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Mr A Khan
Persimmon (West Yorkshire)
Unit 9
Temple Point
Finch Drive
Colton
Leeds
LS15 9JQ

Date: 22nd May 2025

Our Ref: C7844/GH/10883

Dear Anas,

Re: Land to the North of Cumberworth Road, Skelmanthorpe
Remediation Verification Letter Report

Sirius Geotechnical Ltd (Sirius) were commissioned by Persimmon (West Yorkshire) (Persimmon) to report upon remediation verification works at their current residential development located to the north of Cumberworth Road, Skelmanthorpe (the "site"). The development is to comprise 190 No. low rise (two to three storey) houses with private gardens, associated areas of hardstanding, soft landscaping, estate roads and areas of public open space (POS), in accordance with Persimmon's Proposed Planning Layout drawing ref. CRSK-2018-001 Rev M, a copy of which is included within Attachment A.

The site has been previously subject to investigation and assessment by Sirius, as listed below:

- Sirius Geoenvironmental Appraisal Report, report ref. C7844 Rev. B, dated May 2018.
- Updated Ground Gas Risk Assessment Letter Report, letter report ref. C7844/RC/9060, dated 1st October 2019.
- Supplementary Coal Mining Investigation Letter Report, letter report ref. C7844/RC/9149, dated 16th December 2019.
- Remediation Strategy, report ref. C7844/RMS, dated April 2020.
- Verification of Removal of Chemically Unsuitable Topsoil, letter report ref. C7844/GH/10536, dated 12th June 2024.

In addition to the above, a third party consultant has been commissioned by Persimmon to undertake independent verification of gas protection measures installed into dwellings at the site. Reference to gas protection measures and their verification is outside the scope of this letter report.

Background Information

The site comprises an irregularly shaped plot of land, located to the north of Cumberworth Road, in the village of Skelmanthorpe. A site location plan is provided as Drawing No. C7844/01 within Appendix A. The site is irregularly shaped and, prior to development, comprised a number of grassed or roughly vegetated fields, separated by either hedgerows or dry-stone walling with steel gates for access between the two largest fields. In general, the site slopes gently from west to east, with levels of approximately 199m Above Ordnance Datum (m AOD) along the western site boundary, and 188m AOD to the extreme eastern site boundary.

Published geological plans indicate the site to be underlain by strata of the Pennine Lower Coal Measures Formation (LCM), comprising undifferentiated mudstone, siltstone, sandstone and coal seams. An east to west trending fault, with a downthrow to the south, is conjectured centrally through the site. No made ground or superficial deposits are recorded on the site on the published geological maps.

No classified watercourses are located within 500m of the site. There are no recorded surface or groundwater abstractions within 500m of the site. The LCM bedrock beneath the site is classified as a Secondary A Aquifer.

Summary of Previous Reports

Fieldworks forming part of the Sirius ground investigation took place in April 2018 and comprised machine-excavated trial pits, hand dug pits, and the drilling of window sample and rotary open hole boreholes. The investigation identified topsoil across the site to depths of between 0.2m and 0.4m below ground level (bgl). Made ground was encountered beneath topsoil type made ground in one exploratory hole location (TP02), comprising a 0.1m thick layer of orange-brown slightly gravelly sandy clay with rare cobbles of brick. This material was considered to represent reworked natural strata.

Near surface soils were underlain by a variable thickness of natural residual LCM soils, to depths of between 0.4m and 1.85m bgl, grading into LCM bedrock. Eight of the twelve rotary boreholes, located within the northern half of the site, recorded an intact un-named coal at depths of between 5.7m and 6.5m bgl, varying from 0.4m and 0.6m in thickness.

The risk of shallow mine workings posing a risk to surface stability was considered to be low, requiring no further consideration. The possibility of localised crop workings / bell pits within the site however could not be discounted. It was therefore recommended that excavations be examined for evidence of infilled mine entries/pits/crop workings.

The results of chemical laboratory testing did not identify any contaminants of concern, with the exception of elevated concentrations of arsenic detected within localised topsoil encountered within the northwestern most field (with concentrations of between 29mg/kg and 75m/kg, and a US95 of 53.6mg/kg). The recorded concentrations of arsenic within the topsoil were considered unsuitable for a residential with consumption of homegrown produce end use, compared to the GAC of 37mg/kg.

A re-assessment of the chemical laboratory results indicated that no topsoil samples taken from with the northwestern site area were found to exceed the relevant GAC of 79mg/kg for an informal POS in a residential setting end use. The soils were therefore considered to be suitable for re-use within proposed POS at the site.

Seven topsoil samples tested from the remainder of the site, were recorded with arsenic concentrations of between 11mg/kg and 33mg/kg. The concentrations of arsenic tested from the remainder of the topsoil samples were below the relevant GAC for a residential with consumption of homegrown produce end-use and were considered suitable for re-use.

In addition, two samples of natural subsoil (comprising residual LCM soils) tested as part of the site investigation works were not found to be recorded with any determinants in exceedance of relevant GAC's.

Outline Remediation Requirements

Topsoil within the northwestern most field was recommended to be stripped, stockpiled separately from topsoil from other parts of the site and placed as a growing medium (of minimum 100mm in thickness) within areas of proposed POS. Elsewhere, a nominal 100mm depth of suitable site-won topsoil was recommended to be provided in gardens and areas of soft landscaping to provide a suitable medium for plant growth.

Any materials for use as a growing medium, including site-won and imported material, was to be inspected to ensure that it meets the required specification. It was to be clean and free of foreign debris, building waste materials, timber or other deleterious matter. Any imported materials used within growth media on the site was to be tested in accordance with the Remediation Strategy (report ref. C7844/RMS).

It was considered possible that areas of more significant contamination, not identified to date, may be encountered on site during excavation and construction works. If any areas of noxious, odorous, brightly coloured, fibrous, liquid or other potential contamination were encountered, then further advice was recommended to be sought from a suitably qualified consultant.

Summary of Remedial Works

The localised arsenic impacted topsoil was temporarily relocated as part of enabling works and stockpiled to the rear of plots 108-110, where it was proposed to be placed within an area of POS at a subsequent date. On the basis of the previous chemical laboratory test results, this topsoil was considered suitable for re-use within areas of POS.

Photographic evidence was provided by Persimmon on 16th April 2025 to Sirius pertaining to removal and replacement of the arsenic impacted topsoil. Persimmon indicated that the topsoil had been permanently relocated to an area of POS to the east of the site, as shown on the Remediation Verification Plan, Drawing No. C7844/08, included within Attachment A. Copies of photographs of the relocated arsenic impacted topsoil, as provided by Persimmon, are included within Attachment B of this letter report.

The site won topsoil proposed for re-use within gardens and landscaping elsewhere was assessed by Persimmon and their groundworker prior to placement within plots across the site as a whole, on an ongoing basis. An indicative site won topsoil stockpile location plan is included on the Remediation Verification Plan (Drawing No. C7844/08, included within

Attachment A). The site won stockpiled topsoil was subsequently placed within areas of gardens and soft landscaping, as a suitable growth medium.

