Tank 2
Approx. 14 x 30 x 1.2m(d), minus space left for tree pits.
Aquacell Attenuation Tank, with 100mm surround. 2124N° Blocks.
Storage Volume: 403.56m³.
Soffit Level: 41.60

Ø150 balancing pipes linking tanks at top and bottom.

Manhole with flow control device limited to 10 l/s

Tank 3
14.5 x 27 x 0.8m(d), minus space left for tree pits.
Aquacell Attenuation Tank, with 100mm surround. 1456N° Blocks.
Storage Volume: 276.64m³.
Soffit Level: 41.20

Vertical filter bed/ swale with perforated collector pipe. Minimum bed dimensions: 45 x 0.45m with 1:3 sloped sides.

Type 3 foul water pumping station

Unit 7
Unit 6
FFL:42.915
Block A
Unit 5
CL 41.600
IL 40.400
Unit 8
Block B
FFL:42.100
CL 41.200
IL 40.400
Unit 9
FFL:40.900
Unit 11
FFL:40.900
Block C
Unit 19
FFL:42.775
Unit 18
Block E
FFL:42.325
Unit 17
Unit 16
Block D
FFL:41.200
FFL:41.200
FFL:40.450
Unit 13
Unit 12
FFL:40.150
Turning Area

Underground HV cables

Site Bounc

SuDs Basin

Overhead cables

Overhead Cable

CLF Ht 2.0

Line of Small Trees Ht 8.0m

Retaining wall

SWALE

Storm Rising main

Foul Rising main

Pumped Chamber

Weir crest level 39.30

Outlet level 40.05

Pond 1

Pond 2

PWL 39.40

BL 38.80

PWL 39.30

BL 38.70

Dense Bodies/Scrap Material

Grass/Skalpings/Spoil

Earth

Undergrowth/bushes

DO NOT SCALE THIS DRAWING

LEGEND:

- EXISTING ADOPTED SOUTHERN WATER FOUL SEWER.
- ADOPTABLE FOUL RISING MAIN.
- TYPE 1A 1200Ø RIGID MANHOLE WITH INVERT LEVEL ON ADOPTABLE FOUL SEWER.
- TYPE 2 1200Ø RIGID MANHOLE WITH INVERT LEVEL ON ADOPTABLE FOUL SEWER.
- TYPE 3 450 X 450 RIGID IC WITH INVERT LEVEL ON ADOPTABLE FOUL SEWER.
- TYPE 3 600/450Ø FLEXIBLE IC WITH INVERT LEVEL ON ADOPTABLE FOUL SEWER.
- TYPE 2 1200Ø RIGID MANHOLE WITH INVERT LEVEL ON PRIVATE FOUL DRAIN.
- TYPE 3 600/450Ø FLEXIBLE IC WITH INVERT LEVEL ON PRIVATE FOUL DRAIN.
- TYPE 4 450/315Ø FLEXIBLE IC WITH INVERT LEVEL ON PRIVATE FOUL DRAIN.
- TYPE 2 1200Ø RIGID MANHOLE WITH INVERT LEVEL ON PRIVATE STORM DRAIN.
- TYPE 3 600/450Ø FLEXIBLE IC WITH INVERT LEVEL ON PRIVATE STORM DRAIN.
- TYPE 4 450/315Ø FLEXIBLE IC WITH INVERT LEVEL ON PRIVATE STORM DRAIN.
- CATCHPIT MANHOLE WITH INVERT LEVEL ON PRIVATE STORM DRAIN.
- CATCHPIT CHAMBER WITH INVERT LEVEL ON PRIVATE STORM DRAIN.
- RODDING EYE WITH INVERT LEVEL ON PRIVATE STORM DRAIN.
- ROAD GULLY WITH LATERAL STORM DRAIN.
- PROPOSED ACO DRAIN.
- WAVIN AQUACELL MODULAR ATTENUATION TANK.
- PERFORATED PIPE.
- PERMEABLE PAVING.

