area to the overland flow set at 22.4 Ha; this includes the current 2.2 Ha site.
- How overland flow is conveyed towards the Cadoxton River.

Appendix A shows existing overland flows for the development from NRW Flood Maps. These existing flows have been incorporated within the proposed scheme and Appendix C shows the proposed Engineering Layout. The existing flow path along the southern boundary is to be maintained as is the flow path crossing the site; this shall be incorporated within the POS and routed towards the sites surface water discharge point at the south west corner.

Appendix B shows the Q100 rate for the 22.4 Ha overland flow set by the council. This generates a flow of 200 l/s; 8.9 l/s/ha.

This area can be reduced to 20.2 Ha (this site is 2.2 Ha) which generates an overland flow of 179.8 l/s. As the site is restricted to 14 l/s this generates a total site discharge of 193.8 l/s.

The surface water discharges from the site via an existing 300mm dia. culvert to the south west corner of the site. This runs under Cardiff Road towards the Cadoxton River at a grade of 1:20. This gives a hydraulic capacity of 250 l/s.

Therefore the existing culvert has adequate capacity to manage existing and proposed flows from the development and there is no increase in flood risk further downstream.

2.3 Climate Change

To take in to account climate change impact for the 100 year life of the residential development a 30% allowance for the predicted increase in rainfall intensity should be assumed for the design of the surface water drainage in accordance with Technical Advice Note 15 (TAN15).

Flows up to and including the 1 in 100 year event, plus 30% climate change will be managed on site via a dry attenuation basin designed to the maximum discharge rate of 14 l/s.

2.4 Foul Water Sewer Design

Foul drainage from the development will discharge from the development via the existing combined sewer within Cardiff Road to the west of the site, see Appendix D.

Foul sewers serving the proposed development will be designed to meet the hydraulic design and construction requirements within “Sewers for Adoption” 7th Edition. It is intended to offer the foul sewer to Welsh Water for adoption under a Section 104 Agreement in accordance with The Water Industries Act 1991.

3.0 SUMMARY

3.1 This statement provides information on the surface & foul water drainage as required by the undertaking given by Edenstone Homes.

3.2 Surface water shall discharge from site to an existing culvert to the south west of the site. This discharge shall be limited via a Hydrobrake Chamber at a maximum rate of 14 l/s as per Spring Designs Drainage Strategy and FRA, dated October 2014.

3.3 Attenuation shall be via a dry basin / pond and will be designed to manage the 1 in 100 year storm event, plus 30% climate change.

3.4 Existing surface water flow paths through the development are to be maintained and the existing culvert has adequate capacity to manage these flows, plus the 14 l/s max flow from the proposed development.

3.5 Foul drainage shall discharge into the existing adopted combined system within Cardiff Road.

3.6 Surface and foul water sewers will be offered for adoption to Welsh Water via a Section 104 Agreement.

3.7 To take in to account climate change impact for the 100 year life of the residential development a 30% allowance for the predicted increase in rainfall intensity has been assumed for the design of the surface water drainage in accordance with Technical Advise Note (TAN 15).

Appendix A

NRW Flood Risk Maps

Cyfoeth Naturiol Cymru
Natural Resources Wales

Map Title

Map Perygl Llifogydd / Flood Risk Map

Allwedd / Map Key

- Flood Defences
- Risk of Flooding from Rivers & Sea
  - High
  - Medium
  - Low
  - Very Low

Graddfa / Scale 1: 5,001

Dyddiad / Date
01/06/2017

0.3 0 0.13 0.3
British_National_Grid Kilometers

Cyfoeth Naturiol Cymru
Natural Resources Wales

Dinas Powys

Map Perygl Llifogydd / Flood Risk Map

Allwedd / Map Key

- High Surface Water Flood Risk - Extent
- Medium Surface Water Flood Risk - Extent
- Low Surface Water Flood Risk - Extent