Persimmon have confirmed to Sirius that no soils proposed for use as a growth medium have been imported as part of enabling and construction works at the site, and that formation levels within proposed gardens and soft landscaping have comprised natural LCM subsoils. A review of the former site levels and proposed development levels has been undertaken as part of this verification report. it is evident that levels have remained similar to previous, and no significant cut / fill earthworks have been undertaken to achieve current levels. This substantiates the evidence that no imported soils was necessary during the enabling works.

Concluding Comments

On the basis of the foregoing, it is considered that the site has been satisfactorily remediated in accordance with the requirements of the Remediation Strategy, thereby permitting discharge of the relevant planning conditions.

We trust the above and attachments meet with your approval, however should you require further assistance then please do not hesitate to contact us directly.

Yours sincerely

G Halliday

Principal Engineer

For and on behalf of Sirius Geotechnical Ltd.

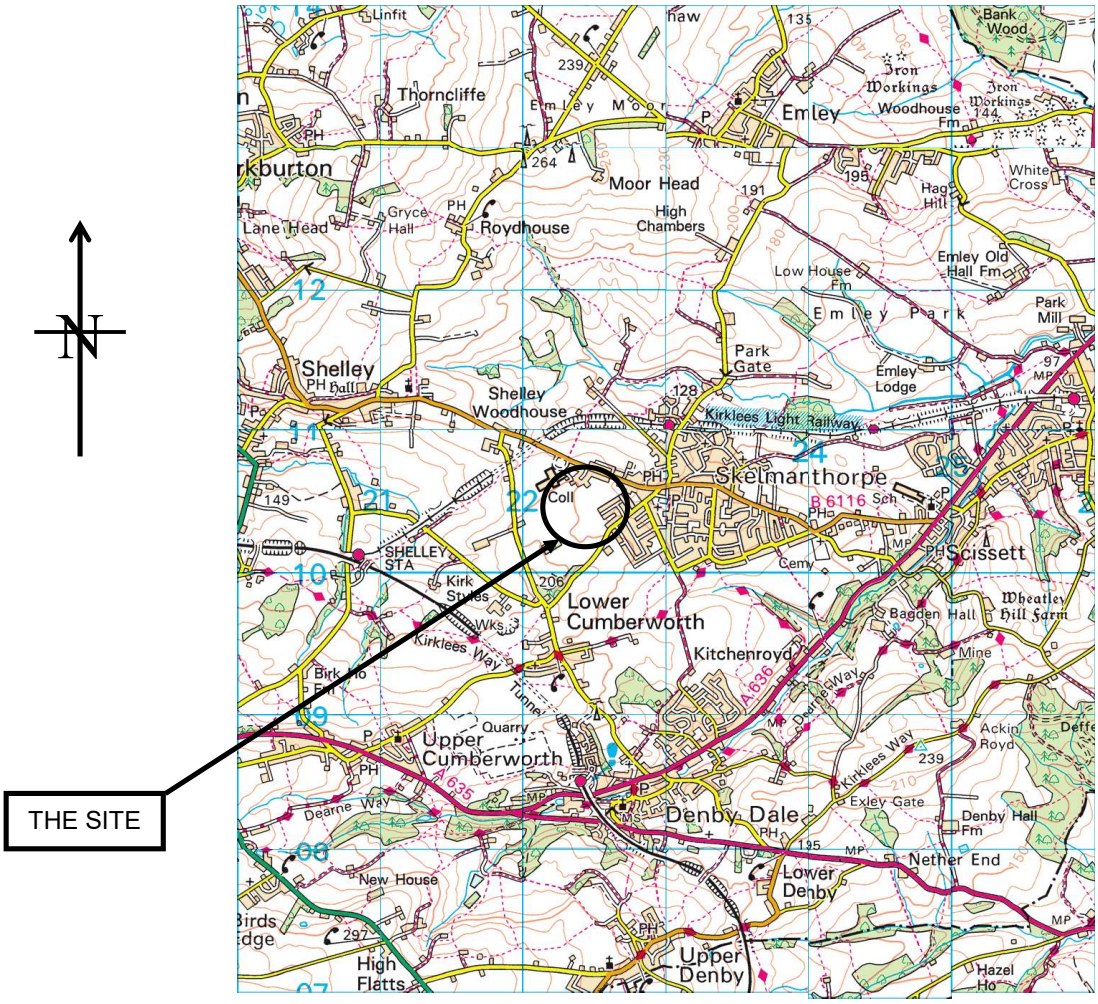
Attachments	A	Drawings
	B	Photographs

ATTACHMENT A

DRAWINGS

Site Location Plan

Contract Number	C7844
Contract	Cumberworth Road Skelmanthorpe
Client	Persimmon Homes West Yorkshire



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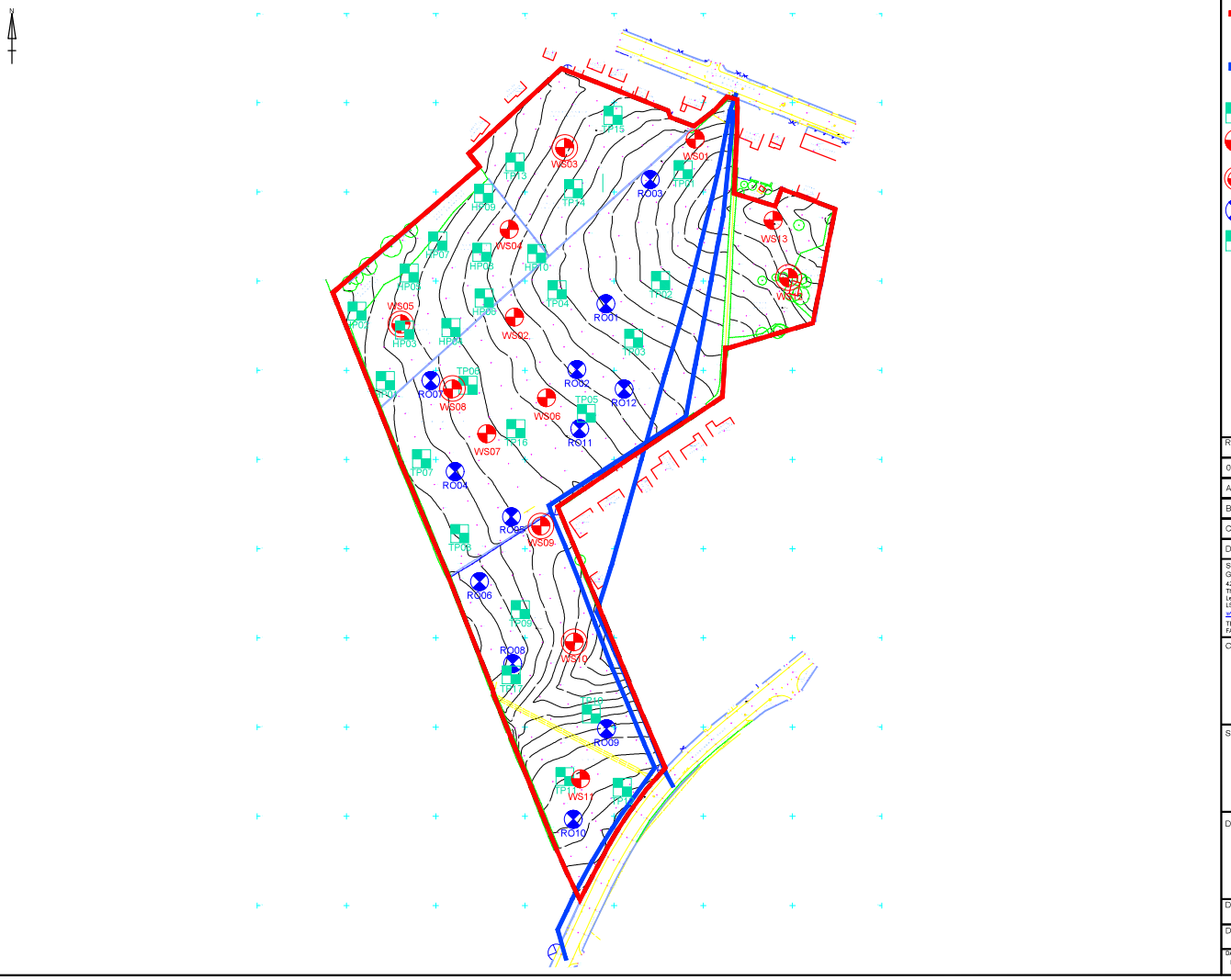
Sirius Geotechnical Ltd, Suite 2, Russel House, Mill Road, Langley Moor, Durham DH7 8HJ.
Licence No. 100042005

