



**Legend**

Private Drainage Symbols	Foul	Surface Water	General Notes
Polypropylene Inspection Chamber			1. Any indication of site boundaries is to be considered approximate. The Engineer shall be held responsible for any errors or omissions in the information provided by others and our details are not in themselves intended to be any indication of final design.
PC Ring Manhole			2. The underlying basic survey information has been provided by Murphy and Subson Surveys. Tully De'Ath cannot be held responsible for any inaccuracies in levels and dimensions. Any errors or omissions are to be reported to the Engineer immediately.
External Backdrop			3. The Contractor shall check all levels and dimensions. Any errors or omissions are to be reported to the Engineer immediately.
Rectangular Manhole			4. All information regarding below ground obstructions has been taken from our general arrangement drawing as far as we are reasonably able to obtain at the time. The Contractor shall allow for obstructions beneath the surface and should be adequately prepared for cut/cover. For detailed specification refer to landscape specialist details.
Foul Drainage Connection Point - Rainwater Downpipe			5. Allowance to be made for diversion/maintenance of existing services as required.
Yard Gully			6. For details of landscaping and boundary fences refer to Architects drawings.
Suspended Drainage - 100mm unless otherwise stated.			7. In accordance with NHBC Technical Standards Chapter 9.2 appropriate action should be taken to suitably restore the drainage characteristics of the soil once construction activities around the building have stopped. Garden areas shall be free from obstructions beneath the surface and should be adequately prepared for cultivation. For detailed specification refer to landscape specialist details.
Grated Channel Drain			<b>Drainage Notes:</b>
Filter Drain			1. All foul and roof water rest beds to have a minimum radius of 300mm about their central axis. Rest-bed invert levels for soil vent pipe connections shall be a minimum of 450mm below the lowest connection where the pipe extends to the lowest connection where the pipe extends above the second floor of the building. Rest-bed invert levels shall be below the building rest outlet to run above the soil vent pipe.
Pumped Rising Main			2. Cover levels of manholes and inspection chambers are for information only and must not be used for setting out purposes. Covers are to be set flush with the top of kerbs or roadway level. Covers to be set to existing ground level unless otherwise stated. Covers to be retained shall be adjusted to match proposed levels.
Reverse Interceptor (See Drg 280 for details)			3. Where two pipes cross each other beneath a trafficked area or a separation of less than 150mm, they shall have a Class 'A' (concrete) surround 500mm either side of crossing point.
24 Hour breakdown Storage Tank			4. Private drainage construction to comply with NHBC requirements and BS EN 1252 Part 1 to 4 & BS EN 1452 & BS EN 13598. See also note 10.
Culvert Access Point			5. Foul drainage pipe runs upstream of the referenced manhole network referred to in the manhole schedules shall be laid to a minimum gradient of 1:50.
Sump (See Note 17)			6. Foul drainage pipe runs upstream of the referenced manhole network referred to in the manhole schedules shall be laid to a minimum gradient of 1:50.
Rodding Eye			7. Surface water drainage pipe runs upstream of the referenced manhole network referred to in the manhole schedules shall be laid to a minimum gradient of 1:50.
PC Ring Manhole			8. Drainage beneath suspended floor slab shall be based on compacted acceptable earthworks material as defined in the DT Specification for Highway Works. Where drainage passes within 300mm of the underside of the floor slab, Class A pad & surround is required. Greater than 300mm, Class A pad & surround is to be used.
Rising Main			9. Drainage beneath ground bearing slabs shall have a cover of 200mm to underside of slab. They shall have a Class 'A' pad & surround to formation level with compacted capping material.
Existing Drainage			10. Existing drains to be abandoned shall be grubbed out or filled with good or form concrete in accordance with Clause 201 & S06 of the DT Specification for Highway Works. Manholes to be broken-out down to proposed formation level and backfilled. Beneath trafficked areas backfill to formation level with compacted capping material.
Combined Adopted			11. Where connecting into existing drainage invert levels and locations/alignments are to be checked and results reported back to engineer 5 days prior to work commencing.
Combined Private			12. The proposed connections into the adopted sewer network will all be subject to approval and inspection by Thames Water under the terms of a Section 106 Agreement. The determination required in accordance with Thames Water policy, Thames Water's Approval has already been obtained for the proposed connections of CA1 (west) and downstream of 3701 (east) - Ref:10/3821506.
Private Storm			13. The contractor shall take the necessary measures required to avoid damage to the existing drains and services that are to be retained or to be replaced. The Contractor shall be responsible for the proposed level regime.
Adoptable Drainage			14. Depth to pipe invert of rodding eyes to be 500mm unless otherwise stated.
Combined Manhole			15. All works involving adopted sewers to be carried out in accordance with Sewers for Adoption The LA.
Other			16. It is important that the water level in the traps within the drainage floor (for foul drains) shall be kept within the traps and within the reverse interceptors is regularly checked and maintained in order to prevent the escape of noxious gases from the sewer network.
Retaining Wall			17. Sumps for future pumps associated with cavity drainage to be retained. See Drg 240 for drainage repair location.
Site Boundary			<b>Pump Stations</b>
Attenuation Air Vent			20a. Foul pumping stations are shown retained in plant common basement areas of Queen Mother Hall and Rosalind Franklin. A surface water pumping station is shown in Rosalind Franklin. This will be required in order to serve rainwater draining from the eastern side of this building.

