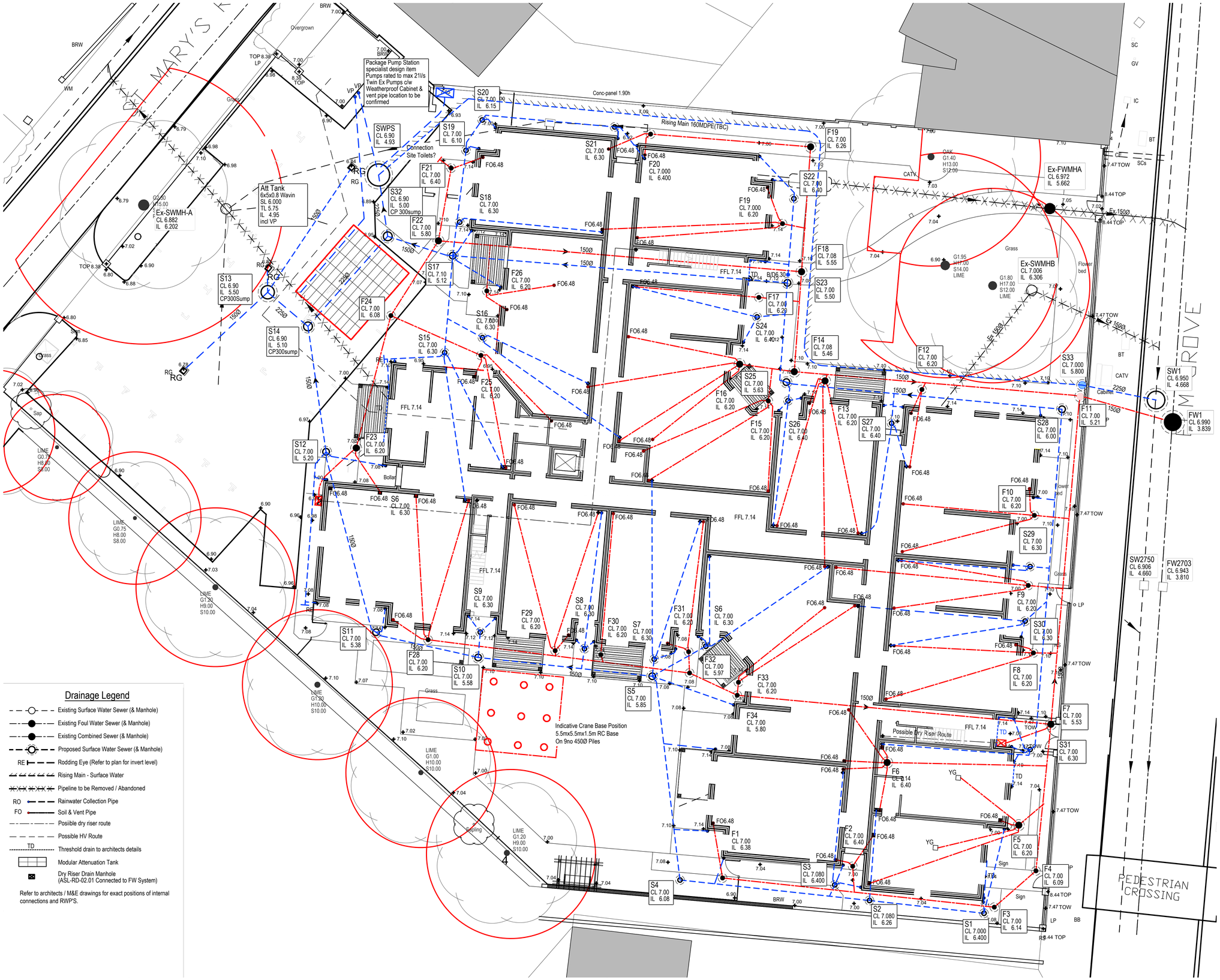

Drainage Legend

- Existing Surface Water Sewer (& Manhole)
- Existing Foul Water Sewer (& Manhole)
- Existing Combined Sewer (& Manhole)
- Proposed Surface Water Sewer (& Manhole)
- RE — Rodding Eye (Refer to plan for invert level)
- Rising Main - Surface Water
- Pipeline to be Removed / Abandoned
- RO — Rainwater Collection Pipe
- FO — Soil & Vent Pipe
- Posiible dry riser route
- Possible HV Route
- TD — Threshold drain to architects details
- Modular Attenuation Tank
- Dry Riser Drain Manhole (ASL-RD-02.01 Connected to FW System)

Refer to architects / M&E drawings for exact positions of internal connections and RWP'S.

Notes:

1. This drawing is to be read in conjunction with all relevant architects, engineers and specialist sub-contractors drawings and the specification.

2. All setting out to be in accordance with the schedules. any discrepancies between the engineers and the architects drawings to be referred to the architect before proceeding. Dimensions must not be scaled.

3. All private drainage is to be in accordance with BS EN 752-1-2-3-4, BS EN 1295-1, BS EN 1610 and all relevant sections of approved document H of the building regulations (2002 Edition).

4. All adoptable drainage is to be in accordance with 'Sewers for Adoption 7th Edition' - a design and construction guide for developers and the local highway authority requirements where appropriate.

5. Where drainage pipework is to be flexibly jointed extra strength vitrified clay it should be to BS EN 295-1, Hepworth 'Supersleve' or equivalent.

6. Where drainage pipework is plastic i.e. PVC-U it shall be to BS EN 1401-1 Osma or equivalent. Private pipework to be type SN4 and all adoptable pipework to be type SN8.

7. Where drainage pipework is cast iron it shall be to BS EN 877 and for ductile iron it shall be to BS EN 598.

8. All concrete pipework, shall be to BS EN 1916 and BS 5911-1. Manholes and fittings shall be to BS 5911 parts 3 and 4 and BS EN 1917.