Scale	1:50,000		
Drawn by	ZP	Approved	GH
Drawing Number	C7844/01		



NOTES

Site Boundary as taken from proposed planning layout, dated April 2018

Approximate position of services

TP Trial Pit

WS Window Sample Borehole

WS Window Sample Borehole (With Monitoring Well)

RO Rotary Openhole Borehole

HP Hand Dug Pit

REVISION		BY	DATE
0	For Information	SM	09/05/18
A	>>	>>	>>
B	>>	>>	>>
C	>>	>>	>>
D	>>	>>	>>

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CLIENT

Persimmon Homes West Yorkshire

SITE

Land off Cumberworth Road, Skelmanthorpe

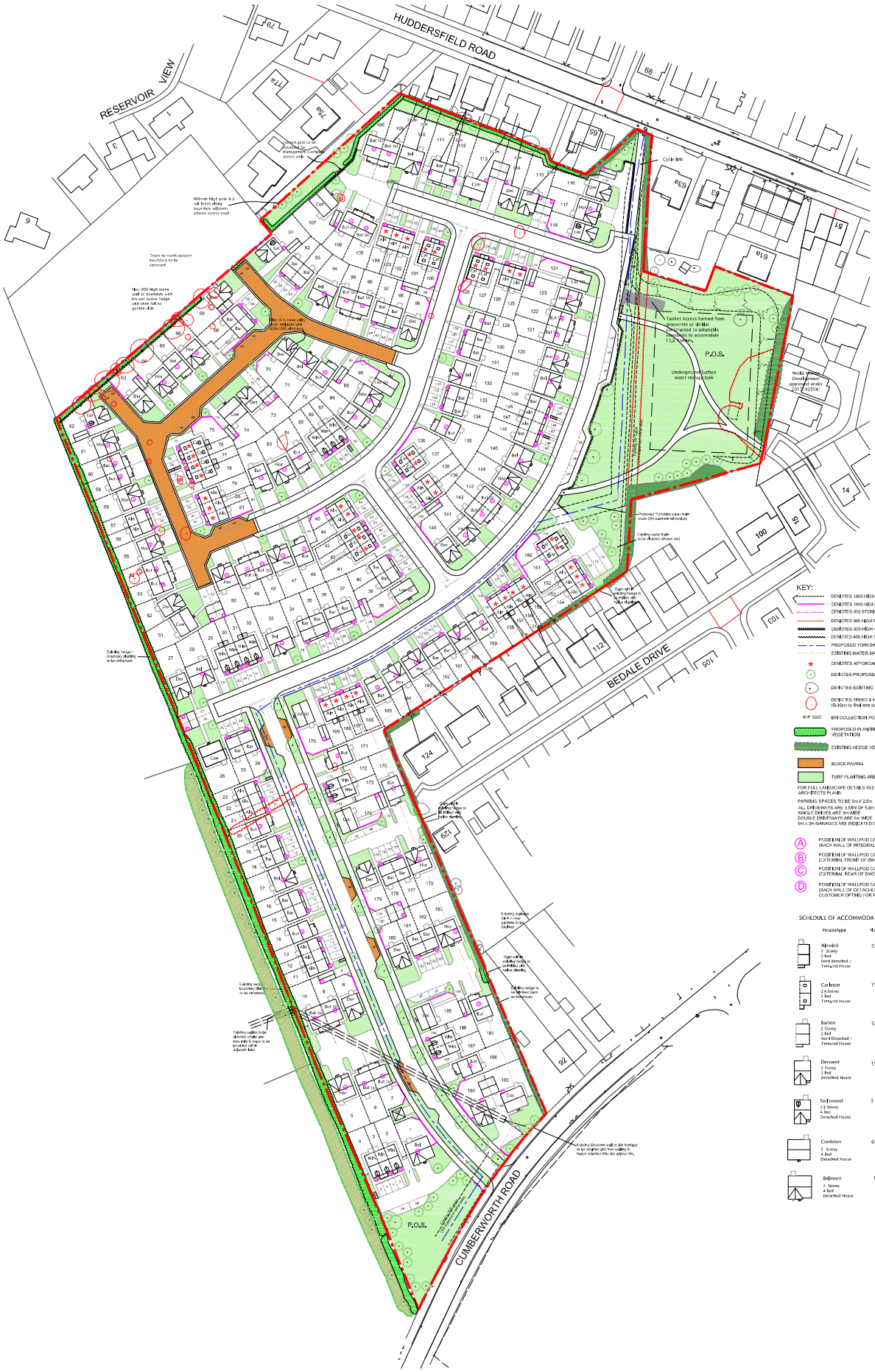
DRAWING TITLE

Exploratory Hole Location Plan

DRAWING NO.	REVISION NO.
C7844/04	0

DRAWN BY	APPROVED BY
SM	GH

DATE	SCALE	PAPER SIZE
May 2018	1:2000	A3



KEY:

- DENOTES 1800 HIGH CLOSE BOARDED FENCE
- DENOTES 1800 HIGH SCREEN WALL / FENCE
- DENOTES 900 STONE WALL TO BOUNDARY
- DENOTES 900 HIGH POST AND 2 RAIL FENCE
- DENOTES 450 HIGH HOOP TOP RAILINGS
- DENOTES 450 HIGH TIMBER KNEE RAIL
- PROPOSED YORKSHIRE WATER MAIN ROUTE
- EXISTING WATER MAIN TO BE DIVERTED
- DENOTES AFFORDABLE HOUSING
- DENOTES PROPOSED TREES
- DENOTES EXISTING TREES RETAINED
- DENOTES TREES & HEDGES TO BE REMOVED (Subject to final tree survey)
- BCP BIN COLLECTION POINT
- PROPOSED PLANTING / ENHANCEMENT OF EXISTING VEGETATION
- EXISTING HEDGE VEGETATION TO BE RETAINED
- BLOCK PAVING
- TURF PLANTING AREA

