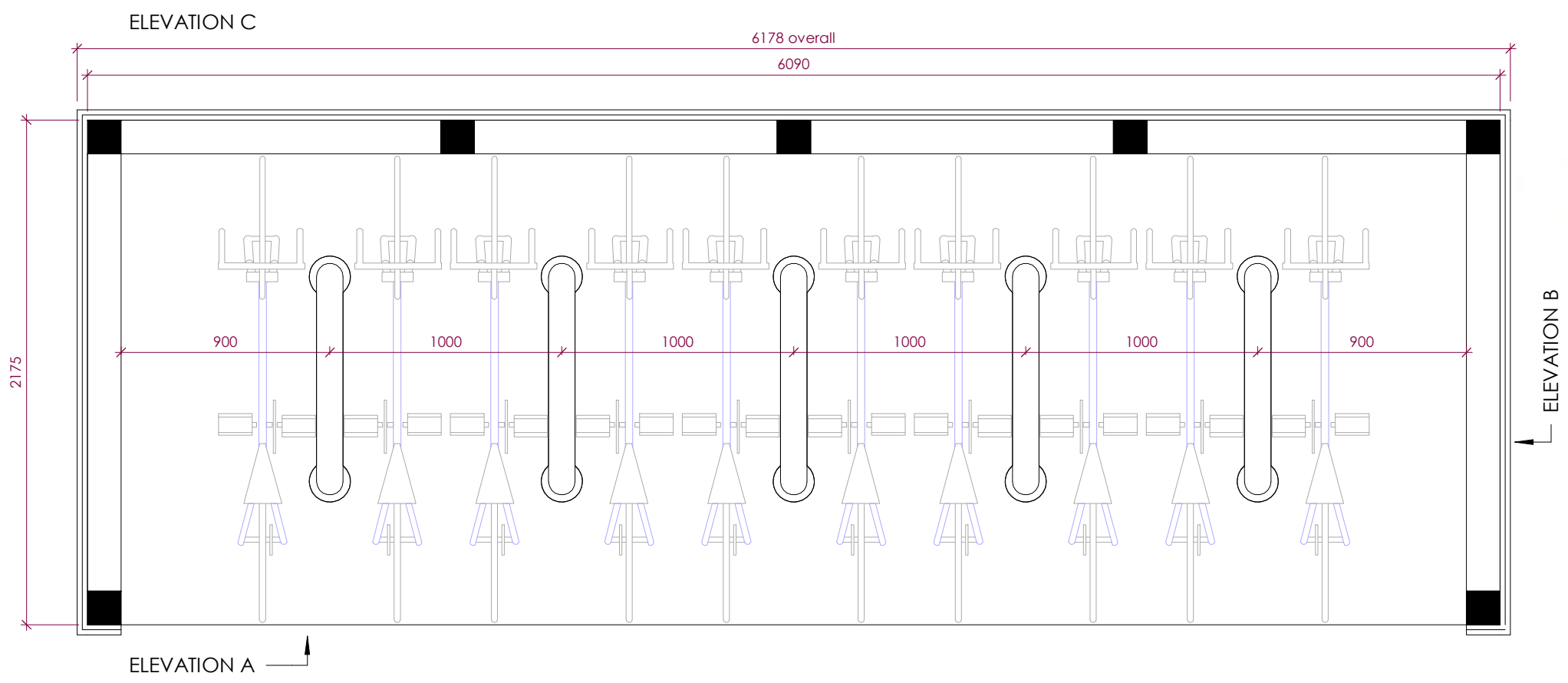
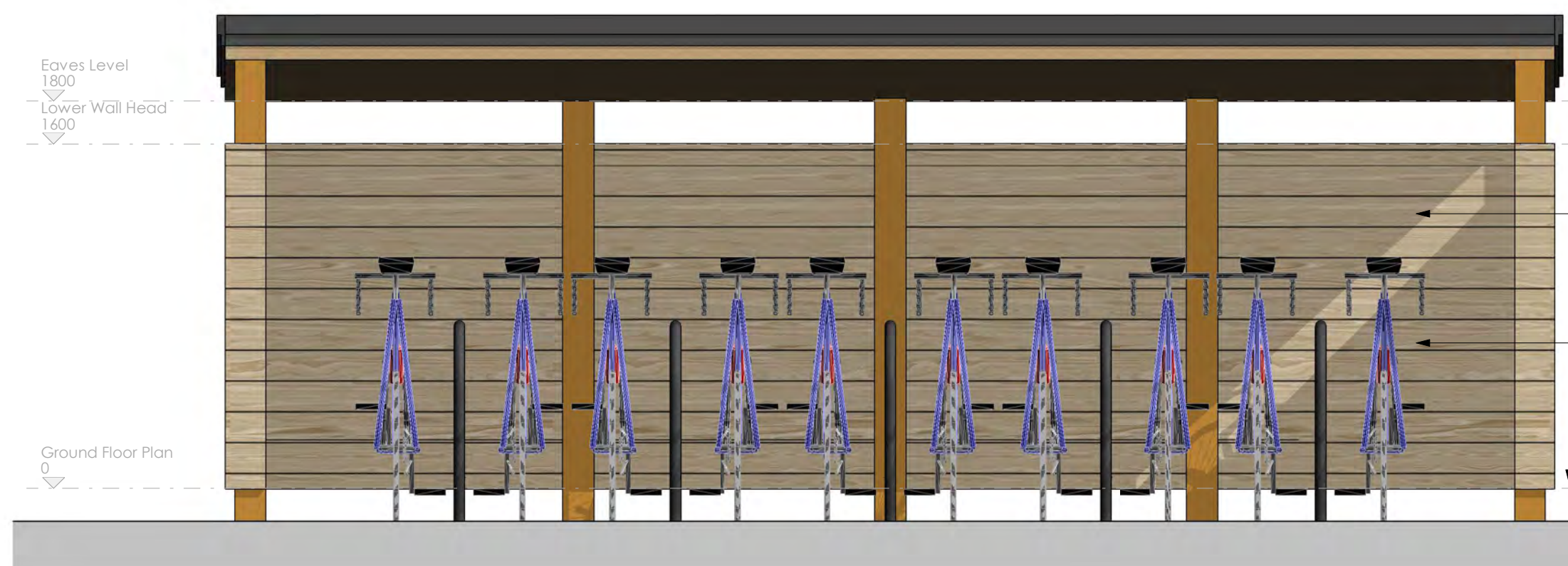




