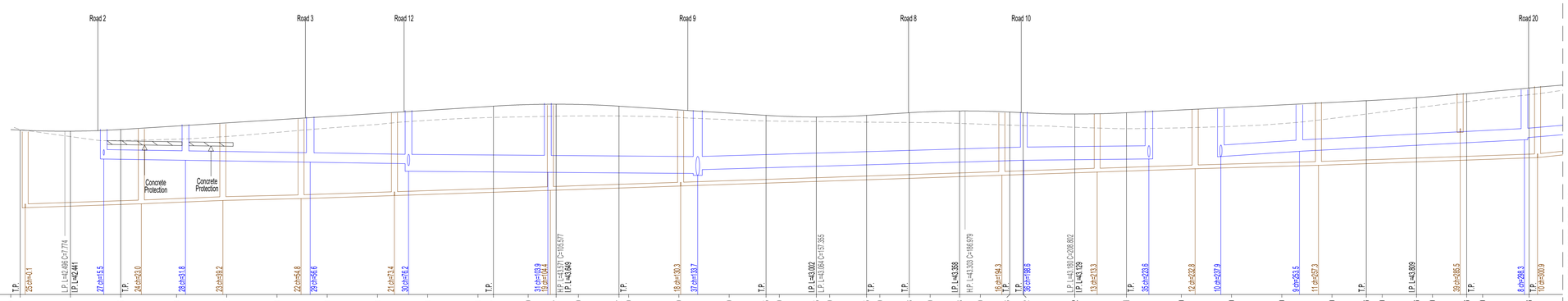
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Road 1