FOR FULL LANDSCAPE DETAILS SEE LANDSCAPE ARCHITECTS PLANS

PARKING SPACES TO BE 5m X 2.5m
ALL DRIVEWAYS ARE A MIN OF 6.0m LONG
SINGLE DRIVEWAYS ARE 3m WIDE
DOUBLE DRIVEWAYS ARE 6m WIDE
6m x 3m GARAGES ARE INDICATED ON PLAN

- A POSITION OF WALLPOD CAR CHARGING PORT (BACK WALL OF INTEGRAL/ATTACHED GARAGE)
- B POSITION OF WALLPOD CAR CHARGING PORT (EXTERNAL FRONT OF DWELLING)
- C POSITION OF WALLPOD CAR CHARGING PORT (EXTERNAL REAR OF DWELLING)
- D POSITION OF WALLPOD CAR CHARGING PORT (BACK WALL OF DETACHED GARAGE - SUBJECT TO CUSTOMER OPTING FOR POWER TO GARAGE)

SCHEDULE OF ACCOMMODATION PERSIMMON

Housetype	No.	Housetype	No.
Alnwick 2 Storey 2 Bed Semi detached / Terraced House	33	Buttermere 2 Storey 3 Bed Detached House	16
Carleton 2½ Storey 3 Bed Terraced House	15	Buttermere semi 2 Storey 3 Bed Semi Detached	20
Barton 2 Storey 2 Bed Semi Detached / Terraced House	32	Windermere 2½ Storey 3 Bed Semi Detached / Terraced House	14
Derwent 2 Storey 3 Bed Detached House	15	Lockwood Corner 2 Storey 3 Bed Detached House	4
Earlswood 2½ Storey 4 Bed Detached House	3	Lockwood 2 Storey 3 Bed Detached House	2
Coniston 2 Storey 4 Bed Detached House	6	Hornsea 2 Storey 4 Bed Detached House	20
Belmont 2 Storey 4 Bed Detached House	10		

Total = 190

Rev M - 30.09.19 - SAC
Additional planting added to match landscape plan
Rev L - 29.09.19 - SAC
Additional dbl & dms added to plots 165-168 & extra room for storage added to plots 165/180
Rev K - 05.09.19 - SAC
Layout revised following planning comments, plot list and layout amended 109-116
Rev J - 12.07.19 - CJB
Layout updated inline with engineering & landscaping designs
Rev H - 02.07.19 - CJB
Plots 107 & 108 Revised following Landscape architects comments, Footpath added to POS
Rev G - 18.06.19 - RLS
Revised following planning consultants comments.
Rev F - 05.04.19 - RLS
Housetypes updated to new Persimmon range, Grass verges added to Road entrance, water main amended. Carleton Introduced.
Rev E - 25.01.19 - RLS
House name text updated to R18
Rev D - 09.01.19 - RLS
Winder & Chedworth Blocks updated to R18 standard
Plot 102 amended
Rev C - 29.11.18 - RLS
Site Boundary line and plots 161-168 gardens amended
Rev B - 20.11.18 - RLS
Notes amended as per MB comms -Plots 186-192 amended
Rev A - 14.11.18 - CJB
Layout & mix amended following internal discussion

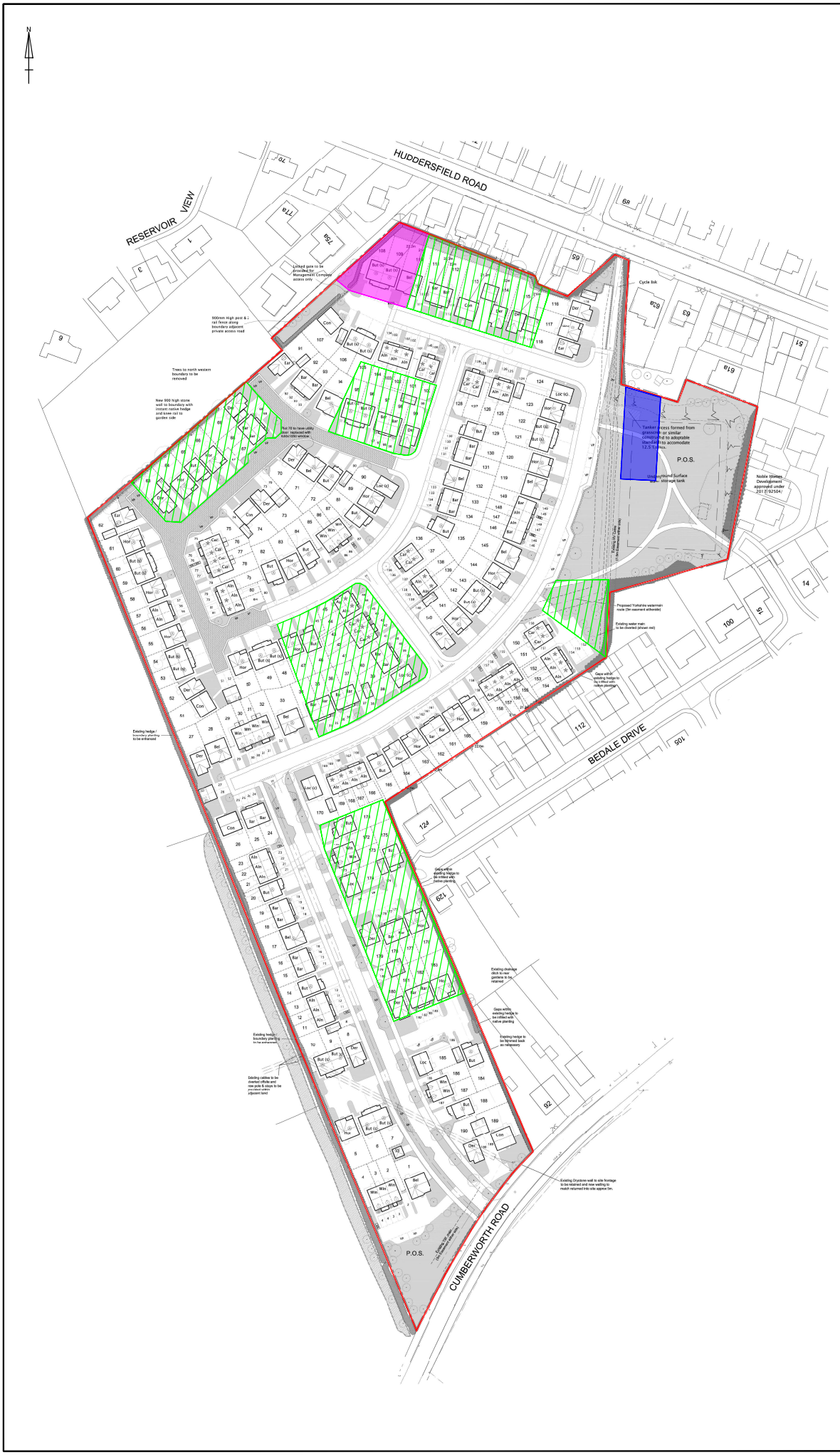
PERSIMMON
Together, we make a home

Proposed Development
CUMBERWORTH ROAD
SKELMANTHORPE

PROPOSED PLANNING LAYOUT

Scale 1:500@A0	Drawing Number CRSK-2018-001 Rev. - M
Drawn By CJB	
Drawn By SAC	APRIL 2018

0 10 20 30 40m
Scale 1:500



NOTES

- Site Boundary
- Suitable Site Won Topsoil Stockpiles
- Arsenic Impacted Topsoil (Temporary Stockpile Location)
- Area of Relocated Arsenic Impacted Topsoil

Notes

1. This drawing should not be viewed in isolation from the accompanying report.
2. All marked site features shown on this drawing are given for indicative purposes only. This drawing should not be underlaid in isolation to determine proposed development layouts. Reference should be made to the accompanying report for commentary on the potential location of these features including coordinates if available and any further works required to locate features if required.