Graddfa / Scale 1: 5,001

Dyddiad / Date
02/05/2017

0.3 0 0.13 0.3
British_National_Grid Kilometers

Appendix B

Surface Water Run-off ReFH2 Q100

UK Design Flood Estimation

Generated on Tuesday, April 4, 2017 12:56:39 PM by Steve
Printed from the ReFH Flood Modelling software package, version 2.2.6029.28099

Summary of estimate using the Flood Estimation Handbook revitalised flood hydrograph method (ReFH)

Site details Checksum: FBB2-F1E8

Site name: Cross Common

Easting: 315450

Northing: 170450

Country: England, Wales or Northern Ireland

Catchment Area (km²): 0.22 [15.85]*

Using plot scale calculations: No

Site description: None

Model run: 100 year

Summary of results

Rainfall - FEH 2013 (mm):	68.49	Total runoff (ML):	3.70
Total Rainfall (mm):	53.35	Total flow (ML):	8.55
Peak Rainfall (mm):	12.12	Peak flow (m³/s):	0.20

Parameters

Where the user has overriden a system-generated value, this original value is shown in square brackets after the value used.
** Indicates that the user locked the duration/timestep*

Rainfall parameters (Rainfall - FEH 2013 model)

Name	Value	User-defined?
Duration (hh:mm:ss)	05:30:00	No
Timestep (hh:mm:ss)	00:30:00	No
SCF (Seasonal correction factor)	0.79	No
ARF (Areal reduction factor)	0.99	No
Seasonality	Winter	n/a

Loss model parameters

Name	Value	User-defined?
Cini (mm)	97.56	No
Cmax (mm)	416.75	No
Use alpha correction factor	No	No
Alpha correction factor	n/a	No

Routing model parameters

Name	Value	User-defined?
Tp (hr)	2.81	No
Up	0.65	No
Uk	0.8	No

Baseflow model parameters

Name	Value	User-defined?
BF0 (m^3/s)	0.01	No
BL (hr)	42.62	No
BR	1.51	No

Urbanisation parameters

Name	Value	User-defined?
Urban area (km^2)	0.02	No
Urbext 2000	0.06	No
Impervious runoff factor	0.7	No
Imperviousness factor	0.3	No
Tp scaling factor	0.5	No
Sewered area (km^2)	0.00	Yes
Sewer capacity (m^3/s)	0.00	Yes

Time series data

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m^3/s)	Baseflow (m^3/s)	Total Flow (m^3/s)
00:00:00	1.171	0.000	0.292	0.000	0.010	0.010
00:30:00	1.962	0.000	0.496	0.001	0.010	0.010
01:00:00	3.270	0.000	0.846	0.003	0.010	0.012
01:30:00	5.408	0.000	1.454	0.007	0.010	0.017
02:00:00	8.800	0.000	2.512	0.015	0.010	0.025
02:30:00	12.123	0.000	3.756	0.029	0.010	0.039
03:00:00	8.800	0.000	2.941	0.053	0.010	0.063
03:30:00	5.408	0.000	1.897	0.085	0.011	0.096
04:00:00	3.270	0.000	1.180	0.119	0.012	0.131
04:30:00	1.962	0.000	0.720	0.149	0.014	0.163
05:00:00	1.171	0.000	0.434	0.172	0.016	0.187
05:30:00	0.000	0.000	0.000	0.184	0.018	0.202
06:00:00	0.000	0.000	0.000	0.184	0.021	0.205
06:30:00	0.000	0.000	0.000	0.174	0.023	0.197
07:00:00	0.000	0.000	0.000	0.157	0.025	0.182
07:30:00	0.000	0.000	0.000	0.136	0.028	0.164
08:00:00	0.000	0.000	0.000	0.116	0.029	0.146
08:30:00	0.000	0.000	0.000	0.098	0.031	0.129
09:00:00	0.000	0.000	0.000	0.082	0.032	0.114
09:30:00	0.000	0.000	0.000	0.069	0.033	0.102
10:00:00	0.000	0.000	0.000	0.058	0.034	0.092
10:30:00	0.000	0.000	0.000	0.048	0.034	0.082
11:00:00	0.000	0.000	0.000	0.038	0.035	0.073
11:30:00	0.000	0.000	0.000	0.029	0.035	0.064
12:00:00	0.000	0.000	0.000	0.021	0.035	0.056
12:30:00	0.000	0.000	0.000	0.014	0.035	0.048
13:00:00	0.000	0.000	0.000	0.008	0.034	0.042
13:30:00	0.000	0.000	0.000	0.004	0.034	0.038
14:00:00	0.000	0.000	0.000	0.002	0.034	0.036
14:30:00	0.000	0.000	0.000	0.001	0.033	0.034
15:00:00	0.000	0.000	0.000	0.000	0.033	0.033
15:30:00	0.000	0.000	0.000	0.000	0.033	0.033
16:00:00	0.000	0.000	0.000	0.000	0.032	0.032
16:30:00	0.000	0.000	0.000	0.000	0.032	0.032
17:00:00	0.000	0.000	0.000	0.000	0.032	0.032