9. All materials for adoptable drainage are to be Kitemarked as appropriate.

10. All adoptable manhole covers are to be badged as appropriate i.e. 'FW' or 'SW'.

11. The position of the rising main should be a minimum distance of 1.0m from kerb face to the outside of the pipe nearest the kerb. Laid with a minimum of 1.2m of cover in the road and 0.9m of cover in the footpath.

13. Where drains pass through foundations or connect to manholes, flexible pipe joints are to be provided within 150mm of the face of the structure and within a further 600mm to form a rocker pipe.

14. Where pipes pass through screen walls, footings or retaining walls, lintels are to be provided.

15. Where pipelines pass within 1.0m of buildings or walls the foundations are to be taken down below the bottom of the trench. Where pipelines are more than 1.0m away from foundations the trench shall be backfilled with concrete up to a point that meets a 45° angle line taken from the bottom corner of the nearest foundation.

16. Where depth to invert does not exceed 600mm and the pipe size does not exceed 100mm diameter, 300mm dia. polypropylene access chambers may be used. Elsewhere, proprietary polypropylene or precast concrete manholes are to be used.

17. Where connections are to be made to existing manholes / sewers, invert levels, pipe sizes and orientation should be checked prior to the commencement of the works and any variance reported to the engineer immediately. Where connections are to be made on or off site the contractor is to check the line and level of any services / mains, to ensure that no clashes exist prior to works commencing.

18. Where pipelines cross, each is to be surrounded with grade ST4 mass concrete for a distance not less than 1.0m centred on the crossing point. Length of surround to be extended as necessary to within 150mm of the next nearest flexible joints.

19. For adoptable drainage, a reinforced concrete cover slab is to be provided where the effective cover to the crown of the adopted pipe(s) is less than 0.9m in verges or 1.2m in carriageways and / or footpaths. Where effective cover is 1.0m or less in carriageways and / or footpaths, pipework will need to be ductile iron (ie. Stanton Pam St. Gobain type "Integral").

20. For private drainage, concrete protection is to be provided where the effective cover to the crown of the pipe(s) is less than 1.2m in trafficked areas and 0.6m in soft landscaped or pedestrianised areas.

21. 'Effective cover' is the minimum depth of cover over the pipe crown at any time during the construction process.

22. All adopted foul drainage to be located a minimum of 1.2m finished depth to soffit. Unless specifically identified as otherwise with relevant protective measures.

23. The contractor is to ensure that protective measures are taken to ensure that drainage pipework and fittings are not damaged by site traffic prior to oversite filling operations being completed around buildings.

24. The top run of each private foul drainage network is to be laid to falls no slacker than 1:40. the head of each run is to be vented to atmosphere in accordance with approved document H.

25. All surface water drainage to be min 100mm dia, laid at a gradient no slacker than 1/80. And all foul water drainage to be min 100mm dia. unless stated otherwise.

26. The contractor is to ensure that all pipework connections are arranged to direct flows down or into the main channel in the direction of the main flow. Where necessary 3/4 bends are to be used on oblique connections inside the manhole benching where sufficient room exists or the pipelines on oblique connections are arranged outside the chamber to be able to divert flows down the main channel. Connections brought in perpendicular to the main channel are not acceptable. Where possible the main channel flow shall be from any connections with WC's to ensure a flush through the main channel is achieved.

27. The contractor is to ensure that when preformed polypropylene manhole bases are used that they are orientated such that the main flow is through the main channel of the base. this should be achieved by incorporating long radius bends outside of the manhole.

28. Any connection into a public sewer is to be inspected by the local water authority and carried out fully in accordance with their requirements. The contractor is to allow for obtaining the appropriate `connection to a public sewer' forms and paying all necessary fees.

29. The contractor is to allow for obtaining the appropriate road opening licences from the local highway authority and paying all necessary fees for any works associated with off-site sewer connections. All reinstatement works within the public highway are to be carried out in accordance with the requirements of the local highway authority.

30. The contractors attention is drawn to the need to ensure that any trenches excavated through previously compacted filled areas, in particular under the building footprint and immediately around the outside, are re-compacted to ensure localised differential settlement does not occur.

31. Package pumping station(s) to be 'specify manufacturer and reference' or equivalent. For installation guidance refer to manufacturer's specification. Any vent pipe to be taken to a position agreed with the architect. A three phase electricity supply is required to provide power to the control panel of the pumping station. The control panel, if external, is to be located inside a kiosk within close proximity of the pumping station. If internally located within a building, the control panel may be positioned on a wall. Localised re-grading of the ground around the pumping station may be required to accommodate new levels. An informative notice plaque should be located on or near the control panel stating 'in the event of the alarm sounding or warning light flashing please contact the number below 'insert contact telephone number'.

32. Drainage channel(s) to be 'ACO MD100' or equivalent. For installation guidance refer to the manufacturer's specification. Refer to landscape architects details for surfacing treatments around units where applicable. Where channels are indicated as in-built falls the relevant units are to be incorporated to provide the necessary length of channel gradient from the head of the run to the sump unit.

33. Modular crate attenuation tank system(s) to be 'Wavin Aquacell' or equivalent.

Rev.	Date	Description	Issued By
P2	20.12.16	Landscape Update Tank&Pump Relocated	MJR
P1	05.12.16	Drawn	MJR

Stage 4

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Client.
McCarthy & Stone

Project Title.
Elm Grove, Hayling Island

Drawing Title.
Proposed Drainage Plan

Drawn by MJR
Scale 1:125
Date Dec' 16

Project No.
Drwg No. [Rev]
SO-2267-04-DE 001 P2