REVISION		BY	DATE
0	For Information	MF	01/05/25
A	>>	>>	>>
B	>>	>>	>>
C	>>	>>	>>
D	>>	>>	>>

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CLIENT

Persimmon West Yorkshire

SITE

Land off Cumberworth Road, Skelmanthorpe

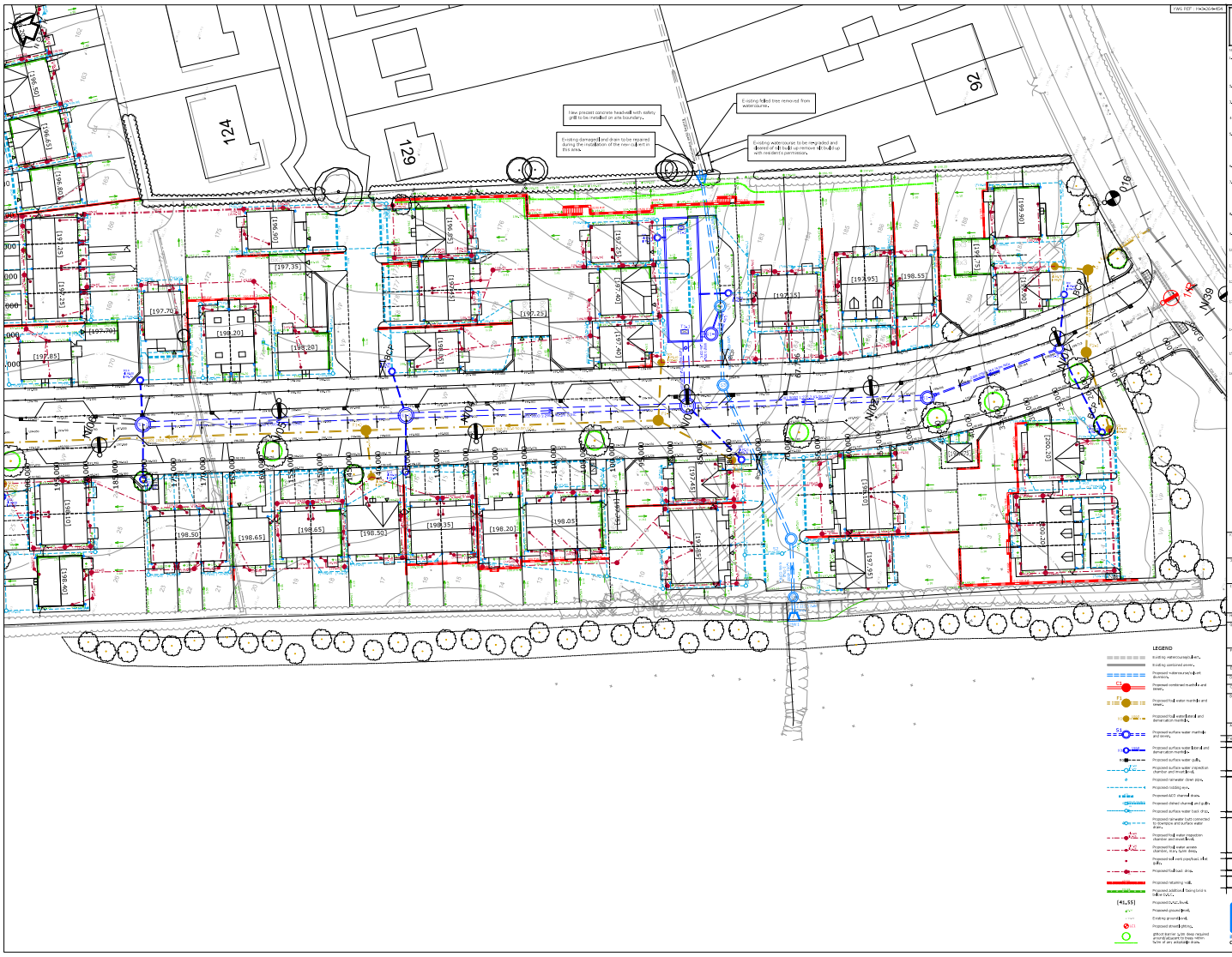
DRAWING TITLE

Remediation Verification Plan

DRAWING NO.	REVISION NO.
C7844/08	0

DRAWN BY	APPROVED BY
MF	GH

DATE	SCALE	PAPER SIZE
May 2025	1:1,500	A3



FWG REF : 14-3634-054

Cumberworth Road, Skelmanthorpe

Persimmon Homes West Yorkshire

1:200 Engineering Layout Sheet 1 of 3

NOTES

1. Manholes, gratings, rodding eyes and any other part of the works intended for adoption under a Section 104 agreement or gullies etc. intended for adoption as highway drainage are to be constructed in accordance with the Water Authority's "Guidelines for Adoption" MH Bibles, and to the requirements of the Adoptive Authority and the Local Council.
2. Unadopted foul and surface water drainage is to be constructed in accordance with the Building Regulations Part H, BS EN 752-2007, and approved Government Certificates.
3. All private drainage to be 100mm(D) unless indicated otherwise, and shall be constructed in accordance with the requirements to be determined by.
4. Private drainage within less than 3.0m of cover in driven and car parking areas to have Vertical Vitrified clay pipes and surround.
5. Private drains are to be constructed using flexible jointed vitrified clay pipes to BS EN 1401 "Super Strength" Specification, laid to a minimum 1:40 gradient on granular bedding to a minimum of 100mm, or PVC-U Building Drainage system pipe work to BS EN 1401-1, bedded and fixed (filled) in accordance with the manufacturers instructions and the specifications detailed in Note 4.
6. Backfilling of drain trenches adjacent to dwellings or other structures to be in accordance with section 2.27 and diagrams 7 and 8 of the Building Regulations Part H.
7. Access fittings and inspection chambers less than 1m deep are to be precast or prefabricated of brick laid in accordance with the Water Authority's "Guidelines for Adoption" MH Bibles, and to be of Sewer Concrete construction with 225mm heavy concrete surround, or adjusted and reduced covers and frames to be installed in accordance with the requirements of BS 5911.
8. Cover levels indicated on the drawing are nominal and may be adjusted to suit finished ground levels as necessary. Private inspection chamber covers and frames to be to a design suitable for installation in paved and landscaped areas.
9. Rainwater down pipes to be connected direct to drain using an approved bend or shoe. Internal installation of down pipes to permit rodding access.
10. Where drains pass through foundations or other rigid structures, a flexible joint is to be used and provision for flexibility is to be made with "Tube" pipes.
11. The positions of bills, downpipes, rodding eyes and rainwater down pipes are to be accurately located from the Architects drawings.
12. Gullies situated in areas accessible to vehicles are to be constructed in accordance with the requirements of Section 2.29 of the Building Regulations and BS 5911 Design of Highway Construction details drawings.
13. Drains within areas of hard standing to be constructed to first making up the area to approved levels and to the requirements of the Building Regulations Part H, Section 2.27. The trench shall be filled to the level of the surrounding hard standing with granular fill material compacted in layers not exceeding 225mm.
14. Drains to be constructed under dwellings with suspended floor structures to be laid in accordance with the requirements of section 2.27 of the Building Regulations Part H, and to be constructed in accordance with the requirements of BS 8301 and BS 8000 Part 2.
15. Drainage proposals have been prepared assuming that the Local Authority will adopt the foul and surface water drainage serving dwellings, as at the time of the planning application stage.
16. For all details of manholes and ironmongery refer to the Architect for details.

