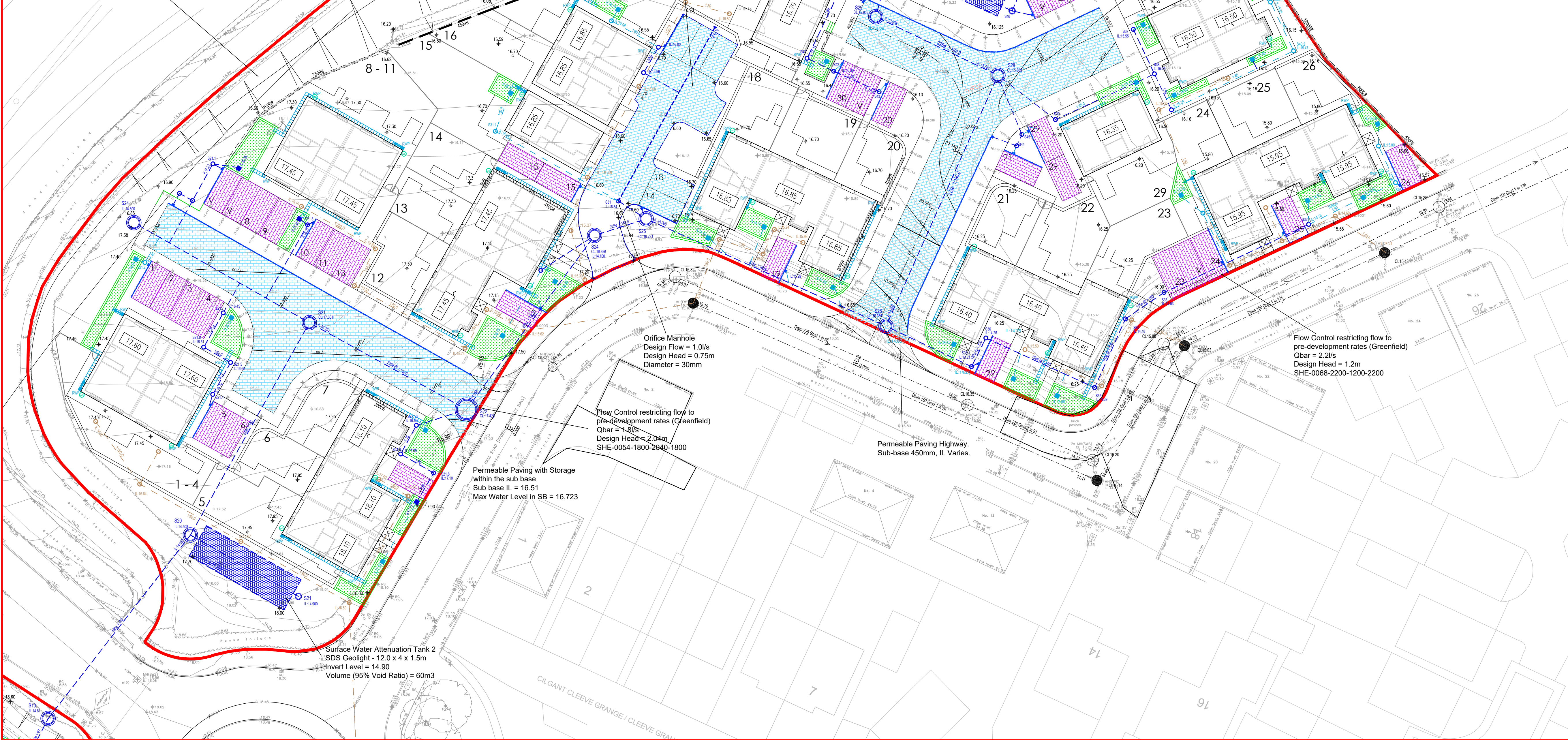


**Legend**

- 179.50 Finished Floor Level (FFL) +/-450mm
- Retaining Wall - (Height shows difference in levels - Finished Levels at bottom and top)
- Proposed Finished Ground Level
- Additional Underbuild (below d.p.c. as shown)
- Tanking
- Gravel Board Retainment (Max 450mm)
- Steps (to be Part M Compliant)
- 1:2m gradient batters to be used - subject to approval by a suitable qualified Geo-technical Engineer.
- Existing DCWW Surface Water Sewer
- Existing DCWW Foul Sewer
- Proposed Foul Water Sewer (S104)
- Proposed Surface Water Sewer
- Perforated pipe underdrain - Permeable Paving
- SuDS Bioretention Area with overflows and perforated underdrain
- SuDS Permeable Paving (private)
- SuDS Permeable Paving (adopted) Fully lined with perforated under drain
- Private surface water drain (1000 unless shown otherwise) and inspection chamber <3m deep with restricted access depths over 1.2m (Type 3)
- Adoptable surface water drain (1000 unless shown otherwise) and inspection chamber <3m deep with restricted access depths over 1.2m (Type 3)
- Fin Drain to Permeable Paving (private parking bays)
- RWP Discharging to Bio-retention area via channel drain
- Foul Water lateral and IC's (adoptable) <3m deep with restricted access depths over 1.2m (Type 3)
- DCWW to adopt under the S104 agreement
- Foul Water lateral and IC's (private)
- Water Butt - No required per plot (private)
- Surface Water Attenuation Cells - SDS Geolight