Vertical Exaggeration: 5
Datum: 36.000M AOD

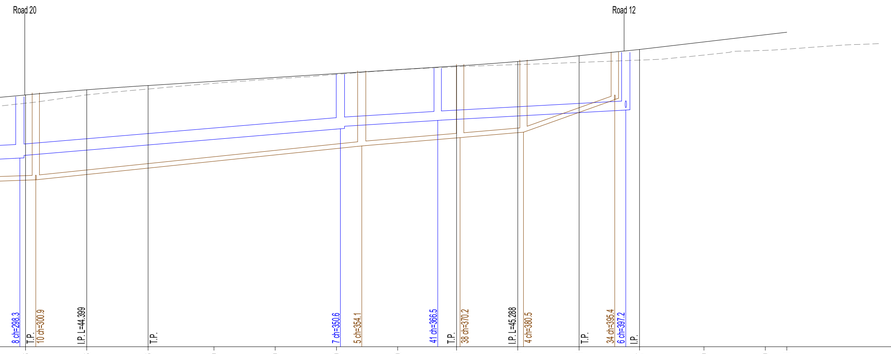


FOR CONTINUATION SEE BELOW

CHAINAGE ON CENTRELINE (m)	-3.000 · 4.115 · 8.888 · 18.885 · 30.000 · 40.000 · 50.000 · 60.000 · 70.000 · 80.000 · 90.000 · 93.077 · 100.000 · 105.577 · 110.000 · 118.077 · 120.000 · 130.000 · 140.000 · 147.355 · 150.000 · 157.355 · 160.000 · 167.355 · 170.000 · 175.888 · 180.000 · 185.888 · 190.000 · 195.888 · 198.522 · 208.802 · 210.981 · 220.000 · 230.000 · 240.000 · 250.000 · 260.000 · 268.826 · 270.000 · 276.826 · 280.000 · 288.826 · 290.000 · 299.246
LEVELS ON CENTRELINE OF CARRIAGEWAY (m)	42.559 · 42.541 · 42.497 · 42.566 · 42.705 · 42.830 · 42.955 · 43.080 · 43.205 · 43.330 · 43.455 · 43.493 · 43.556 · 43.571 · 43.591 · 43.493 · 43.469 · 43.344 · 43.219 · 43.127 · 43.098 · 43.064 · 43.099 · 43.127 · 43.160 · 43.233 · 43.275 · 43.302 · 43.288 · 43.258 · 43.222 · 43.160 · 43.222 · 43.341 · 43.441 · 43.541 · 43.641 · 43.709 · 43.743 · 43.830 · 43.877 · 43.991 · 44.049 · 44.217
VERTICAL DESIGN ON CARRIAGEWAY CENTRELINE	G = -1.0% · SAG CURVE K = 8.889 L = 20.000 · GRADIENT 1.2% (1 in 80) LENGTH = 74.191m · HOG CURVE K = 10.000 L = 25.000 · GRADIENT -1.2% (-1 in 80) LENGTH = 29.278m · SAG CURVE K = 8.000 L = 20.000 · GRADIENT 1.2% L = 8.514m · HOG CURVE K = 8.889 L = 20.000 · G = -1.0% · SAG CURVE K = 10.279 L = 20.559 · GRADIENT 1.0% (1 in 100) LENGTH = 47.745m · SAG CURVE K = 24.444 L = 20.000 · GRADIENT 1.8% (1 in 55) LENGTH = 12.420m
HORIZONTAL DESIGN ON CARRIAGEWAY CENTRELINE	STRAIGHT LENGTH = 19.543m · CURVE R = 58.008 L = 26.701 · CURVE R = 56.354 L = 40.263 · STRAIGHT LENGTH = 46.143m · STRAIGHT LENGTH = 66.347m · L = 1.45m · CURVE R = 95.601 L = 27.266 · L = 1.45m · L = 1.395 · CURVE R = 97.544 L = 29.682 · L = 1.395 · STRAIGHT LENGTH = 73.241m
EXISTING LEVELS (m)	42.559 · 42.281 · 42.129 · 42.180 · 42.288 · 42.451 · 42.619 · 42.766 · 42.930 · 43.025 · 43.045 · 43.072 · 43.094 · 43.104 · 43.103 · 43.097 · 43.040 · 42.956 · 42.907 · 42.865 · 42.880 · 42.875 · 42.856 · 42.853 · 42.844 · 42.839 · 42.868 · 42.760 · 42.739 · 42.721 · 42.712 · 42.654 · 42.596 · 42.630 · 42.888 · 42.798 · 43.065 · 43.179 · 43.262 · 43.433 · 43.509 · 43.671 · 43.744 · 43.947
MANHOLE COVER LEVELS APPROX (m)	42.478 · 42.576 · 42.565 · 42.763 · 42.768 · 42.979 · 43.067 · 43.210 · 43.328 · 44.884 · 43.305 · 43.324 · 43.217 · 43.263 · 43.176 · 43.317 · 43.353 · 43.391 · 43.546 · 43.646 · 44.002 · 44.181 · 44.285
FOUL WATER SEWER INVERT LEVELS (m)	39.457 · 150Ø 1/149 L=23.32 PN=1.016 · 39.807 · 39.807 · 150Ø 1/124 L=16.53 PN=1.015 · 39.140 · 39.140 · 150Ø 1/207 L=15.33 PN=1.014 · 39.014 · 39.014 · 150Ø 1/149 L=18.18 PN=1.013 · 38.935 · 38.935 · 150Ø 1/149 L=30.80 PN=1.012 · 40.142 · 40.142 · 150Ø 1/150 L=25.93 PN=1.011 · 40.015 · 40.015 · 150Ø 1/149 L=63.94 PN=1.010 · 40.143 · 40.143 · 150Ø 1/149 L=19.11 PN=1.009 · 40.871 · 40.871 · 150Ø 1/149 L=19.55 PN=1.008 · 41.005 · 41.002 · 150Ø 1/178 L=24.39 PN=1.007 · 41.139 · 41.139 · 150Ø 1/142 L=43.55 PN=1.006 · 41.446 · 41.446 · 42.452
SURFACE WATER SEWER INVERT LEVELS (m)	41.388 · 3750 1/321 L=15.71 PN=8.002 · 41.340 · 41.340 · 3750 1/322 L=24.81 PN=8.003 · 41.260 · 41.260 · 3750 1/323 L=20.00 PN=8.004 · 41.201 · 41.201 · 6750 1/667 L=26.02 PN=6.005 · 40.939 · 40.939 · 6750 1/663 L=29.84 PN=6.006 · 40.674 · 40.674 · 5250 1/173 L=64.87 PN=4.008 · 41.338 · 41.338 · 5250 1/462 L=24.49 PN=4.007 · 41.382 · 41.491 · 4500 1/77 L=15.80 PN=1.006 · 41.556 · 41.556 · 4500 1/98 L=44.91 PN=1.005 · 42.155 · 42.230
MANHOLE DIAMETER (mm)	Type B 1200 · Type C 1350 · Type B 1200 · Type C 1350 · Type B 1200 · Type A 1200 · 1500 Type C · Type A 1200 · Type B 1350 · Type B 1350 · Type A 1200 · Type B 1200 · Type B 1800 · Type B 1200 · Unknown 1350 · Type B 1200 · Unknown 1500 · Type B 1200 · Type C 1350 · Type C 1350 · Type B 1800 · Unknown 1200 · Type B 1800 · 1200 Type B