Rev	Description	By	Date
A	Sewer diameters changed to 100mm(D) and manhole sizes amended to suit. Plot 1 and 2 Foul drainage redesigned to suit revised layout. Existing watercourse realigned and culverted. Existing watercourse realigned to suit new layout.	SS	06.07.20
B	Sewer layout as shown revised following full site survey. Foul drainage redesigned to suit revised layout. Surface water drainage redesigned to suit revised layout. Existing watercourse realigned and culverted to suit new layout. Existing culvert to be removed and watercourse realigned to suit new layout.	SS	09.07.20
C	Drainage layout and general notes amended to suit new layout. Plot 1 and 2 foul drainage redesigned. Plot 1 and 2 surface water drainage redesigned. Plot 1 and 2 soakaway redesigned. Plot 1 and 2 soakaway redesigned. Existing watercourse realigned and culverted to suit new layout.	SS	09.07.20
D	Foul drainage layout and general notes amended to suit new layout.	SS	09.07.20
E	Surface water drainage layout and general notes amended to suit new layout. Plot 1 and 2 soakaway redesigned. Plot 1 and 2 soakaway redesigned. Plot 1 and 2 soakaway redesigned. Existing watercourse realigned and culverted to suit new layout.	SS	09.07.20
F	Foul drainage layout and general notes amended to suit new layout.	SS	09.07.20
G	Surface water drainage layout and general notes amended to suit new layout. Plot 1 and 2 soakaway redesigned. Plot 1 and 2 soakaway redesigned. Plot 1 and 2 soakaway redesigned. Existing watercourse realigned and culverted to suit new layout.	SS	09.07.20
H	Sewer diameters changed to 100mm(D) and manhole sizes amended to suit. Plot 1 and 2 Foul drainage redesigned to suit revised layout. Existing watercourse realigned and culverted to suit new layout. Existing culvert to be removed and watercourse realigned to suit new layout.	SS	09.07.20
I	Foul drainage layout and general notes amended to suit new layout.	SS	09.07.20
J	Surface water drainage layout and general notes amended to suit new layout. Plot 1 and 2 soakaway redesigned. Plot 1 and 2 soakaway redesigned. Plot 1 and 2 soakaway redesigned. Existing watercourse realigned and culverted to suit new layout.	SS	09.07.20
K	Road and footpath layouts amended and new road gullies added.	SS	09.07.20
L	Drainage revised to reflect S104 comment amendments. Foul pumped rising main added to site layout adjacent to plots 1 to 7 to serve plots 1 to 7. Foul drainage redesigned to suit revised layout. Plot 1 and 2 soakaway redesigned. Plot 1 and 2 soakaway redesigned. Plot 1 and 2 soakaway redesigned. Existing watercourse realigned and culverted to suit new layout.	SS	09.07.20
M	Adoptable foul drainage layout updated to suit Adoptable Sewer Layout.	SS	16.07.20

Rev	Description	By	Date

Project Title

Persimmon Homes West Yorkshire

Drawing Title

Cumberworth Road, Skelmanthorpe

1:200 Engineering Layout Sheet 1 of 3

Scale	Date
1:200 @ A0	02.03.20

Drawing No	Revision	Status
4902-C-D1-02	K	Approval

LEGEND

- Existing reference levels
- Existing contoured areas
- Proposed reference levels on structures
- Proposed contoured levels and areas
- Proposed foul water manholes and sewers
- Proposed foul water lateral and derivation manholes
- Proposed surface water manholes and sewers
- Proposed surface water lateral and derivation manholes
- Proposed surface water pipes
- Proposed surface water inspection chamber and lateral drains
- Proposed rainwater down pipes
- Proposed rodding eyes
- Proposed AGO channel drains
- Proposed channel drains and grills
- Proposed surface water back drains
- Proposed rainwater butt connected to downpipe and surface water drains
- Proposed foul water inspection chamber and lateral drains
- Proposed foul water access chamber, rodding eye, bolt drains
- Proposed foul vent pipe/back drains
- Proposed foul back drains
- Proposed retaining wall
- Proposed additional hard/soft landscaping
- [41.55] Proposed levels
- Proposed kerb levels
- Proposed ground level
- Existing ground level
- Proposed street lighting
- 100mm barrier kerb deep required around adjacent to trees within 5m of any adoptable drains