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m^3/s)	Baseflow (m^3/s)	Total Flow (m^3/s)
17:30:00	0.000	0.000	0.000	0.000	0.031	0.031
18:00:00	0.000	0.000	0.000	0.000	0.031	0.031
18:30:00	0.000	0.000	0.000	0.000	0.030	0.030
19:00:00	0.000	0.000	0.000	0.000	0.030	0.030
19:30:00	0.000	0.000	0.000	0.000	0.030	0.030
20:00:00	0.000	0.000	0.000	0.000	0.029	0.029
20:30:00	0.000	0.000	0.000	0.000	0.029	0.029
21:00:00	0.000	0.000	0.000	0.000	0.029	0.029
21:30:00	0.000	0.000	0.000	0.000	0.028	0.028
22:00:00	0.000	0.000	0.000	0.000	0.028	0.028
22:30:00	0.000	0.000	0.000	0.000	0.028	0.028
23:00:00	0.000	0.000	0.000	0.000	0.027	0.027
23:30:00	0.000	0.000	0.000	0.000	0.027	0.027
24:00:00	0.000	0.000	0.000	0.000	0.027	0.027
24:30:00	0.000	0.000	0.000	0.000	0.026	0.026
25:00:00	0.000	0.000	0.000	0.000	0.026	0.026
25:30:00	0.000	0.000	0.000	0.000	0.026	0.026
26:00:00	0.000	0.000	0.000	0.000	0.026	0.026
26:30:00	0.000	0.000	0.000	0.000	0.025	0.025
27:00:00	0.000	0.000	0.000	0.000	0.025	0.025
27:30:00	0.000	0.000	0.000	0.000	0.025	0.025
28:00:00	0.000	0.000	0.000	0.000	0.024	0.024
28:30:00	0.000	0.000	0.000	0.000	0.024	0.024
29:00:00	0.000	0.000	0.000	0.000	0.024	0.024
29:30:00	0.000	0.000	0.000	0.000	0.024	0.024
30:00:00	0.000	0.000	0.000	0.000	0.023	0.023
30:30:00	0.000	0.000	0.000	0.000	0.023	0.023
31:00:00	0.000	0.000	0.000	0.000	0.023	0.023
31:30:00	0.000	0.000	0.000	0.000	0.022	0.022
32:00:00	0.000	0.000	0.000	0.000	0.022	0.022
32:30:00	0.000	0.000	0.000	0.000	0.022	0.022
33:00:00	0.000	0.000	0.000	0.000	0.022	0.022
33:30:00	0.000	0.000	0.000	0.000	0.021	0.021
34:00:00	0.000	0.000	0.000	0.000	0.021	0.021
34:30:00	0.000	0.000	0.000	0.000	0.021	0.021
35:00:00	0.000	0.000	0.000	0.000	0.021	0.021