Road 1

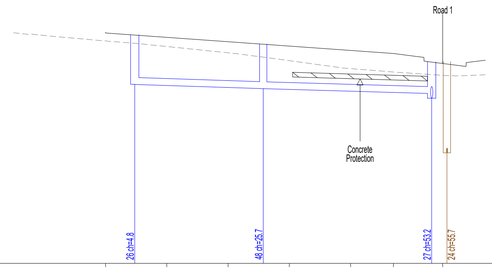
Vertical Exaggeration: 5
Datum: 36.000M AOD



CHAINAGE ON CENTRELINE (m)	290.000 · 299.246 · 310.000 · 320.000 · 330.000 · 340.000 · 350.000 · 360.000 · 368.601 · 370.000 · 379.601 · 380.000 · 388.601 · 390.000 · 399.467 · 410.000 · 420.000 · 423.511
LEVELS ON CENTRELINE OF CARRIAGEWAY (m)	44.049 · 44.217 · 44.385 · 44.525 · 44.661 · 44.788 · 44.914 · 45.040 · 45.162 · 45.308 · 45.495 · 45.700 · 45.947 · 46.182 · 46.264
VERTICAL DESIGN ON CARRIAGEWAY CENTRELINE	GRADIENT 1.9% (1 in 55) LENGTH = 12.420m · HOG CURVE K = 36.095 L = 20.000 · GRADIENT 1.3% (1 in 79) LENGTH = 80.356m · SAG CURVE K = 24.715 L = 20.000 · GRADIENT 2.1% L = 9.866m · GRADIENT 2.3% (1 in 43) LENGTH = 24.045m
HORIZONTAL DESIGN ON CARRIAGEWAY CENTRELINE	STRAIGHT LENGTH = 73.241m · CURVE R = 108.050 L = 45.592 · STRAIGHT LENGTH = 24.766m · CURVE R = 102.745 L = 15.469
EXISTING LEVELS (m)	43.744 · 43.947 · 44.218 · 44.410 · 44.565 · 44.741 · 44.867 · 45.055 · 45.155 · 45.206 · 45.278 · 45.354 · 45.519 · 45.672 · 45.712
MANHOLE COVER LEVELS APPROX (m)	44.161 · 44.285 · 44.884 · 45.005 · 45.086 · 45.219 · 45.300 · 45.615 · 45.607
FOUL WATER SEWER INVERT LEVELS (m)	41.446 · 41.446 · 150Ø 1/48 L=53.40 PN=1.005 · 43.552 · 43.552 · 150Ø 1/60 L=16.31 PN=1.004 · 43.824 · 43.824 · 150Ø 1/60 L=10.52 PN=1.003 · 43.930 · 43.930 · 150Ø 1/14 L=14.93 PN=1.002 · 44.065
SURFACE WATER SEWER INVERT LEVELS (m)	42.155 · 42.230 · 3750 1/59 L=52.13 PN=1.004 · 43.112 · 43.187 · 300Ø 1/79 L=15.69 PN=1.003 · 43.386 · 43.386 · 300Ø 1/90 L=30.44 PN=1.002 · 43.724
MANHOLE DIAMETER (mm)	Type B 1350 · 1200 Type B · Type C 1350 · Type B 1350 · Unknown 1200 · Type B 1200 · Type B 1200 · Unknown 1200 · 1350 Type B

Road 2

Vertical Exaggeration: 5
Datum: 36.000M AOD



CHAINAGE ON CENTRELINE (m)	0.000 · 10.000 · 20.000 · 30.000 · 40.000 · 46.987 · 55.031
LEVELS ON CENTRELINE OF CARRIAGEWAY (m)	43.518 · 43.375 · 43.232 · 43.089 · 42.946 · 42.847 · 42.520
VERTICAL DESIGN ON CARRIAGEWAY CENTRELINE	GRADIENT -1.4% (-1 in 70) LENGTH = 46.987m
HORIZONTAL DESIGN ON CARRIAGEWAY CENTRELINE	STRAIGHT L = 8.902m · R = 89.999 L = 5.703 · STRAIGHT L = 7.507m · CURVE R = 43.000 L = 7.720 · STRAIGHT L = 7.879m · STRAIGHT L = 9.104m
EXISTING LEVELS (m)	43.268 · 43.076 · 42.870 · 42.634 · 42.356 · 42.245
MANHOLE COVER LEVELS APPROX (m)	43.484 · 43.162 · 42.576 · 42.395
FOUL WATER SEWER INVERT LEVELS (m)	39.807
SURFACE WATER SEWER INVERT LEVELS (m)	41.339 · 2250 1/151 L=20.90 PN=8.000 · 41.101 · 41.101 · 2250 1/170 L=27.51 PN=8.001 · 41.539
MANHOLE DIAMETER (mm)	Type C 1350 · Unknown 1200 · Type C 1350 · 1200 Type B