Geo Structures Civils

iD Civils Design Consulting Engineers

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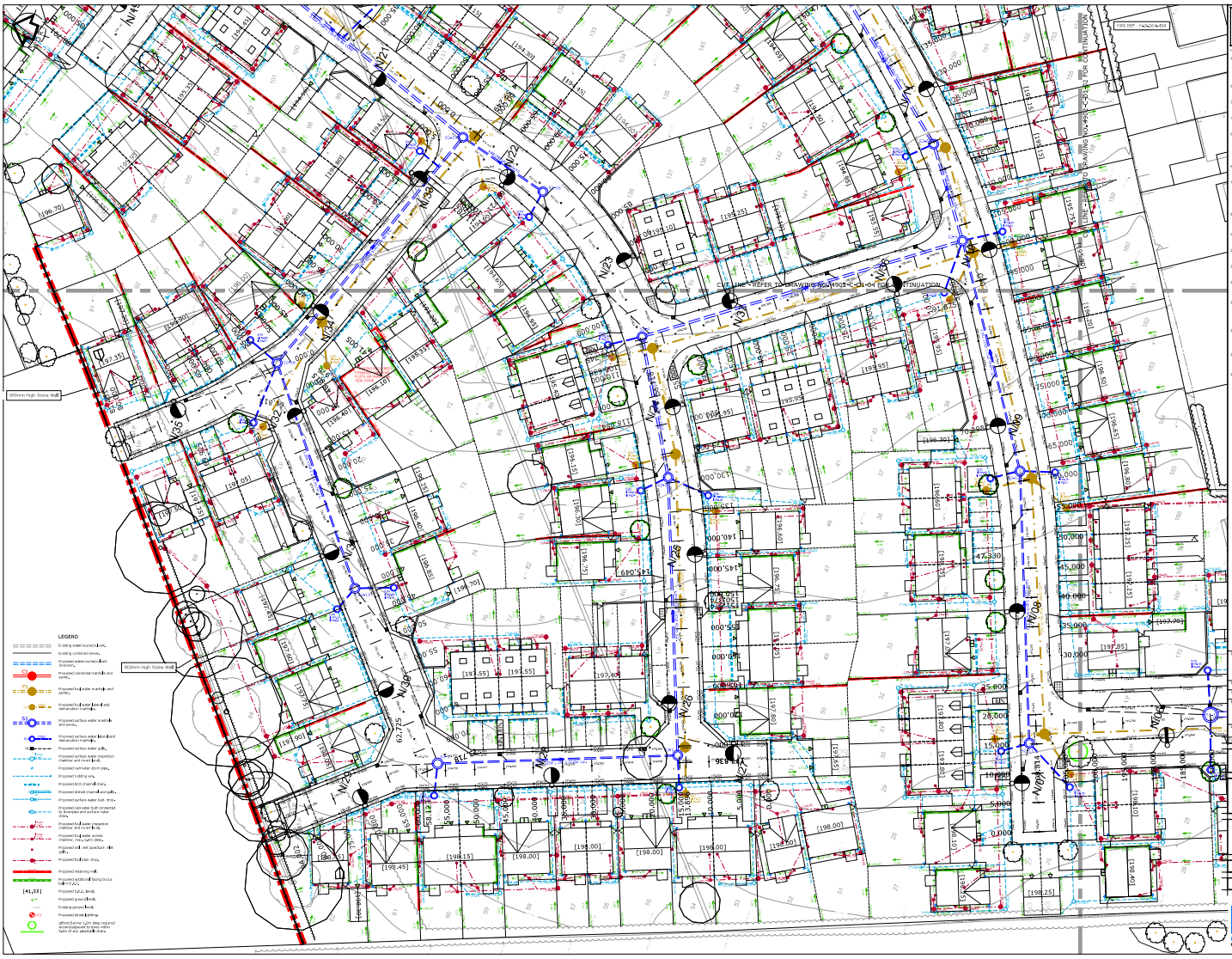
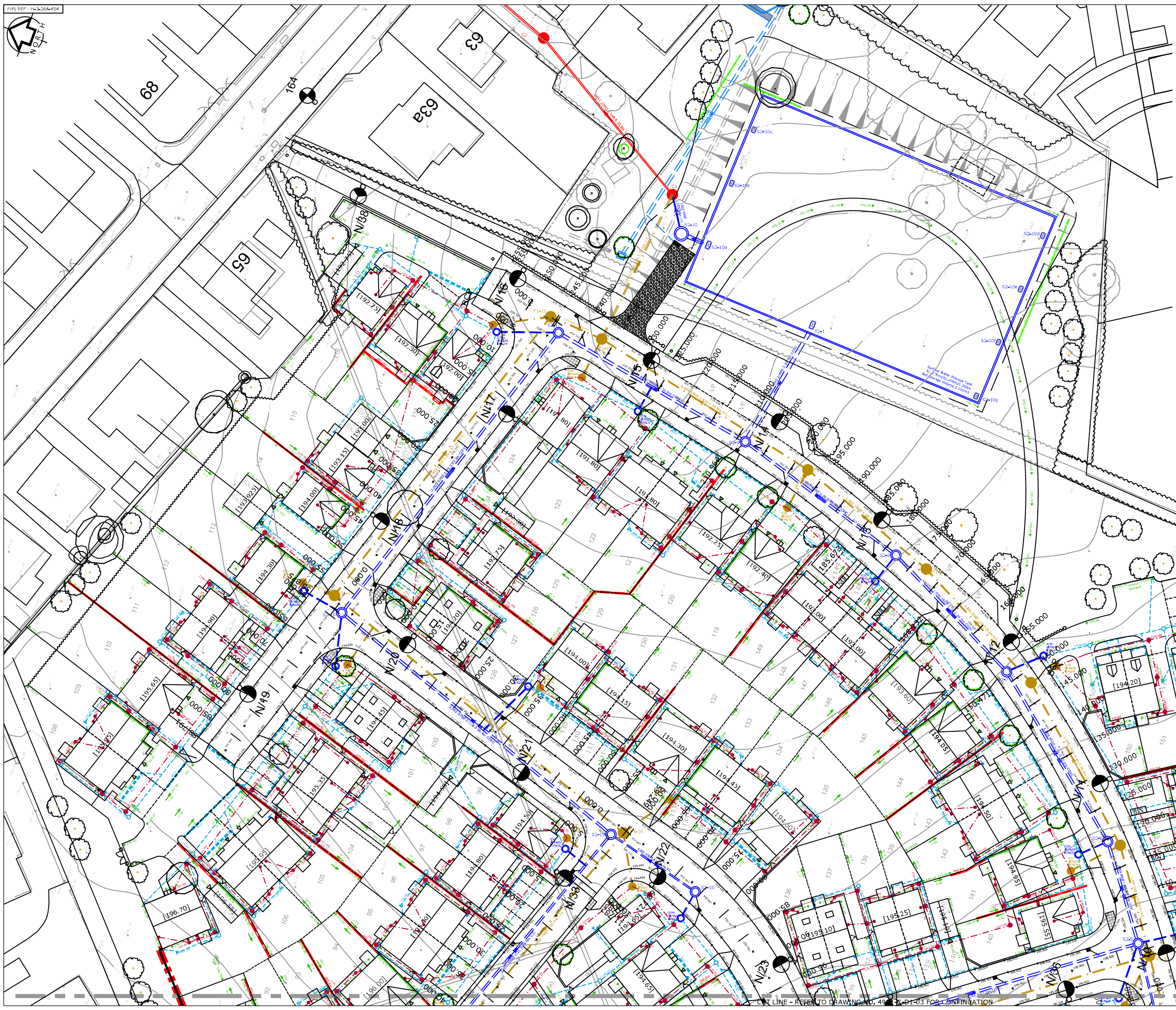

LEGEND
Existing watercourse/river.
Existing combined sewer.
Proposed watercourse/culvert diversion.
Proposed combined manhole and sump.
Proposed foul water manhole and sump.
Proposed foul water lined and demarcation manhole.
Proposed surface water manhole and sump.
Proposed surface water lined and demarcation manhole.
Proposed surface water pipe.
Proposed surface water inspection chamber and invert level.
Proposed rainwater down pipe.
Proposed rodding eye.
Proposed ACO channel drain.
Proposed drained channel and pipe.
Proposed surface water bed/ drain.
Proposed rainwater but connected to drainage and surface water drain.
Proposed foul water inspection chamber and invert level.
Proposed foul water access chamber (150x150 min).
Proposed soil vent pipe/such vide pipe.
Proposed foul drain.
Proposed retaining wall.
Proposed additional hatching in lined ponds.
[41,55] Proposed S/C/L level.
Proposed ground level.
Existing ground level.
Proposed road gradients.
gabion Barrier 1.2m deep required around/adjacent to keep within 5m of any adjacent drain.
900mm High Stone Wall
CUT LINE - REFER TO DRAWING NO.4902-C-D1-04 FOR CONTINUATION
Geo Structures Civils
ID Civils Design Consulting Engineers
Persimmon Homes West Yorkshire
Cumberworth Road, Skelmanthorpe
1:200 Engineering Layout Sheet 2 of 2
1:200 @ A0
02.03.20
4902-C-D1-03
E
Approval