Ground Floor Plan
Scale - 1 : 25

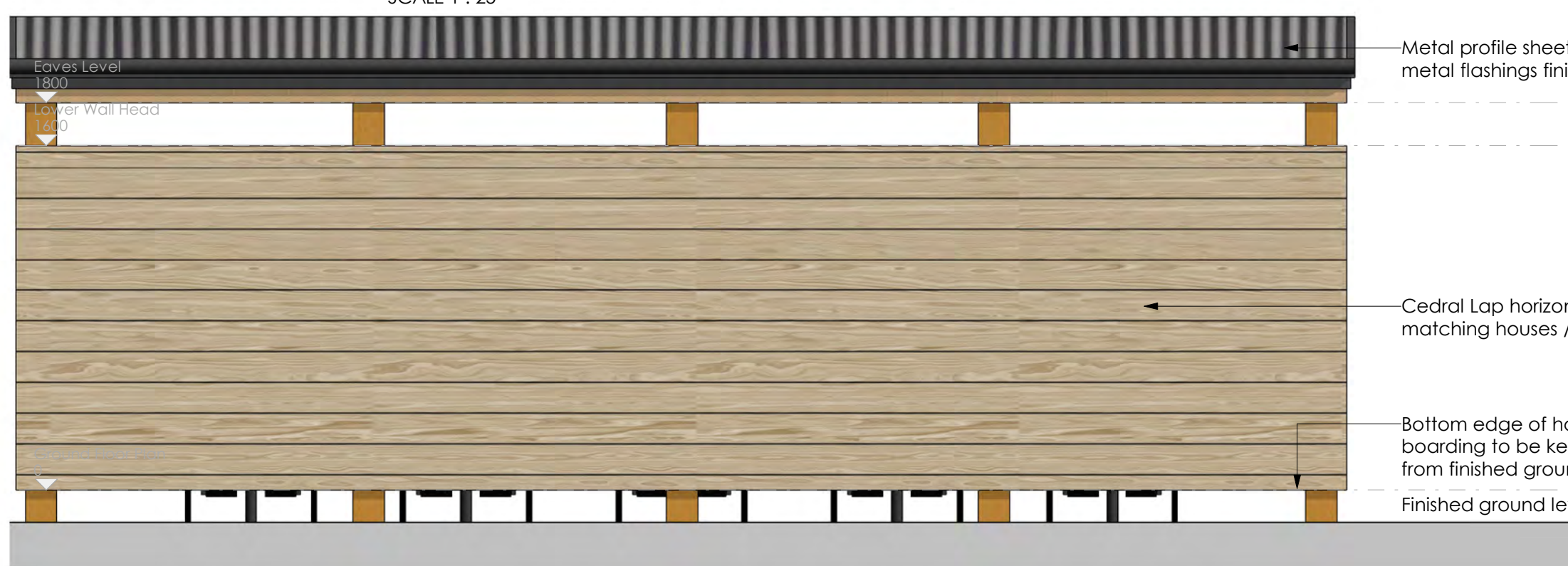


3D View 01
Scale -

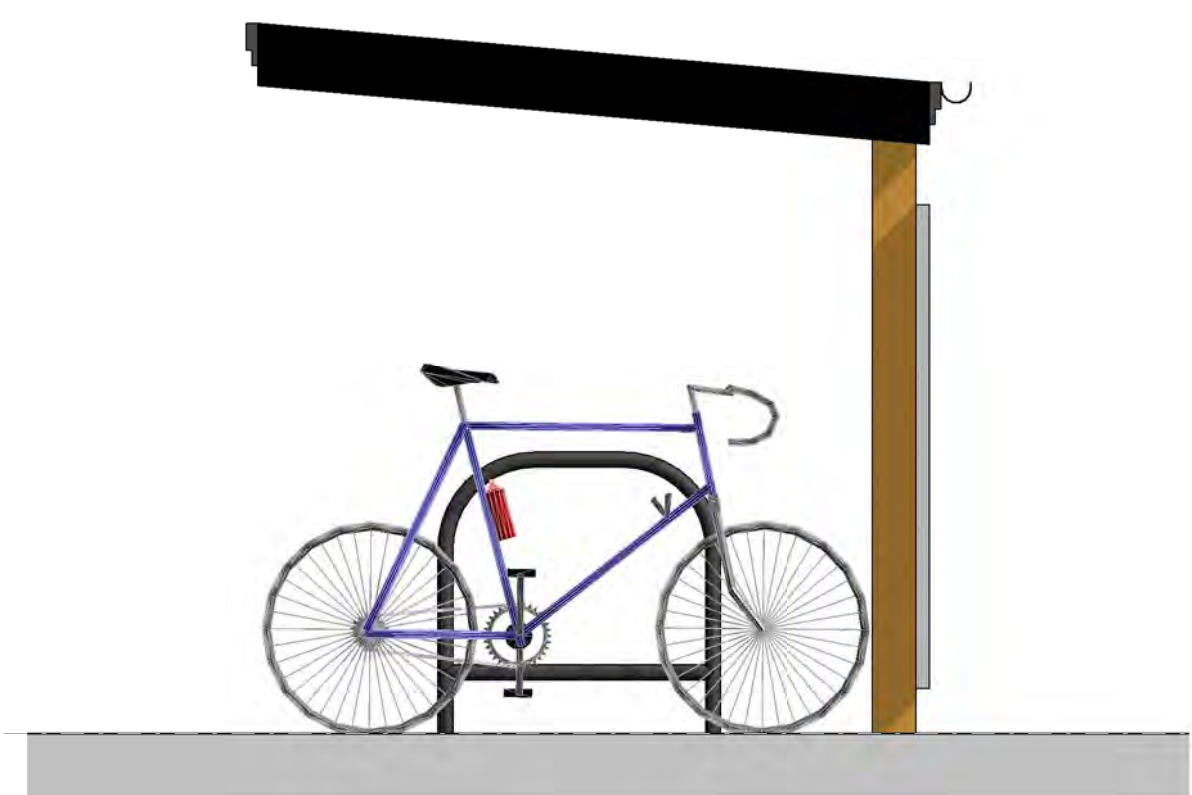


Elevation A
Scale - 1 : 25

- ← Metal profile sheet roofing with metal flashings finished dark grey
- ← Cedar Lap horizontal cladding matching houses / flats
- ← 4no. Metal hoop cycle stands providing 8no. cycle parking spaces
- ← Bottom edge of horizontal cladding boarding to be kept nominal 150mm from finished ground level
- ← Finished ground level