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m^3/s)	Baseflow (m^3/s)	Total Flow (m^3/s)
35:30:00	0.000	0.000	0.000	0.000	0.020	0.020
36:00:00	0.000	0.000	0.000	0.000	0.020	0.020
36:30:00	0.000	0.000	0.000	0.000	0.020	0.020
37:00:00	0.000	0.000	0.000	0.000	0.020	0.020
37:30:00	0.000	0.000	0.000	0.000	0.020	0.020
38:00:00	0.000	0.000	0.000	0.000	0.019	0.019
38:30:00	0.000	0.000	0.000	0.000	0.019	0.019
39:00:00	0.000	0.000	0.000	0.000	0.019	0.019
39:30:00	0.000	0.000	0.000	0.000	0.019	0.019
40:00:00	0.000	0.000	0.000	0.000	0.018	0.018
40:30:00	0.000	0.000	0.000	0.000	0.018	0.018
41:00:00	0.000	0.000	0.000	0.000	0.018	0.018
41:30:00	0.000	0.000	0.000	0.000	0.018	0.018
42:00:00	0.000	0.000	0.000	0.000	0.018	0.018
42:30:00	0.000	0.000	0.000	0.000	0.017	0.017
43:00:00	0.000	0.000	0.000	0.000	0.017	0.017
43:30:00	0.000	0.000	0.000	0.000	0.017	0.017
44:00:00	0.000	0.000	0.000	0.000	0.017	0.017
44:30:00	0.000	0.000	0.000	0.000	0.017	0.017
45:00:00	0.000	0.000	0.000	0.000	0.016	0.016
45:30:00	0.000	0.000	0.000	0.000	0.016	0.016
46:00:00	0.000	0.000	0.000	0.000	0.016	0.016
46:30:00	0.000	0.000	0.000	0.000	0.016	0.016
47:00:00	0.000	0.000	0.000	0.000	0.016	0.016
47:30:00	0.000	0.000	0.000	0.000	0.015	0.015
48:00:00	0.000	0.000	0.000	0.000	0.015	0.015
48:30:00	0.000	0.000	0.000	0.000	0.015	0.015
49:00:00	0.000	0.000	0.000	0.000	0.015	0.015
49:30:00	0.000	0.000	0.000	0.000	0.015	0.015
50:00:00	0.000	0.000	0.000	0.000	0.015	0.015
50:30:00	0.000	0.000	0.000	0.000	0.014	0.014
51:00:00	0.000	0.000	0.000	0.000	0.014	0.014
51:30:00	0.000	0.000	0.000	0.000	0.014	0.014
52:00:00	0.000	0.000	0.000	0.000	0.014	0.014
52:30:00	0.000	0.000	0.000	0.000	0.014	0.014
53:00:00	0.000	0.000	0.000	0.000	0.014	0.014

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (mm)	Net Rain (mm)	Runoff (m^3/s)	Baseflow (m^3/s)	Total Flow (m^3/s)
53:30:00	0.000	0.000	0.000	0.000	0.013	0.013
54:00:00	0.000	0.000	0.000	0.000	0.013	0.013
54:30:00	0.000	0.000	0.000	0.000	0.013	0.013
55:00:00	0.000	0.000	0.000	0.000	0.013	0.013
55:30:00	0.000	0.000	0.000	0.000	0.013	0.013
56:00:00	0.000	0.000	0.000	0.000	0.013	0.013
56:30:00	0.000	0.000	0.000	0.000	0.012	0.012
57:00:00	0.000	0.000	0.000	0.000	0.012	0.012
57:30:00	0.000	0.000	0.000	0.000	0.012	0.012
58:00:00	0.000	0.000	0.000	0.000	0.012	0.012
58:30:00	0.000	0.000	0.000	0.000	0.012	0.012
59:00:00	0.000	0.000	0.000	0.000	0.012	0.012
59:30:00	0.000	0.000	0.000	0.000	0.012	0.012
60:00:00	0.000	0.000	0.000	0.000	0.012	0.012
60:30:00	0.000	0.000	0.000	0.000	0.011	0.011
61:00:00	0.000	0.000	0.000	0.000	0.011	0.011
61:30:00	0.000	0.000	0.000	0.000	0.011	0.011
62:00:00	0.000	0.000	0.000	0.000	0.011	0.011
62:30:00	0.000	0.000	0.000	0.000	0.011	0.011
63:00:00	0.000	0.000	0.000	0.000	0.011	0.011
63:30:00	0.000	0.000	0.000	0.000	0.011	0.011
64:00:00	0.000	0.000	0.000	0.000	0.010	0.010
64:30:00	0.000	0.000	0.000	0.000	0.010	0.010
65:00:00	0.000	0.000	0.000	0.000	0.010	0.010
65:30:00	0.000	0.000	0.000	0.000	0.010	0.010
66:00:00	0.000	0.000	0.000	0.000	0.010	0.010

