



- NOTES**
1. Drainage design and construction is in accordance with Sewers for Adoption 4th Edition and the requirements of the statutory undertaker.
  2. All SWP, RWP and BIC connections are indicative and must be confirmed by architect.
  3. Pipe gradients out of building to connecting manhole to be laid on 1:40 in accordance with part 7 of the 2013 Building Regulations, Table 8. All inverts to SWP within 3 storey buildings must be 750mm in accordance with Building Regulations.
  4. Tolerances in pipe laying to be in accordance with Sewers for Adoption 4th Edition Clause 4.3.7
  5. For pipes 150-450mm dia. all rocker pipes to be in accordance with 'Sewers for Adoption' 4th Edition.
  6. Engineering bricks shall not contain frogs or holes.
  7. Brickwork to manholes to be English bond.
  8. Where pipes surrounded in concrete, flexibility to be maintained at pipe joints by the use of suitable compressible material eg. 'Flexocor' or 'Flexobond'.
  9. All manhole covers and frames must comply with BS EN 24. covers in roads to be Grade D40 and be 150mm deep. Manhole covers in car parking areas and drives to be Grade B125. All landscaped areas may be Grade A15. All to be laid in accordance with Part 7 of Building Regulations 2013, Tables 11 & 12.
  10. Pipes greater than 300 diameter to be 'Aquaflow' and pipes less than 300 diameter to be Wavin Ultrab' or similar approved.
  11. Granolithic benching to manholes to be 40mm thickness minimum.
  12. Precast concrete chamber rings to be reinforced.
  13. The slope of benching in all cases should be 1 in 30.
  14. Manholes shall not incorporate double square or double oblique channel junctions in their inverts.
  15. All incoming pipes shall be surrounded with 150mm of concrete to the face of the collar of the first flexible joint and the outgoing pipe shall also be surrounded to within 50mm of the first flexible joint and a compressible filler used as a former between the concrete surround and downstream pipe collar.
  16. All underground services to be confirmed by contractor prior to commencement on site. any discrepancies to be reported to engineer.
  17. Private sewers not located in roads to be Class F granular bed and surround as per standard details.
  18. Sewers located under adopted roads to be Class 5 granular bed and surround (more than 1.2m cover)
  19. Sewers located under private roads and car parking bays to be Class F granular bed and surround as per standard details unless adopted, then provide Class 5 if more than 1.2m cover)
  20. Private sewers with less than 0.6m of cover to be concrete surrounded as Class 2 on standard details.
  21. Adopted sewers with less than 1.2m cover, provide Class 2 concrete bed and surround. Concrete haunching may be suitable for large diameter storage sewers, guidance must be sought from adopting authority prior to use.
  22. Road gullies to be trapped for connection to proposed combined sewer.
  23. No deep or wide rooted trees to be planted within close proximity of the proposed and existing public sewer system.

**LEGEND**

- PROPOSED SURFACE WATER SEWERS SECTION 104
- PROPOSED FOUL WATER SEWERS SECTION 104
- EXISTING SURFACE WATER SEWER
- EXISTING FOUL WATER SEWER
- EXISTING COMBINED WATER SEWER
- PROPOSED EASEMENT

1	24/08/2019	Approved for all 10 connections	Code
2	24/08/2019	Issue for technical approval	Issue
3	24/08/2019	Issue for planning approval	Issue
4	24/08/2019	Issue for construction	Issue
5	24/08/2019	Issue for completion	Issue
6	24/08/2019	Issue for completion	Issue

Drawing originator: **BETTS HYDRO** | **BETTS ASSOCIATES** | **BETTS GEO**  
 Client: **DAVID WILSON HOMES**  
 Project title: **Waddow View Clifheroe**  
 Drawing title: **S104 Agreement Plan Main Drainage Layout**  
 Scale: 1:500 for the original size of A0  
 Drawn by: JC | Checked by: RA | Issued by: [ ] | Date: FEB 2019  
 Drawing status: **For Approval**  
 Job No: DWH155 | Drawing No: [ ] | Project: [ ] | Issue: [ ] | Date: [ ] | Revision: [ ]  
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