LEGEND

- Existing watercourse/culvert.
- Existing combined sewer.
- Proposed watercourse/culvert diversion.
- C1 — Proposed combined manhole and sewer.
- F1 — Proposed foul water manhole and sewer.
- IC2 150Ø — Proposed foul water lateral and demarcation manhole.
- S1 — Proposed surface water manhole and sewer.
- IC1 150Ø — Proposed surface water lateral and demarcation manhole.
- RG — Proposed surface water gully.
- Proposed surface water inspection chamber and invert level.
- Proposed rainwater down pipe.
- Proposed rodding eye.
- Proposed ACO channel drain.
- Proposed dished channel and gully.
- Proposed surface water back drop.
- Proposed rainwater butt connected to downpipe and surface water drain.
- Proposed foul water inspection chamber and invert level.
- Proposed foul water access chamber, max. 0.6m deep.
- Proposed soil vent pipe/back inlet gully.
- Proposed foul back drop.
- Proposed retaining wall.
- Proposed additional facing bricks below D.P.C.
- [41.55] — Proposed D.P.C. level.
- Proposed ground level.
- Existing ground level.
- LC1 — Proposed street lighting.
- gtRoot Barrier 1.0m deep required around/adjacent to trees within 5.0m of any adoptable drain.

Health and Safety Notes/CDM Regulations 2015

In line with the above regulations we are obliged to inform the Contractor of the abnormal risks that may be encountered in the construction of these works. As part of the design process all the salient health & safety aspects are given full consideration and these are observed within the designs viewed on this document. Although considerable effort is undertaken to eliminate risks, the very nature of the project gives rise to some hazards and risks.

Significant risks that cannot be eliminated by design and could not be foreseen by a competent contractor are noted in the risk assessment boxes on the drawings.

NOTES

1. Manholes, sewers etc, and any other part of the works intended for adoption under a Section 104 Agreement or gullies etc. intended for adoption as Highway Drainage are to be constructed in accordance with the W.A.A specification "Sewers for Adoption" 6th Edition, and to any requirements of the Adopting Authority and the Local Council.
2. Unadopted FW and SW drainage is to be constructed in accordance with the Building Regulations Part H, BS EN 752:2017 and relevant Agreement Certificates.
3. All private drainage to be 100mmØ unless indicated otherwise. All connections from private to adoptable manholes/sewers to be 150mmØ(min).
4. Private drainage with less than 0.9m of cover in drives and car parking areas to have minimum 150mm concrete bed and surround.
5. Private Drains are to be constructed using flexibly-jointed vitrified clay pipes to BS. 65:1991 "Super Strength" specification and BS EN 295-1:2013 (e.g. Hepworth SuperSleeve or similar) or PVCu Building Drainage system pipe work to BS EN 1401-1, bedded and back filled in accordance with the manufacturers instructions and the specifications listed in Note 2.
6. Backfilling of drain trenches adjacent to dwellings or other structures to be in accordance with section 2.25 and diagrams 7 and 8 of the Building Regulations Part H.
7. Access fittings and inspection chambers less than 1m deep are to be clayware or pre-formed polypropylene as appropriate to the depth and number of connections. Chambers greater than 1.2m deep are to be of pre-cast concrete construction with 150mm in-situ concrete surround, or polypropylene reduced access system. Inspection chamber sizes are to be in accordance with Table 8 of BS.8301.
8. Cover levels indicated on the drawing are nominal and may be adjusted to suit finished ground levels as necessary. Private inspection chamber covers should be Grade B in areas accessible to wheeled vehicles and Grade C elsewhere.
9. Rainwater down pipes to be connected direct to drain using an appropriate adapter and removable section of down pipe to permit rodding access.
10. Where drains pass through foundations or other rigid structures, a lintel or sleeve is to be used and provision for flexibility is to be made with "rocker pipes".
11. The positions of SVPs, stub-stacks, W.C. outlets etc. and rainwater down pipes are to be accurately located from the house-type working drawings.
12. Gullies situated in areas accessible to wheeled vehicles are to be of suitable construction. For communal parking areas refer to the detail shown on iD Civils Design Ltd Highway Construction details drawing no. 4902-C-D3-01.
13. Drains within areas of "made ground" to be constructed by first making up the area to approx. finished level and then excavating through the fill material into undisturbed ground. The drain trench is then to be back filled to formation level using suitable granular fill material well-compacted in layers not exceeding 225mm.
14. Drains to be constructed under dwellings with suspended floor slabs should either be installed using a proprietary hanger system where "beam and pot" or similar construction is used, or should be cast into local slab thickening where reinforced concrete ground slabs are to be poured in-situ.
15. Finished ground levels have been prepared assuming that the level threshold to the building, is in accordance with part M of the building regulations, is at the front of the property unless otherwise stated.
16. For all details of fences/walls and enclosures refer to the architect for details.

Rev	Description	By	Date
F	Drawing title and general notes amended, cut lines added and root barriers added around/adjacent to trees within 5.0m of adoptable sewers and storage tanks following comments from Kirklees Council. Detached garage DPC levels amended to match external garage levels, i.e. 150mm below plot DPC level.	DL	20.10.21
E	Rear garden external works to plots 107, 114-116, 119-121, 125-126, 129-139, 142-149 & 150-151 amended.	DL	25.08.21
D	Road gully locations amended and new road gullies added.	DL	20.08.20
C	Surface water storage tank size amended and IC29 relocated to improve manhole F1.7 entry angle following YW comments and private foul drainage amended accordingly.	DL	14.08.20
B	Drawing updated to reflect S104 comment amendments. Storage tank location and cover levels amended. Flag on edge replaced with retaining wall where required. Plot 99 garage lifted to remove tanking. Aco channels added to end of shared drives 105 to 109.	DL	05.05.20
A	Adoptable foul drainage gradients updated between manholes F1-1 and C1 for completeness.	DL	10.03.20

Client:

Persimmon Homes West Yorkshire

Project Title:

Cumberworth Road, Skelmanthorpe

Drawing Title:

1:200 Engineering Layout Sheet 3 of 3

Scale	Date	
1:200 @ A0	02.03.20	
Drawing No	**Revision**	**Status**
4902-C-D1-04	F	Approval

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ATTACHMENT B

PHOTOGRAPHS

SITE PHOTOGRAPHS - REMEDIATION VERIFICATION

Photo indicating stockpiled arsenic impacted topsoil, awaiting relocation.

Photo indicating placement of arsenic impacted topsoil within area of proposed public open space (located within eastern site area)