Appendix

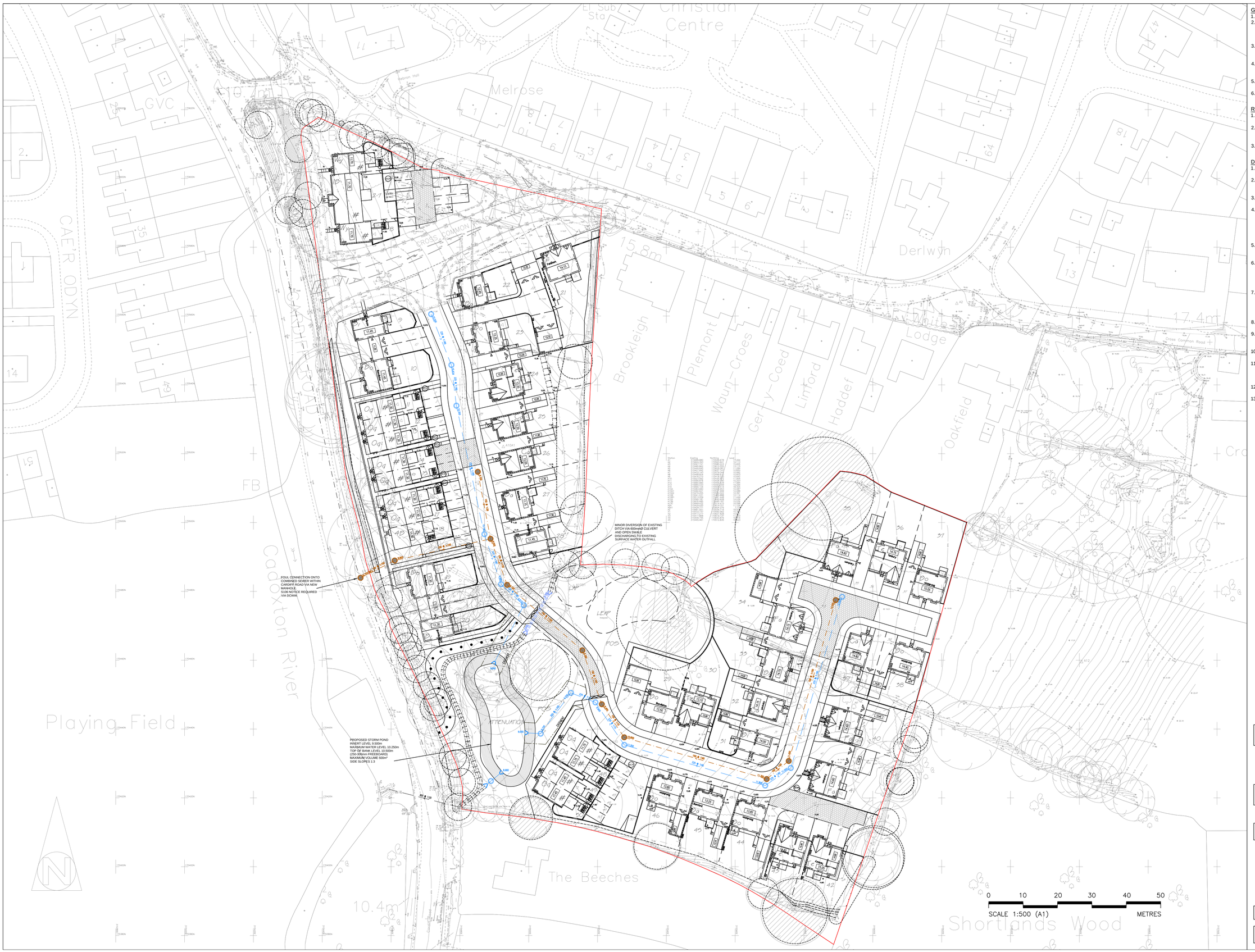
Catchment descriptors *

Name	Value	User-defined value used?
Area (km²)	0.22 [15.85]	**Yes**
ALTBAR	58	No
ASPBAR	152	No
ASPVAR	0.18	No
BFIHOST	0.53	No
DPLBAR (km)	5.03	No
DPSBAR (mkm-¹)	82.9	No
FARL	0.97	No
LDP	9.42	No
PROPWET (mm)	0.47	No
RMED1H	11.5	No
RMED1D	38.8	No
RMED2D	50.2	No
SAAR (mm)	1062	No
SAAR4170 (mm)	1107	No
SPRHOST	30.36	No
Urbext2000	0.06	No
Urbext1990	0.05	No
URBCONC	0.81	No
URBLOC	0.63	No
Urban Area (km²)	0.02	No
DDF parameter C	-0.03	No
DDF parameter D1	0.39	No
DDF parameter D2	0.35	No
DDF parameter D3	0.34	No
DDF parameter E	0.29	No
DDF parameter F	2.49	No
DDF parameter C (1km grid value)	-0.03	No
DDF parameter D1 (1km grid value)	0.38	No
DDF parameter D2 (1km grid value)	0.35	No
DDF parameter D3 (1km grid value)	0.32	No
DDF parameter E (1km grid value)	0.29	No
DDF parameter F (1km grid value)	2.51	No

Values in square brackets are the original values loaded from the FEH Web Service or FEH CD-ROM

Appendix C

Engineering Layout



GENERAL NOTES

1. Do Not Scale
2. The contractor is to check and verify all buildings and site dimensions and levels, including 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.
3. Positions of existing services/statutory undertakers apparatus adjacent to or crossing proposed excavations are to be checked by the contractor prior to starting work
4. This drawing is to be read in conjunction with and checked against all other drawings, Engineering Details, Specification and any structural, geotechnical or other specialist document provided.
5. Any anomaly or contradiction between any of the above is to be reported to Edenstone Homes.
6. This drawing is schematic for clarity only, positions of pipe runs and manholes may vary on site due to site conditions.

ROAD AND SEWER ADOPTION NOTES

