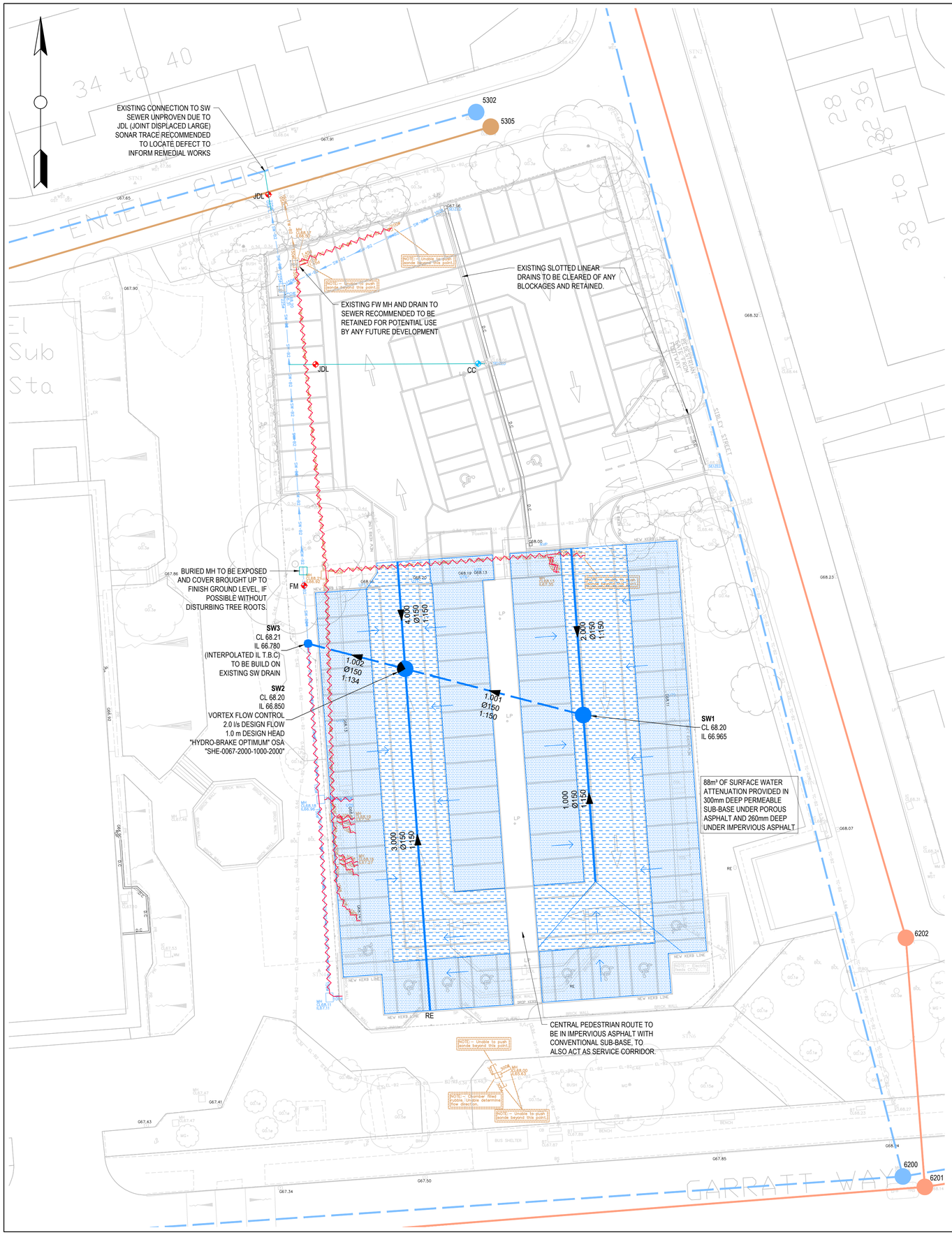

KEY:

- Existing combined water sewer
- Existing foul water sewer
- Existing surface water sewer
- Existing foul water drain
- Existing surface water drain
- Existing pipes and manholes to be grubbed up or grouted if located under retained works
- Surface water private drain
- Surface water highway drain
- Surface water flow control
- Filter Drain
- Porous asphalt pavement
- Impervious asphalt pavement on permeable sub-base
- Permeable sub-base formation slopes (note that this is not finished ground gradients)
- Drainage defect Grade 1-2 - May require remedial monitoring (none identified)
- Drainage defect Grade 3 - Some form of remedial works probably required.
- Drainage defect Grade 4-5 - Remedial repair or replacement required

Drainage defect notes:- CC: Crack circumferential, FM: Fractures multiple, JDL: Joint displaced large. Only defects on retained drainage are shown.

MANHOLE SCHEDULE

MANHOLE NAME & COORDINATES	CL & DEPTH TO INVERT		PIPE NAME	PIPE IL	PIPE DIA.	MANHOLE SIZE & COVER CLASS	MANHOLE TYPE, ACCESS SIZE & DESCRIPTION
SW1 E. 388591.540 N. 396267.626	68.200 1.235	In In Out	2.000 1.000 1.001	66.965 66.965 66.965	150 150 150	1,200 DIA D400	PCC 750X750 ACCESS
SW2 E. 388574.897 N. 396271.945	68.200 1.350	In In In Out	1.001 4.000 3.000 1.002	66.850 66.850 66.850 66.850	150 150 150 150	1,200 DIA D400	PCC 750X750 ACCESS VORTEX FLOW CONTROL 2.0 l/s DESIGN FLOW 1.0 m DESIGN HEAD "HYDRO-BRAKE OPTIMUM" OSA "SHE-0067-2000-1000-2000"
SW3 E. 388565.823 N. 396274.299	68.213 1.433	In	1.002	66.780	150	600 B125	PPIC MAX 350 ACCESS (INTERPOLATED IL T.B.C) TO BE BUILD ON EXISTING SW DRAIN