Elevation C
Scale - 1 : 25



Elevation B
Scale - 1 : 25

Figured dimensions only are to be taken from this drawing.
All dimensions are to be checked on site before any work is put in hand.
IF IN DOUBT ASK.

CDM:
Hazard Elimination & Risk Reduction has been undertaken and recorded where appropriate, in accordance with the requirements of "The Construction (Design and Management) Regulations 2015" and the associated "Industry Guidance for Designers"

Rev	Description	Date
01	Original - First Issue	-



Lyle House, Fairways Business Park,
Inverness IV2 6AA

T : 01463 712 288
W : www.colinarmstrong.com



Client	The Highland Council
Project	House Development Cromlet Park Invergordon
Project No.	2186
Drawing No.	DIHD23035_CO017_ZZ_00_DR_A_9010
Revision	01
EXTERNAL WORKS	Communal Bike Stores
Status	A - ISSUED FOR PLANNING
Date Created	Nov. '23
Drawn by	WM
Scale	1 : 25
Sheet	@ A2

From file : X:\Documents\2186 - Phase 2 Cromlet\02. WORK IN PROGRESS\2.1 BIM Models\2186_CAA_BIKE STORE_RTD_2020.rvt
Printed on : 07/12/2023 14:39:00

WATER MAIN NOTE

- ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITION OF WATER FOR SCOTLAND PUBLISHED BY WRC PLC.
- ALL SERVICE PIPES TO HAVE 750mm MINIMUM COVER AND MAXIMUM 1350mm COVER TO GROUND LEVEL.
- ALL WATER MAINS TO HAVE 900mm MINIMUM COVER TO THE CROWN OF THE PIPE AND NOT MORE THAN 1350mm COVER TO GROUND LEVEL, UNLESS OTHERWISE AGREED WITH SCOTTISH WATER.
- ALL BEDDING AND BACK-FILLING MUST BE DONE WITH CERTIFIED INERT MATERIAL FROM OFF SITE.
- ALL BARRIER PIPE JOINTS ARE TO BE PROPRIETARY MECHANICAL (FLUID) COMPRESSION JOINT FITTINGS AS APPROVED BY SCOTTISH WATER.
- ALL HPPE JOINTS ARE TO BE BUTT FUSED.
- PRESSURE TESTING OF THE PROPOSED WATER MAINS TO BE UNDERTAKEN AS PER THE PIPE MANUFACTURER'S TESTING PROCEDURES.
- THE DEVELOPER WILL REQUIRE TO CHLORINATE THE NEW MAIN IN ACCORDANCE WITH THE WATER BYELAWS. A SAMPLE SHOULD BE TAKEN AND ANALYSED BY AN ACCREDITED LABORATORY, WITH THE RESULTS CERTIFICATE BEING PASSED TO SCOTTISH WATER.
- ALL WORKS CARRIED OUT BY THE DEVELOPER WILL NEED TO BE INSPECTED BY SCOTTISH WATER TO ENSURE COMPLIANCE WITH THE WATER BYELAWS (TRACK AND BYELAWS INSPECTIONS).
- ALL BURIED MAINS ARE TO BE INSTALLED WITH PE100 (HPPE) PIPE MATERIAL.
- MAINS TO BE POSITIONED RELATIVE TO OTHER UTILITIES IN ACCORDANCE WITH APPENDIX G OF WATER FOR SCOTLAND UNLESS OTHERWISE NOTED.
- CONSTRUCTION DETAILS TO BE IN ACCORDANCE WITH APPENDIX H OF WATER FOR SCOTLAND UNLESS OTHERWISE NOTED.
- MAIN LAYING NEAR TO TREES AND TREE PLANTING ADJACENT TO MAINS TO BE INSTALLED IN ACCORDANCE WITH SECTION 2.3.10 OF WATER FOR SCOTLAND.
- ALL SLUICE VALVES TO CLOSE IN ACCORDANCE WITH SCOTTISH WATERS LOCAL POLICY AGREEMENT.
- ALL LEVELS RELATED TO ORDNANCE DATUM.
- ALL PLOTS TO BE PROVIDED WITH A SINGLE 25mm Ø CONNECTION UNLESS OTHERWISE NOTED. WORK TO BE CARRIED OUT BY THE S.L.O. UNITS WITH 5 No. OR MORE BEDROOMS TO BE PROVIDED WITH A SINGLE 32mm Ø CONNECTION.
- THE MINIMUM DISTANCE BETWEEN SERVICE CONNECTIONS ON THE WATER MAIN SHALL BE 450mm AND BE INSTALLED FROM THE WATER MAIN AT 90 DEGREES.
- ALL SERVICE PIPES INSTALLED UNDER DRIVEWAYS TO BE OF BARRIER PIPE MATERIAL.
- ALL WATER MAIN PIPEWORK TO BE 10 BAR SDR17 PRESSURE RATING.
- EXCEPT WHERE SELF ANCHORING JOINTS ARE USED, THRUSTS FROM BENDS AND BRANCHES SHALL BE RESISTED BY CONCRETE THRUST BLOCKS CAST IN CONTACT WITH UNDISTURBED GROUND.
- ANCHORAGE IS REQUIRED AT BRANCHES, BENDS, DEAD ENDS, END FIRE HYDRANT'S OR WASH OUT HYDRANTS, EVEN IF TEMPORARY.
- ALL BARRIER PIPE TO BE IN ACCORDANCE WITH APPENDIX M OF WATER FOR SCOTLAND UNLESS NOTED OTHERWISE.
- ALL MAINS TO BE DESIGNED AND LAID TO BE IN ACCORDANCE WITHIN APPENDIX N OF WATER FOR SCOTLAND UNLESS NOTED OTHERWISE.
- ALL BACKFILL AND BEDDING AS PER STANDARD DETAILS AND TO BE IN ACCORDANCE WITH APPENDIX O OF WATER FOR SCOTLAND UNLESS NOTED OTHERWISE.
- FOR FLATS AND MULTIPLE OCCUPANCY PREMISES, MANIFOLD CONNECTIONS ARE PERMITTED WITH A MAXIMUM OF 3 CONNECTIONS FROM A 32mm CONNECTION.
- ALL JOINTING OF PIPES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF SWIS SPECIFICATION 404 AND AS PER THE JOINTING PROCEDURE IN APPENDIX P FOR ELECTROFUSION AND THE JOINTING METHODS AS DESCRIBED IN PART 3 OF THIS SPECIFICATION AND THE MANUFACTURER'S RECOMMENDATIONS. SCOTTISH WATER MAY ISSUE A PREFERRED LIST OF MATERIALS AND SIZES. THIS SHALL ENSURE COMPATIBILITY WITH MATERIALS CURRENTLY USED AND ALLOW SCOTTISH WATER TO MINIMISE STOCKS HELD FOR MAINTENANCE PURPOSES.
- ALL PIPE WORK GREATER THAN 32mm TO BE DESIGNED BY AND CONSTRUCTED BY WIRES ACCREDITED COMPANIES.
- ALL FIRE MAINS MUST BE INSTALLED WITH RED FIRE MARKER TAPE WRAPPED AROUND THE PIPE ALONG THE ENTIRE LENGTH OF THE LAID MAIN AS PER APPENDIX O OF WATER FOR SCOTLAND UNLESS NOTED OTHERWISE.
- CONTRACTORS SHOULD BEFORE COMMENCING ON THE CONSTRUCTION OF THE WORKS, WRITTEN AGREEMENT TO THE PROPOSED DESIGN WILL BE REQUIRED FROM SCOTTISH WATER AND A PRESTART MEETING ARRANGED TO CONFIRM SPECIFICATION COMPLIANCE AND INFORM OF ANY PHASING/TIMESCALE OF THE CONSTRUCTION AS DETAILED IN APPENDIX Q.
- BOUNDARY BOX'S SHALL BE INSTALLED IN THE FOOTWAY OR SERVICE STRIP WITHIN 750MM FROM THE PROPERTY BOUNDARY AND, WHERE POSSIBLE, SITED TO AVOID VEHICLE CROSSING POINTS.
- BOUNDARY BOX TUBES AND COVERS TO BE INSTALLED AS PER BS 5834.
- FOR THE PURPOSES OF METERED CONNECTIONS, SCOTTISH WATER SHALL STATE THEIR PREFERRED METERING OPTIONS INCLUDING METER TYPE AND SIZE.
- PRESSURE TESTING OF ALL MAINS IS TO ENSURE THE STRUCTURAL INTEGRITY OF THE CONSTRUCTED ASSET, AND MINIMISE ANY FUTURE LEAKAGE. PRESSURE TESTING IS COMPLETED TO PROVIDE SW WITH THE ASSURANCE THAT THE VESTED ASSET WILL HAVE THE REQUISITE LIFE SPAN BEFORE ANY SW INTERVENTION IS REQUIRED. PRESSURE TESTING SHALL BE COMPLETED AND THE ASSOCIATED REPORTING SHALL BE IN ACCORDANCE WITH SECTION 3.5 AND IN ACCORDANCE WITH APPENDIX R OF WATER FOR SCOTLAND UNLESS NOTED OTHERWISE.