1. All works for adoption under a Section 38 agreement shall be carried out to the approval of the Vale of Glamorgan City Council.
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 Dwr Cymru Welsh Water's requirements.
3. Streetlighting positions to be pegged on site and agreed by the Local Authority PRIOR to erection commencing.

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 the Engineer
3. Private house drainage will be flexibly jointed plastic or clay pipework. Diameter 100mm unless shown otherwise.
4. 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. All drainage laterals from the adoptable drainage system to be 150mm dia, unless connecting to the head of a 100mm dia. FWS.
5. For private drains where cover to pipes is less than 900mm in vehicular areas or 600mm in other areas protection in the form of a 100mm thick concrete pad shall be provided over the pipe granular surround.
6. 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.
7. 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.
8. All gullies and rainwater downpipes connected directly to drains are to be roddable.
9. House levels shown are dpc and adjacent garage floors are to be 150mm lower unless shown otherwise. Levels at drainage access points are inverts.
10. Drainage runs should be laid at a minimum of 5.0m form the rear of properties where practical to allow for future extensions.
11. 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.
12. All branch drains, or connections, are to discharge to the collectors obliquely, and in the direction of the main flow.
13. All low spots on hardstanding areas to have yard gullies/ACO.

Revisions

Project: Cross Common Road
Dinas Powys

Client: Eden Stone Homes

Drawing: Engineering Layout

Scale: 1:500 @ A1

Date: January 2017

Drawn by: JF

Drawing No: 10157-001

Rev: -

PHOENIX DESIGN Partnership Ltd.