Manhole Schedule/Longsection:

1. Do not scale.
2. 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.
3. Site layout shown for context only, refer to other project drawings for details.
4. All adoptable drainage works to be constructed as detailed in design and construction guidance or as stipulated in the water authorities addendum.
5. All public sewers are to be the subject of a section 104 agreement of the water industry act 1991.
6. Invert levels of existing manholes and sewers are to be checked on site before construction commences and results reported to engineers.
7. The contractor is responsible for maintaining continuity of flow for all existing sewers within the site boundary and limit of works for the duration of the project.
8. All drainage ironworks to comply with bs en124, and be stamped with bsi kitemark. covers to suit loading as below;
 - -carriageways and roads - d400
 - -driveways and verges - c250
 - -footways and pedestrian areas - b125
 - -gardens/landscaping - a15
9. All sewer pipes, up to, and including 225mm are to be vitrified clay to BS EN295. All sewer pipes 300mm diameter and above to be concrete pipes to BS EN1916. Where agreed with adopting authority pipes up to and including 600mm diameter can be PVC-U to BS EN1404.
10. All drainage shall be installed and tested strictly in accordance with the manufacturers' printed instructions, bs en 752, bs en 1601, local water authority requirements and the building regulations.
11. All bedding shall be class s unless noted otherwise.
12. All trenches under existing and proposed public highways are to be backfilled with thoroughly compacted type 1 granular sub-base material.
13. Drainage laid beneath roads and areas of vehicular access (car parking etc) with less than 1200mm of cover shall be encased in concrete bed and surround with associated movement joints. drainage laid beneath paths, footways and pedestrian areas with less than 900mm of cover shall be similarly treated.
14. Chambers with outgoing pipes greater than 600mm diameter shall be fitted with guard bars, safety chains or other approved safety devices.
15. The use of precast concrete products made with sulphate resisting cement is mandatory, unless a laboratory report proves such precautions are not necessary.
16. All sewers to be abandoned must be surveyed to identify any lateral connections that are still live with any found to be reported to the engineer.
17. All foul and storm water drains which are not to be adopted as public sewers shall be in accordance with document h of the building regulations, together with nhbc standards chapter 5.3 and bs8301.
18. Where pipes pass through footings, retaining or screen walls, lintels to be provided over drains.
19. Where inverts are less than 0.6m deep inspection chambers (min dia. 190mm) or access fittings (225 x 100mm) to be used, elsewhere proprietary plastic, brick or pcc is to be used and sized in accordance with table 11 of document h of the building regulations (<0.6m to invert min dn300, >0.6m to invert min dn475).
20. Where required 1m deep root barrier of an approved type to be installed vertically along the back edging kerb of all areas of footway/ demarcation to protect from both proposed and future plantation.
21. Construction details subject to refinement through detailed design/technical approval process.

KEY:

- EXISTING GROUND PROFILE
- PROPOSED CENTERLINE PROFILE
- PROPOSED SURFACE WATER
- PROPOSED FOUL SEWER
- CONCRETE PROTECTION

0 5 10 15 20 25m
Scale 1:500

Rev	Date	Description	Drawn	Checked
D	03.25	Updated to suit latest layout & drainage design	LC	DS
C	08.24	Updated to suit latest drainage with updated layout of Road 1.	LC	DS
B	07.24	Updated Drainage and Road 2 Longsections	AS	DS
A	07.24	First issue	LC	DS

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Client
BELLWAY HOMES

Project
LAND NORTH OF ARBORFIELD ROAD, SHINFIELD

Title
FULL APPLICATION LONGITUDINAL SECTIONS SHEET 1

Status

Scale	Date	Drawn	Checked
1:500 H @ A1 1:100 V	JUNE 2024	LC	DS

Drawing No: HD008-FA-151
Revision: D