NOTE

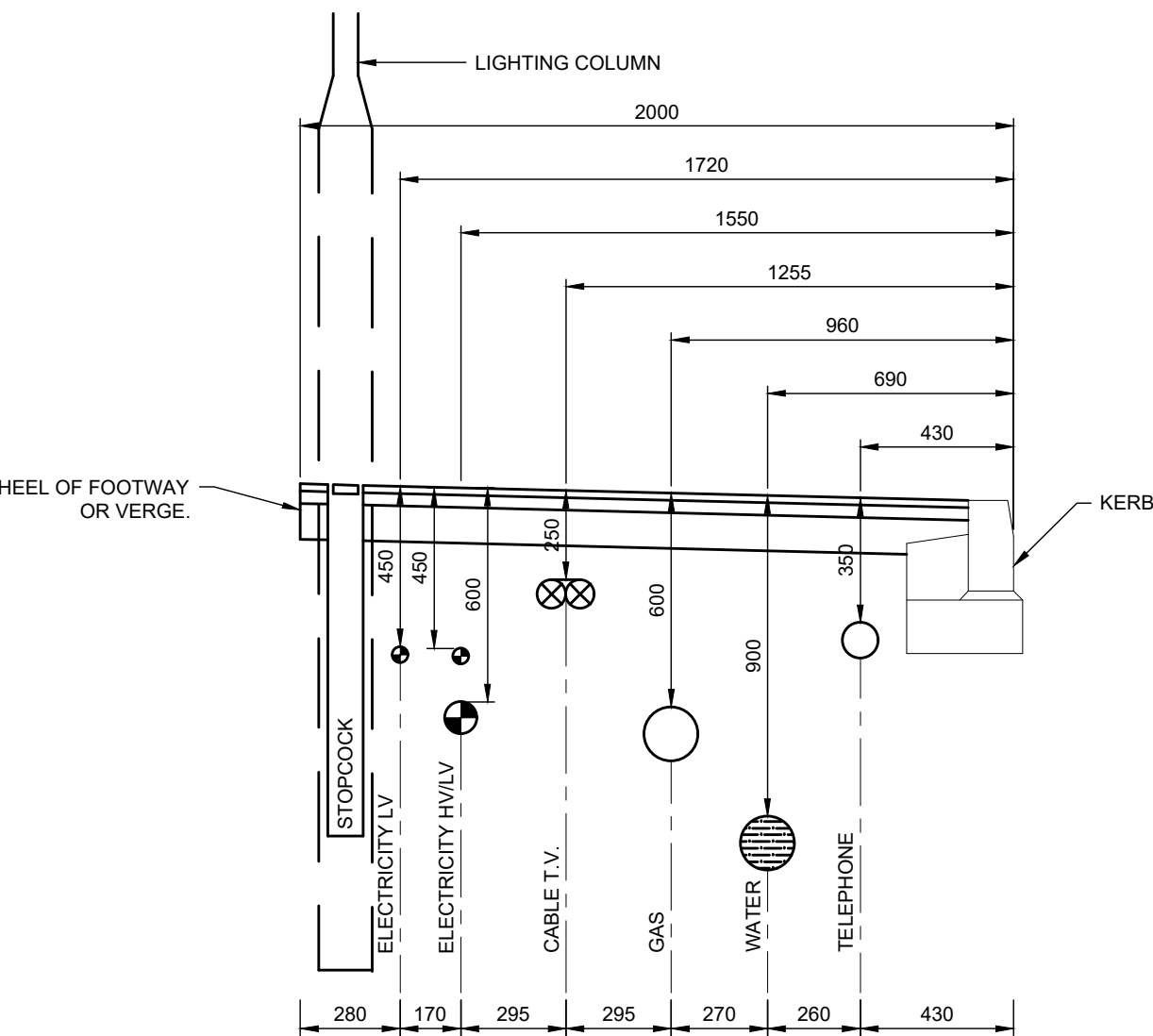
PLEASE NOTE THIS DRAWING IS SUBJECT TO SCOTTISH WATER TECHNICAL APPROVAL.