NOTES

STANDARD NOTES:

1. This drawing is to be read in conjunction with all other Cowan Consultancy drawings, and with all relevant Architect's and Engineer's drawings and specification.
2. No dimensions are to be scaled from this drawing. Unless noted otherwise all dimensions are in millimeters and all levels are in metres from the site datum. All dimensions to be checked on site. All details and dimensions relating to sub-Contractors work must be checked and agreed between the sub-Contractor or supplier and the general Contractor.
3. The electronic information from this drawing cannot be guaranteed as dimensionally drawn Figured dimensions must be used for setting out and detailing.
4. The main Contractor is responsible for the design of all temporary works, and is also responsible for the safe maintenance and stability of existing buildings at all times.
5. The main Contractor is responsible for the mitigation of all occurrences of ground water during the construction period.
6. Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not guaranteed. The main Contractor is responsible for checking all information on site prior to work commencing and taking due care and attention whilst undertaking the works.
7. The contractor must comply with all current legislation relating to Health & Safety.

DRAINAGE NOTES:

1. All works to be conducted in strict accordance with specification of the Local Authority, BS8301 1985 & BSEN.752-1.
2. All pipe runs near buildings to comply with the Building Regulations 2002 Part H1. Where a pipe is within 1m of a foundation the trench shall be filled with class GEN3 concrete up to the lowest level of the foundation. Where the trench is further than 1m from the foundation, the trench shall be filled with class GEN3 concrete to a level below the lowest level for the foundation equal to the distance from the foundation less 150mm. In both cases the pipe shall be bedded and surrounded in 150mm thick class GEN3 concrete.
3. Where pipes, external to the structures, have a depth to soffit from ground level of less than 450mm they shall have a class GEN3 concrete encasement (150mm thick).
4. Where a pipe, under a carriageway, has a depth of cover of less than 1.2m the pipe shall be laid in a class Z bedding.
5. Where pipes are bedded and surrounded in concrete, flexible joints should be provided. Compressible boards (fibreboard or polystyrene) shall be provided at a maximum of 8m centres (coinciding with pipe joints). The boards shall be pre-cut to pipe diameter and to a height and width equal to the concrete cross section. A board thickness of 18mm for pipes up to 450mm nominal diameter and 36mm for pipes over 450mm nominal diameter.
6. All private building drainage shall be constructed in strict accordance with BSEN.752-1.
7. Unless otherwise specified, building drainage to be 100mm internal diameter.
8. Minimum gradient for Ø100mm surface drainage pipes is 1:60, and Ø150mm is 1:100.
9. Minimum gradients for foul drainage pipes:
Ø100mm: 1:40 where flow is less than 1l/s, or where no WCs are connected.
Ø100mm: 1:78 where flow is 1l/s or greater, or where at least 1No. WC is connected.
Ø150mm: 1:135 where flow is less than 5l/s, or where up to 5No. WCs are connected.
Ø150mm: 1:150 where flow is 5l/s or greater, or where 5No. or more WCs are connected
10. All gullies not connected to inspection chambers are to be roddable.
11. All gully connections other than those at manholes to be made via 'Y' junctions.
12. Gullies coincident with pedestrian/drive crossings to have pedestrian type gully covers.
13. All road gully connections to be 150mm diameter.
14. All stub stacks to be fitted with air admittance valves where branch drain exceeds 12m except at the head of the run. Soil vent pipes located at the head of a run to be installed with roof tile vent.
15. All connections to be made from soffit to soffit.
16. Trench temporary formwork is required to all excavations exceeding 1.2m depth to provide adequate support and stability at all times.
17. Sewers are to be constructed in single sections between manholes only. Trenches to be backfilled prior to excavating the succeeding sewer run.
18. All concrete and concrete products to be in accordance with BRE 363 for sulphates.
19. Where sewer or drains are to be abandoned they shall be removed or infilled by grouting in accordance with the Civil Engineer Specification for the Water Industry 7th Edition, clause S.23.

Date	By	Revision	QA'D	Chk'd	Ref
29.8.23	EG	Minor revisions after planning officer comments		CMW	P13
07.8.23	EG	Block D and E levels revised		CMW	P12
28.7.23	EG	Block A FFL corrected		CMW	P11
0.7.23	EG	Drawing updated after design using FLOW model		CMW	P10

Status: APPROVAL

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Client: Parsons Construction

Project: DEVELOPMENT AT KNOWLE LANE
FAIR OAK

Title: DRAINAGE GA PLAN

Date	MAR 2020	Scale	1/200 @ A1	Drg. No.	
Drawn	CMW	Chk'd	EG	QA'D EG	393640-500P13