Drainage Notes:

1. This drawing is to be read in conjunction with all relevant architects and engineers drawings and specifications.
2. Do not scale this drawing. Any ambiguities, omissions or errors on drawings shall be brought to the engineers attention immediately. All dimensions must be checked / verified on site.
3. Design based on topographical survey and cctv survey information available at the time of design.
4. All drainage works to be in accordance with the Civil Engineering Specification for the Water Industry (**CESWI**) as included in Sewers for Adoption 7th Edition (**SFA**), the requirements of The Building Regulations 2010: Approved Document H (**Part H**).
5. All dimensions are in metres and levels in metres above ordnance datum unless otherwise noted.
6. It is advised that the contractor survey retained existing drainage prior to commencement to confirm location and condition, with cleansing to facilitate survey if required.
7. Existing drainage locations where the proposed drainage is to connect, are to be surveyed and exact levels confirmed and provided to engineer prior to commencement of works.
8. All existing services to be located prior to commencement of any drainage works, and where necessary protection or diversions to be undertaken to avoid conflict with the proposed work.
9. All existing drains to be abandoned shall be either removed or grouted up if not possible. Grouting to be performed by capping all ends / connections and filling the retaining void with grout, in accordance with **CESWI**.
10. All soft spots to be removed from bottom of excavations and to be refilled to formation level in accordance with groundworks specifications.
11. Raised ground must be filled in accordance with groundworks specifications and consolidated before any sewer works are carried out.
12. All adoptable drainage works including works to existing public sewers to be undertaken in accordance with **SFA**, **CESWI** and the relevant statutory undertakers details.
13. All private drainage works to be in accordance with **CESWI**, BS EN 752 2017 'Drain And Sewer Systems Outside Buildings' and the **Part H**.
15. All diameters given are nominal internal pipe diameters.
16. Bedding and backfill materials to conform to the requirements of WIS 4-08-02 (Table A2).
17. The first pipe out of manholes to be as short as practicable so as to provide a flexible joint as close as possible to the outside face of the concrete surround and connected to a length of rocker pipe.
18. Sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths.
19. All new connections into existing manholes (or into existing sewers) to be 'soffits level' unless otherwise noted.
20. The chamber size of manholes with more than one connection in them may need to be increased to accommodate the connections and bends.
21. All branch connections to be made with swept bends in the direction of flow in the main drain.
22. Unless noted otherwise in the manhole schedule, all manhole, gully and channel covers (ironwork) should be the following specification:

- B125 load class in pedestrian areas
- D400 load class in vehicular areas.

44. Cover levels, gully positions, and building location are approximate and shall be confirmed by architect/landscape architect. Contractor to allow for adjustment to suit agreed positions and finished levels, and confirm all cover levels on site.
45. Outfall connection(s) subject to agreement with the approving authority.
46. The contractor shall comply with the following:-

(i). All operations should be carried out in accordance with the general health and safety policy of the developer as required by sections 2 of the Health and Safety at Work Act 1974 and in particular The Construction (Health, Safety and Welfare) Regulations 1996.

(ii). The local authority and utilities companies are to be notified prior to commencement of work on site.

(iii). Prior to construction the actual positions and depths of services likely to be affected by the works should be established by means of hand dig in close liaison with the utility companies. The contractor shall immediately advise the engineer of any services exposed which may affect the design.

(iii). All operatives working on the highway works must have street works accreditation.

47. The contractor shall be responsible for ensuring that pipes are adequately protected from concentrated loading by construction traffic during the construction period.
48. The contractor shall allow for the protection, temporary and permanent support, and temporary and permanent diversion works, as necessary to all existing services.
49. The contractor shall allow for keeping trenches and excavations as dry as practicable by pumping from temporary sumps and de-watering as appropriate. The point and method of discharge to be agreed with the drainage authority & LLFA and environment agency.
50. It is advised that drainage works are to be constructed from the outfall towards the head of run to ensure the outfall can be achieved.
51. All drains to be CCTV surveyed on completion of the works.

GENERAL NOTES:

1. Design based on the following:

1.1. S17569-T Topographical survey by SEP, dated Nov 2018
1.2. S17569-U Utility Survey by SEP, dated Apr 2019
1.3. 504835 CCTV Inspection Report by Metro Rod, received 03/11/2022
1.4. GCH-IBI-WS-XX-DR-A-100-006-Proposed Phase 2 Plan, rec' 26/10/2022

Rev:	Description:	Date:	By:	Chkd:
P03	SPECIFIED VORTEX FLOW CONTROL PRODUCT.	08/12/22	AMB	GW
P02	REVISED TO LATEST ARCH LAYOUT AND DESIGN TEAM COMMENTS. ADDED MANHOLE SCHEDULE, PIPE GRADIENTS & FLOW ARROWS.	10/11/22	AMB	CJS
P01	PLANNING ISSUE.	04/11/22	AMB	CJS

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Status: SUITABLE FOR INFORMATION — S2

Client: MORGAN SINDALL

Project: GORTON COMMUNITY HUB

Drg Title: LIBRARY SITE, PROPOSED DRAINAGE LAYOUT

Drawn By	Designed By	Checked By
AMB	AMB	CJS
	Date: 24/10/2022	Scales @ A1: 1:200

Project No - Originator - Function - Spatial - Form - Discipline - Number: GCH - CUR - XX - XX- DR- C - 92101

Revision: P03

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