NOTE

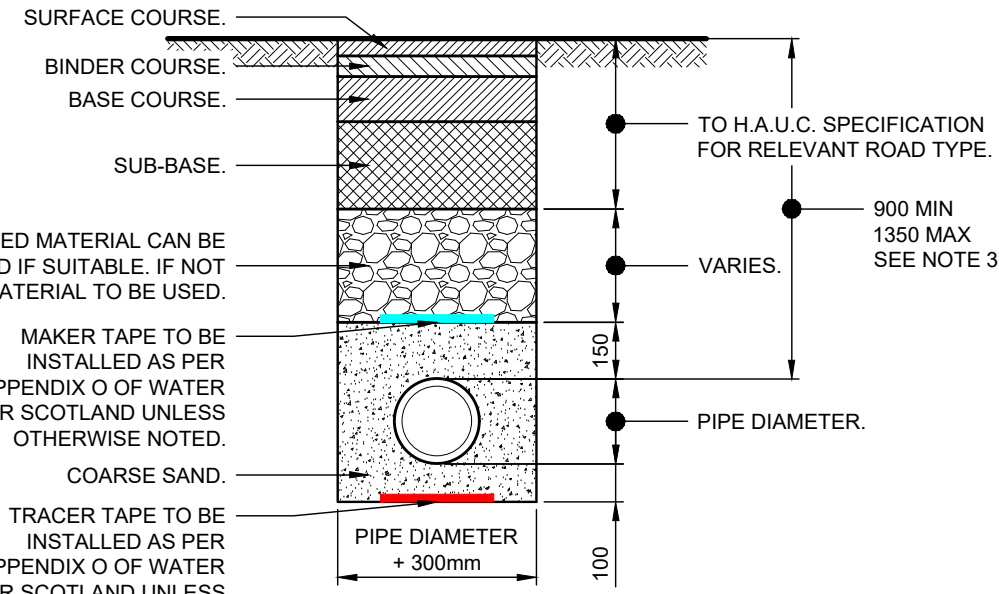
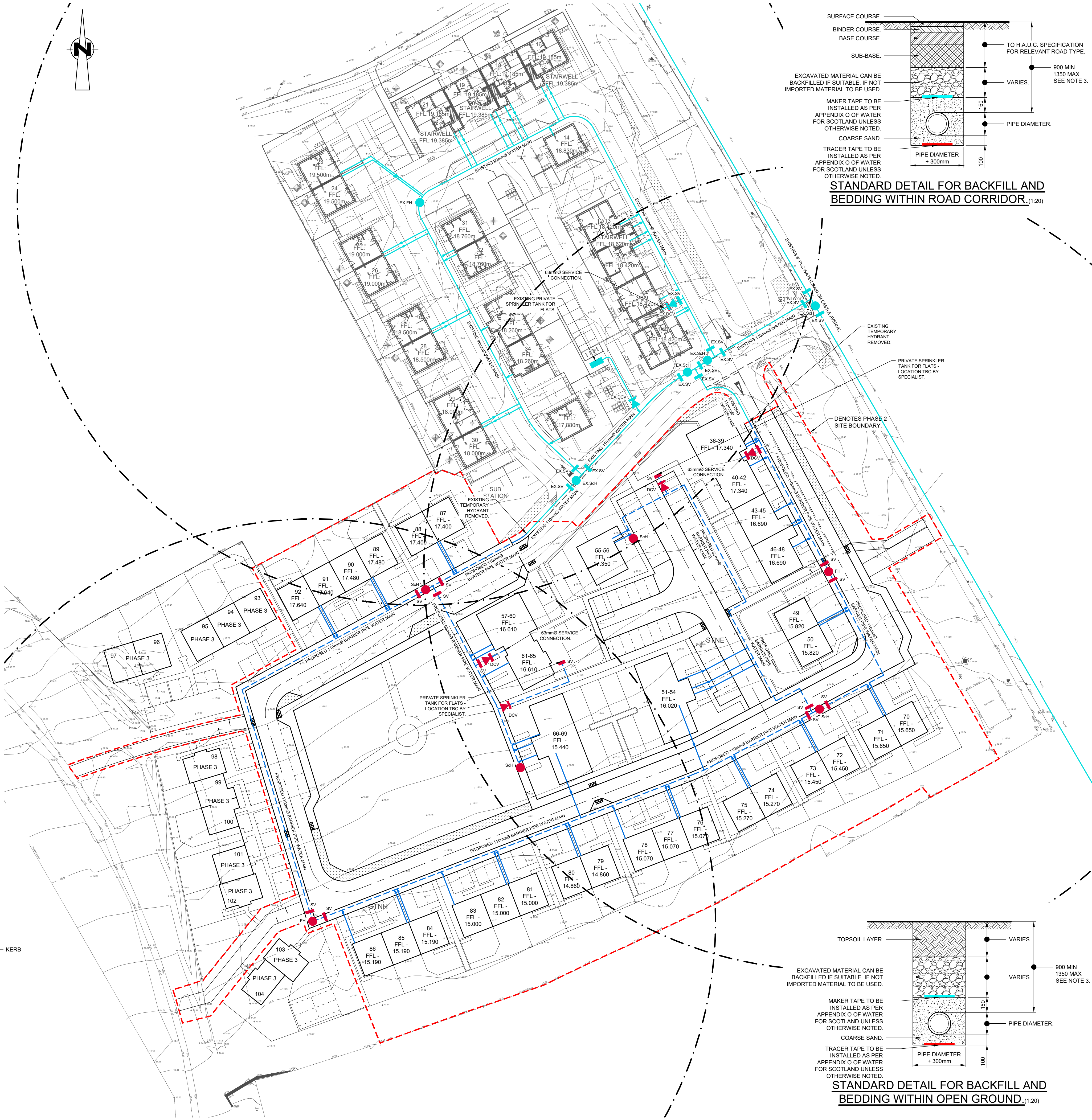
PRESSURE TESTING TO BE CARRIED OUT PRIOR TO ON-SITE CONSTRUCTION IN ACCORDANCE WITH THE WATER BYELAWS.