**Proposed Internal Layouts**  
Internal layouts shown are the latest that we have available to us. Where the information is available we have reflected the drainage point information and floor levels as shown. In other instances where level information is not available we have estimated the locations, number of drainage points and floor levels pending further clarification.

**Existing Drainage**  
As shown it is proposed that certain lengths of existing drainage be retained. See Drg 240 for drainage repair location.

**Alignment of Existing Sewers**  
The alignment of the existing sewers shown on this drawing are assumed only as based upon the location of existing manholes and Thames Water's records. However the exact alignment of each sewer cannot be guaranteed and may not be exactly as shown.

**ISSUED FOR CONSTRUCTION OF ALL COORDINATED MANHOLES STATED ON 9100-SCH-240. CAVITY DRAINAGE, SUMP DETAILS, NUMBER AND LOCATION TO BE ADVISED. ATTENUATION STORAGE DETAILS BENEATH ACCESS ROAD IN ABEYANCE.**

**AS BUILT DRAWING**  
This drawing has been provided as an 'As Built' drawing based on information provided by MOUNT ANVIL.

REV	DATE	DESCRIPTION	BY	CHKD
01	19.09.18	Issued 'As Built'	JW	SFK
02	04.09.17	RFP's updated. Still drain added to south of parking access storage tank.	JSR	SFK
03	21.08.17	RFP's updated in accordance with latest information.	JSR	SFK
04	06.07.17	Revised information added at F20, C2 and Combined Pump Station. Draining rear of Lady Chapman and Rosalind Franklin. Information added to eastern access. Yard gully added to rear of Dudin Brown. For further information refer to drawing 9100-SCH-240.	JSR	SFK
05	14.06.17	Note 18 added. Manhole 552 added. Note regarding surface water runoff from Rosalind Franklin lightwell. Manholes S33, S34 & S35 repositioned. Attenuation tanks in Rosalind Franklin amended.	JSR	SFK
06	24.05.17	Combined pump chamber amended. Combined rising main added and referenced drawing added to table.	JSR	SFK
07	03.04.17	Culvert access points amended. Attenuation air vents added.	JSR	SFK
08	22.03.17	Title amended. Pipe size S27-S29 increased to 150mm. Rep and foul connection points adjusted to suit architect's construction drawing issue. Channel drains and gullies amended to suit landscape architect.	JSR	SFK
09	01.03.17	Manhole cover levels updated in accordance with latest landscaping info. See 9100-DRG-344Y-DE350. Manhole S51 and F88 added.	JSR	SFK
10	03.02.17	First issue under amended drawing number. See drawing 9100-DRG-344Y-00202. Additional manholes identified for construction.	JSR	SFK

Drawing No:	Drawing Title:
9100-DRG-344F-00211	Rosalind Franklin Pump Facilities Plan
9100-DRG-344F-SE212	Rosalind Franklin Foul Pump Facility
9100-DRG-344F-SE213	Storm Water Pump Facility
9100-DRG-344F-SE214	Combined Pump Facility Plan
9100-DRG-344F-00216	Pump Facilities Plan Plant Room
9100-DRG-344Y-DE350	Vehicular Access Road Sections (Sheet 1 of 3)
9100-DRG-344Y-DE351	Vehicular Access Road Sections (Sheet 2 of 3)
9100-DRG-344Y-DE352	Vehicular Access Road Sections (Sheet 3 of 3)



**Engineering Layout**  
Eastern Section of Site

**Project No: 11581**  
Kidderpore Avenue

Scale: 1:10000 DATE: Feb 2017 DRAWN: JSR CHKD: SFK  
9100-DRG-344Y-00202 AB1

**Tully De'Ath consultants**  
Engineering at its Best

T: 01343 833 800  
E: info@tda.com  
W: www.tdath.com

MHREF 3701  
CL = 93.89  
IL = 90.71

Proposed saddle connection to existing sewer invert level of sewer based upon survey records received from Mount Anvil = 88.525m AOD. Invert level of incoming 225mm connection = 88.775m AOD. See Drainage Notes 11 and 12.

Proposed 225mm entering from upstream at manhole to connect to existing 150mm downstream of manhole at common invert level of existing manhole. See also Drainage Note 11.

Ex9 Buried manhole. Approximate location only.

Manhole relocated. Confirmation of revised location awaited from site.

Fractured Interceptor to be replaced.