SLOPE REGRADED TO 1:2 TO ACCOMMODATE PROPOSED SITE LEVELS



- GENERAL NOTES**
- Do not scale
  - 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, NRSWA1991, British Standards, Building Regulations etc.
  - Positions of existing services/statutory undertakers apparatus adjacent to or crossing proposed excavations are to be checked by the contractor prior to starting work
  - 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.
  - Any anomaly or contradiction between any of the above is to be reported to Monmouthshire Housing Association.
  - 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**
- All works for Adoption under a Section 38 Agreement shall be carried out to the approval of Newport Council.
  - 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.
  - Street lighting posts to be pegged on site and agreed by the local authority prior to erection commencing.

- DRAINAGE NOTES**
- All private drainage shall be in accordance with BS8301 and relevant sections of Approved Document H of the Building Regulations.
  - 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 PHG Consulting Engineers.
  - Position of soil pipes, stubstacks, WC outlets, rainwater downpipes, etc., positions are to be checked against the house type working drawings.
  - Private house drainage will be flexibly jointed plastic or clay pipework. Diameter 100mm unless shown otherwise.
  - 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.
  - For private drains where cover to pipes is less than 900mm in vehicular areas or 500mm in other areas protection in the form of a 100mm thick concrete pad shall be provided over the pipe granular surround.
  - Where pipes pass through screen walls, footings or retaining walls, Intels 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.
  - 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.
  - All gullies and rainwater downpipes connected directly to drains are to be roddable.
  - 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.
  - All branch drains, or connections, are to discharge to the collectors obliquely, and in the direction of the main flow.
  - All low spots on handstanding areas to have yard gullies unless permeable paving is used.
  - The developer must self-verify and certify that the design criteria, material standards and workmanship specifications for the proposed adoptable sewers are in accordance with those set out in "Sewers for Adoption" 7th Edition, A Section 106 application to connect must be made to the water authority, the developer shall give 21 days' notice prior to connection, and the works may only be undertaken by a SSIP accredited contractor.
  - The foul sewers must achieve a minimum flow velocity of 0.75 m/s at one third design flow or when the sewer has a nominal internal diameter of 100mm or where 10 properties or less are connected the sewer must be laid at minimum of 1:80. Where the sewer has a nominal internal diameter of 150mm and at least 10 dwelling units are connected the sewer will be laid at a minimum gradient of 1:150. The maximum gradient a sewer can be laid is 1:5.
  - The surface water sewers must achieve a minimum flow velocity of 1 m/s at pipe full flow or when the sewer has a nominal internal diameter of 100mm the sewer must be laid at minimum of 1:100. Where the sewer has a nominal internal diameter of 150mm or greater the sewer will be laid at a minimum gradient of 1:150. The maximum gradient a sewer can be laid is 1:5.
  - All inspection chamber and manhole covers should adhere to BS EN 124 and be suitable for where the chambers and manholes are situated.
  - Where sewers are located in proximity or between buildings refer to Figures B.1 and B.2.
  - Where new drains pass beneath existing foundations, the walls/foundations are to be fully supported in the temporary condition. Trenches to be infilled with concrete post-construction with rocker pipes placed either side of the wall, in accordance with the details

| Rev. | Date     | Details                                                     | Amendments | By | CHK. |
|------|----------|-------------------------------------------------------------|------------|----|------|
| D    | 23/10/24 | Issued for Full-SAB                                         |            | TP | SD   |
| C    | 04/10/24 | Engineering updated following SAB comments                  |            | TP | SD   |
| B    | 26/09/24 | Layout amended, drainage updated following pre-SAB comments |            | TP | SD   |
| A    | 29/07/24 | Foul drainage added                                         |            | TP | TOR  |
|      | 15/07/24 | SUDS strategy updated for Pre-SAB submission                |            | TP | TOR  |

Client

**MHA**  
Monmouthshire Housing  
Tai Sir Fynwy

**phg**  
Consulting Engineers

PHG Consulting Ltd  
107 Cowbridge Road East  
CARDIFF CF11 9AG  
T: +44(0)29 2030 2021  
E: enquiries@phg-consulting.com  
W: www.phg-consulting.co.uk  
@PHG\_consulting  
www.linkedin.com/company/phg-consulting-engineers

Project: **Monmouthshire Housing  
Monbank  
Newport**

Drawing title: **Engineering Layout  
Sheet 2**

| Drawn  | Chk.    | Status   | Scale      |
|--------|---------|----------|------------|
| SJD    | TOR     | Planning | 1:250 @ A1 |
| Date   | Job no. | Dwg no.  | Rev.       |
| Feb-24 | 2460    | 100-2    | D          |