NOTE

90 DEGREE BENDS TO BE AVOIDED ON THE WATER MAIN, WHERE POSSIBLE. 45 DEGREE BENDS TO BE USED INSTEAD.



TYPICAL LOCATION OF SERVICES IN FOOTWAY. (1:20)



STANDARD DETAIL FOR BACKFILL AND BEDDING WITHIN ROAD CORRIDOR. (1:20)



STANDARD DETAIL FOR BACKFILL AND BEDDING WITHIN OPEN GROUND. (1:20)

WATER MAIN LEGEND

- DENOTES EXISTING WATER MAIN.
- FH DENOTES EXISTING HYDRANT.
- SV DENOTES EXISTING CONTROL VALVE.
- DENOTES EXISTING CAPPED END.
- DENOTES PROPOSED WATER MAIN.
- FH DENOTES FIRE HYDRANT.
- SCH DENOTES SCOUR HYDRANT.
- SV DENOTES CONTROL VALVE.
- DCV DENOTES DOUBLE CHECK VALVE.
- DENOTES PROPOSED STOPCOCK.
- M DENOTES WATER METER.
- DENOTES DUCTING.

WATER MAIN MATERIAL LIST

ITEM	LENGTH	No.
110mm OD BARRIER PIPE WATER MAIN	367 m	N/A
63mm OD BARRIER PIPE WATER MAIN	165 m	N/A
FIRE HYDRANT (FH)	N/A	2No.
SCOUR HYDRANT (Sch)	N/A	4No.
DOUBLE CHECK VALVE (DCV)	N/A	4No.
SLUICE VALVES (SV)	N/A	14No.
STOPCOCKS	N/A	44No.

NOTE

32mmØ SERVICE PIPES REQUIRED AS EACH PROPERTY WILL HAVE A INTERNAL SPRINKLER SYSTEM AS REQUIRED BY THE HIGHLAND COUNCIL.

NOTE

FOR PROPOSED WATER MAIN DEED & SERVITUDE PLEASE REFER TO R&C DRAWING C4933/181.

NOTE

SITE LAYOUT BASED ON COLIN ARMSTRONG ARCHITECTS DRAWING "PROPOSED SITE PLAN" RECEIVED ON 19.03.2025.

NOTE

TOPOGRAPHICAL SURVEY BASED ON (PROPERTY AND LAND SURVEYS) PROJECT '1102201'. DATE RECEIVED 11.10.2022.

NOT FOR CONSTRUCTION

GENERAL NOTES:-

- GROUND CONDITIONS VARY ON SITE.
 - EXISTING BUILDINGS VARY ON SITE.
 - DIMENSIONS OR LEVELS SHOWN ARE CHANGED BY ANYONE ON SITE.
 - COMPLETE OR PARTIALLY COMPLETE STRUCTURES ARE TO BE SUBJECT TO CONSTRUCTION LOADING OR AFFECTED BY TEMPORARY WORKS.
- DO NOT SCALE - IF IN DOUBT, ASK.
- LARGE SCALE DETAILS TAKE PRECEDENCE OVER SMALL SCALE DETAILS.
- ALL MATERIALS ARE TO BE USED STRICTLY IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS INVOLVED IN CHANGES OR MODIFICATIONS REQUESTED AND APPROVED, TO SUIT HIS PREFERRED WORK METHOD.
- ALL NECESSARY METHOD STATEMENTS MUST BE PROVIDED PRIOR TO COMMENCEMENT OF ASSOCIATED SITE OPERATIONS.
- THIS DRAWING SHOULD ONLY BE USED FOR CONSTRUCTION PURPOSES WHEN THE ISSUE STATUS IS 'FOR CONSTRUCTION'.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
- ALL LEVELS ARE IN METERS UNLESS OTHERWISE STATED.

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Rev.	By	App.	Description	Date
E	MJD	-	PARKING AND FOOTWAYS REVISED BASED ON COMMENTS.	19.03.2025
D	NJH	MJD	GENERAL UPDATE.	27.02.2025
C	NJH	MJD	UPDATED PER SCOTTISH WATER COMMENTS.	25.02.2025
B	NJH	MJD	ADDITIONAL SPRINKLER TANK CONNECTION ADDED.	22.11.2024
A	NJH	MJD	INITIAL ISSUE.	03.10.2024

Project

PHASE 2, CROMLET PARK, INVERGORDON.

Drawing Title

PROPOSED WATER MAIN LAYOUT

Architect

COLIN ARMSTRONG ARCHITECTS

Drawing ID

XXX-RAC-ZZ-XX-DR-C-0180-E

Job No.