Unit 9, Westway Garage, Marksbury, Bath. BA2 9HN
tel. 01761 479950
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Titan House, Lewis Road, Cardiff. CF24 5BS
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Drg.Status:

Appendix D

Correspondence from Welsh Water

Steve Davis

From: Powell Clare <Clare.Powell@dwrcymru.com>
Sent: Monday, February 13, 2017 11:06 AM
To: Steve Davis
Cc: Huw R. Williams
Subject: RE: Cross Common Road / Cardiff Road, Dinas Powys - PPA0000623

Stephen

Thank you for the below email, we are able to confirm the following:

A foul only connection can be made to the public combined sewer located in Cardiff Road at manhole ST15704505 or ST15704403.

In relation to the diversion of the 150mm foul sewer, you will need to complete a Section 185 diversion application and submit it to my colleague Huw Williams for vetting. The application form and guidance notes can be found on www.dwrcymru.com.

If you have any further queries please let me know.

Regards

Clare

Clare Powell
Development Control Officer | Developer Services | Dwr Cymru Welsh Water
PO Box 3146 | Cardiff | CF30 0EH | T: 0800 917 2652 | F: 02920 740472 |

From: George Owain
Sent: 10 February 2017 08:27
To: Powell Clare <Clare.Powell@dwrcymru.com>
Cc: Huw R. Williams <Huw.Williams5@dwrcymru.com>; Robinson Sonny <Sonny.Robinson@dwrcymru.com>
Subject: FW: Cross Common Road / Cardiff Road, Dinas Powys - PPA0000623

From: Steve Davis [mailto:steve.davis@phoenixdp.co.uk]
Sent: 09 February 2017 15:24
To: George Owain <Owain.George@dwrcymru.com>; Huw R. Williams <Huw.Williams5@dwrcymru.com>
Subject: Cross Common Road / Cardiff Road, Dinas Powys - PPA0000623

******** External Mail ********
Owain / Huw

We are looking at the proposed development off Cross Common Road, Dinas Powys and should be grateful for confirmation of the foul discharge point.

The original drainage strategy notes just “connection to the local network” (PPA000623).

Due to topography the area falls north to south so ideally we’d want to connect to the combined system within Cardiff Road via manholes ST15704505 and ST15704403. Is this okay?

We’d also be required to divert the 150mm foul sewer that runs along the back of Oakfield to Plemont via the site and to this new connection point.

I trust this is acceptable and I should be grateful for your earliest response.