C4933

Scale

1:500 - A1
1:1000 - A3

Issue Status

FOR PLANNING

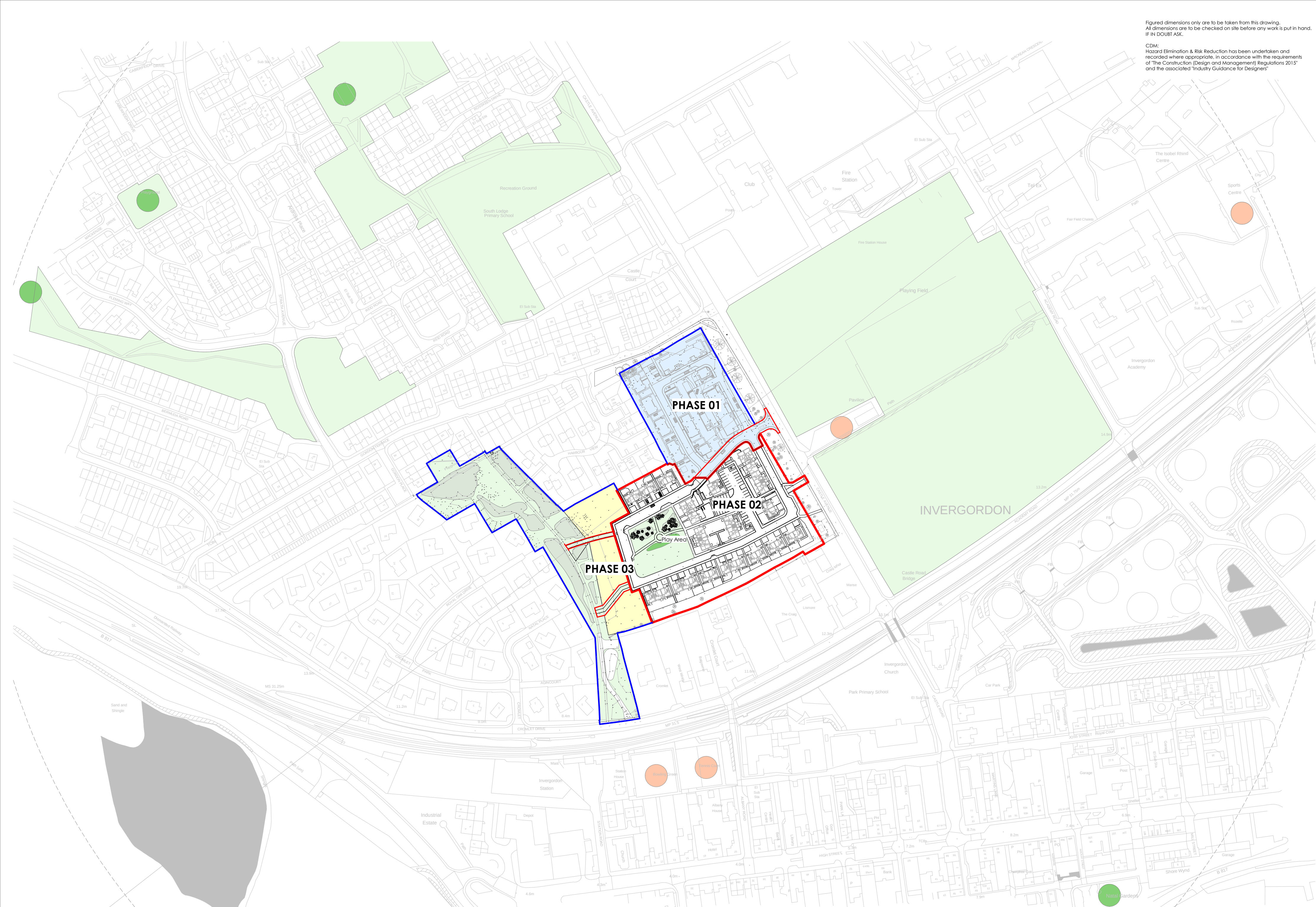
Ramsay & Chalmers

Consulting Structural & Civil Engineers

Chattan Mews Offices, 18 Chattan Place, Aberdeen, AB10 6RD
01224 560700
www.ramsaychalmers.co.uk