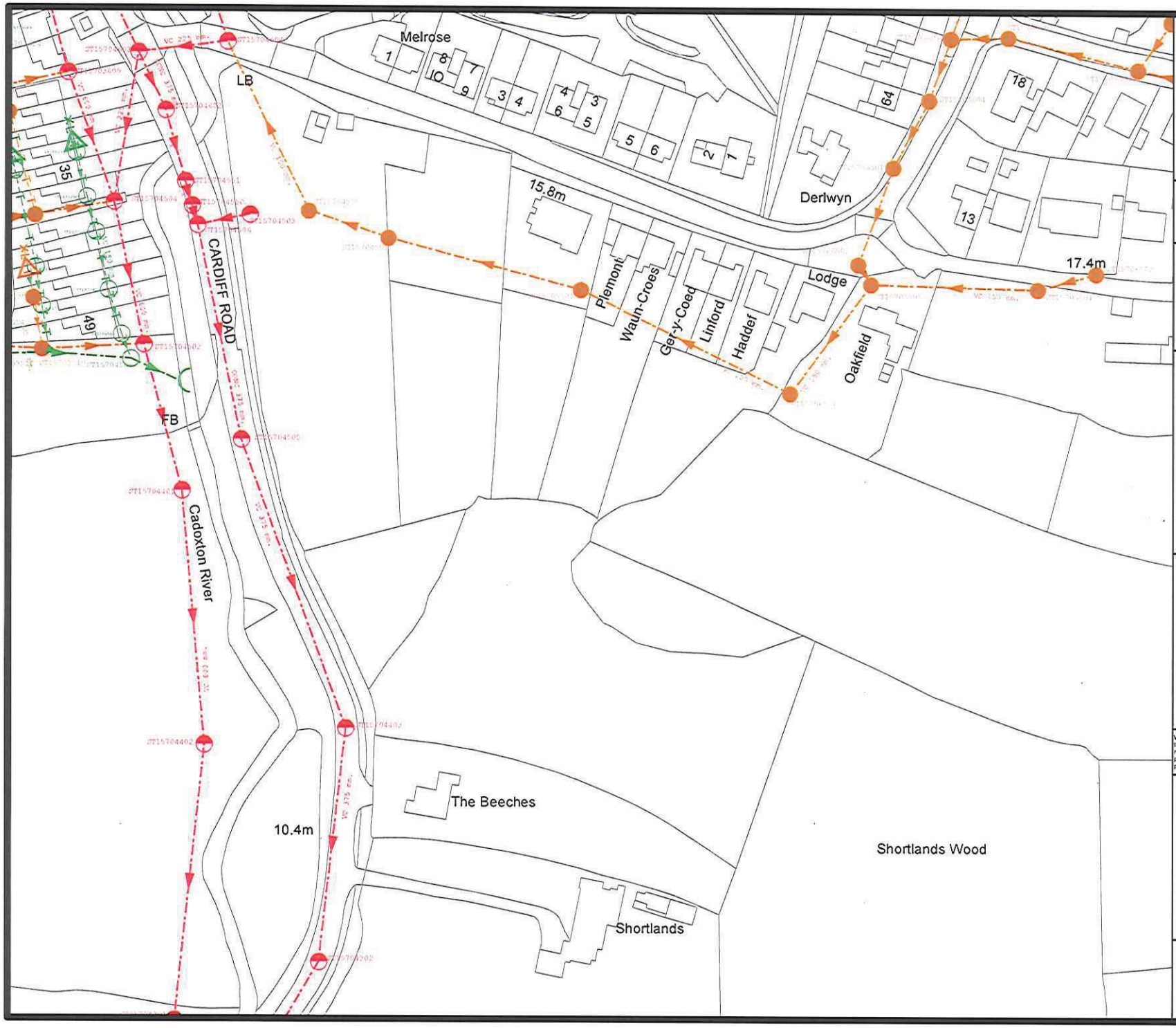
Regards

Stephen Davis

Phoenix Design Partnership Limited

Titan House, Lewis Road, Cardiff, CF24 5BS

Tel: 029 2049 0771 / Mob: 07771852587



Dŵr Cymru
Welsh Water

PPA0000623 SEWER

N
W E
S

LEGEND(Representative of most common features)

Waste network:

- Foul chamber
- Surface water chamber
- Combined chamber
- Combined sewer overflow
- Special purpose chamber
- Treatment works
- Pumping station
- Outfall
- Lamphole
- Storm Overflow
- Rising main
- Gravity sewer
- Private sewer
- Private sewer subject to Sect. 104 adoption agreement
- Private Sewer Transfer
- Lateral Drain
- Inspection Chamber

Notes:

Whilst every reasonable effort has been taken to correctly record the pipe material of DCWW assets there is a possibility that in some cases pipe material (other than Asbestos Cement or Pitch Fibre) may be found to be asbestos cement (AC) or Pitch Fibre (PF) . It is therefore advisable that the possible presence of AC or PF pipes be anticipated and considered as part of any risk assessment prior to excavation

Dwr Cymru Cyf gives this information as to the position of its underground apparatus by way of general guidance only on the strict understanding that it is based on the best information available and no warranty as to its correctness is relied upon in the event of excavations or other works made in the vicinity of the Company's apparatus and any onus of locating the apparatus before carrying out any excavations rests entirely on you. It must be understood that the furnishing of the information is entirely without prejudice to the provision of the New Roads and Streetworks Act 1991 and of the Company's right to be compensated for any damage to its apparatus.

Service pipes are not generally shown but their presence should be anticipated.

EXACT LOCATIONS OF ALL APPARATUS TO BE DETERMINED ON SITE.

Map Ref:	315522 170491
Map scale:	1:1,500
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