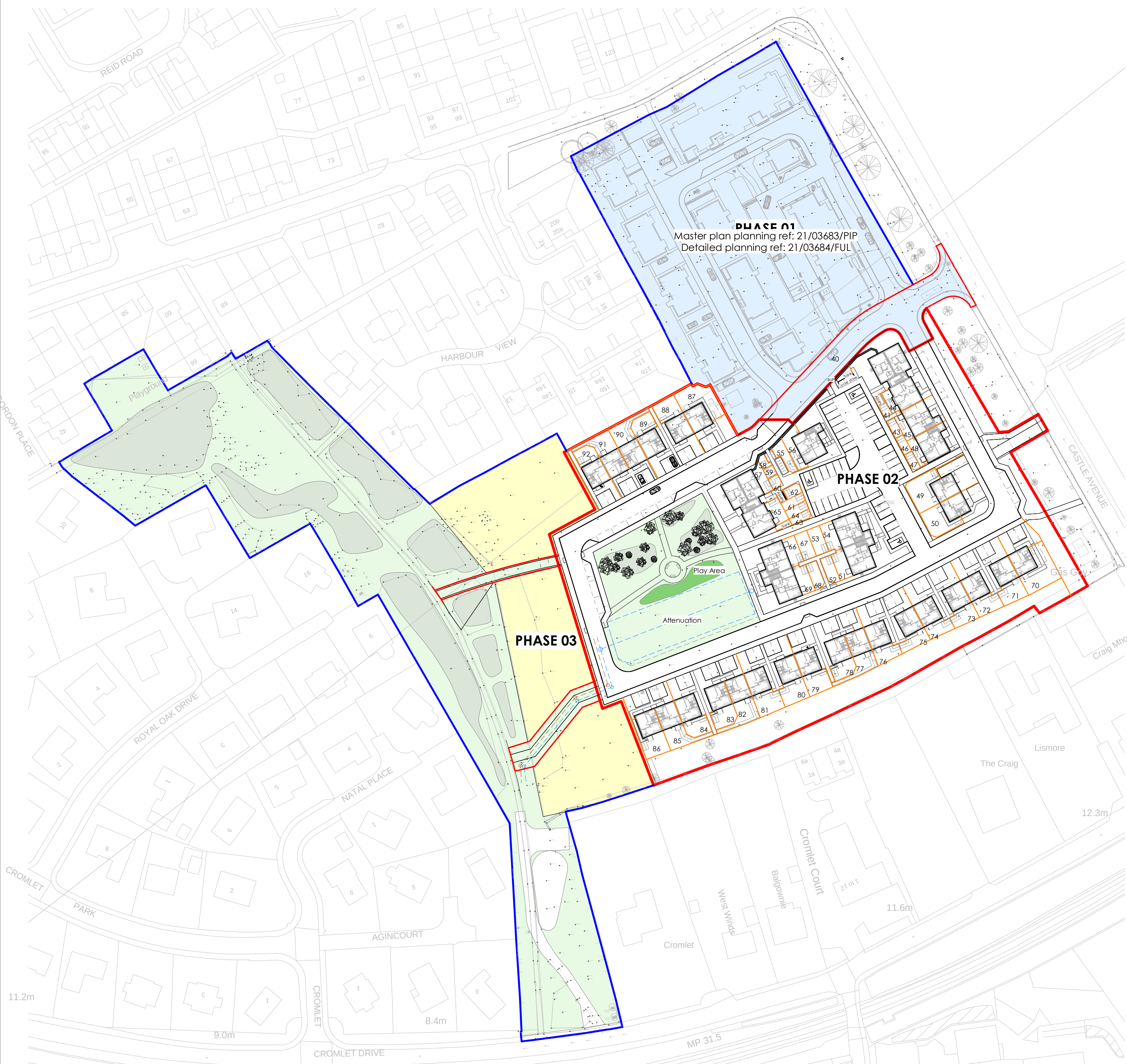
Figured dimensions only are to be taken from this drawing.
All dimensions are to be checked on site before any work is put in hand.
IF IN DOUBT ASK.

CDM: Hazard Elimination & Risk Reduction has been undertaken and recorded where appropriate, in accordance with the requirements of 'The Construction (Design and Management) Regulations 2015' and the associated 'Industry Guidance for Designers'



Greenspace in Proximity to Development

Scale - 1 : 2000



Greenspace within Proposed Development

Scale - 1 : 1000



Play Equipment - Kompan Agility Trail 6

Statement on Greenspace Provision – Phase 02 Housing, Cromlet, Invergordon

The proposed development at Phase 02 Housing, Cromlet, Invergordon includes a well-considered and generous approach to public open space, guided by the Highland Council's Open Space in New Residential Developments: Supplementary Guidance.

Greenspace Area Standards

Based on 57 residential units and an estimated occupancy of 2.3 persons per dwelling (approximately 132 residents), the calculated minimum public open space requirement is 2,112 m², comprising:

6 m² per person for Amenity Greenspace

5 m² per person for Play Space

5 m² per person for Parks and Gardens

Greenspace Area Provision

The development provides in excess of 13,000 m² of greenspace, significantly exceeding this requirement.

Provision includes:

A central landscaped green space of approximately 2,300 m², forming a key focal point in the layout. This space includes: Informal grassed areas, tree and shrub planting, seating and benches.

A dedicated play area featuring the Kompan Agility Trail 6, a robust timber trim trail promoting active, physical, and imaginative play for a variety of age groups

Additional amenity greenspaces integrated throughout the site, supporting informal recreation, visual amenity, and community use

Retention and incorporation of the adjacent core path 'Black Path', contributing to connectivity, active travel, and recreational value as part of the wider greenspace strategy

Peripheral planted and landscaped margins, enhancing biodiversity, enclosure, and amenity

All homes are located within:

300 metres of amenity greenspace, and

600 metres of the proposed play provision,

complying with the accessibility standards outlined in the guidance.

Timescale

All greenspace and play areas will be delivered during the course of construction and will be fully completed prior to the first occupation of any residential unit.

Note

Refer Greenspace in Proximity to Development plan above highlighting existing green spaces, play areas, and recreational facilities within 600 metres of the site, demonstrating the site's strong relationship with the wider recreational network available in Invergordon.

- Phase 01 housing development
- Phase 03 housing development
- Multi purpose green space provision
- Tree grouping existing & proposed
- Play equipment spaces
- Sports facilities provision

Rev	Description	Date
01	Original - First Issue	



Lyle House, Fairways Business Park,
Inverness IV2 6AA

T : 01463 712 288
W : www.colinarmstrong.com



Client
The Highland Council

Project
Housing Development - Phase 02
Cromlet Park
Invergordon

Project No. 2186

Drawing No.
DH23035_C0017_ZZ_00_DR_A_0204

Revision 01

Green Space Provision

Status	PLANNING
Date Created	13/05/25
Scale	As indicated
Drawn by	WM
Sheet	@ A1

Primary School

South Lodge
Primary School

Castle
Court

To South Lodge
Primary School

PHASE 01
(APPROACHING COMPLETION)

Master plan planning ref: 21/03683/PIP
Detailed planning ref: 21/03684/FUL

PHASE 02
(PROPOSED)

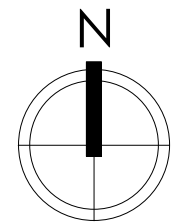
Path link to core path3
RC23.05 - Black Path

To Park Primary
School &
Invergordon
Academy

Invergordon
Academy

INVERGORDON

Park Primary School
(Demolished at Time of
Drawing Preparation)



0 20 40 60m
Scale 1:1000

Rev	Description	Date
02	Revised for THC Road Team Comments	26/09/24
01	Original - First Issue	



COLIN ARMSTRONG
ARCHITECTS

Lyle House, Fairways Business Park,
Inverness IV2 6AA

T : 01463 712 288
W : www.colinarmstrong.com



Client
The Highland Council

Project
Housing Development - Phase 02
Cromlet Park
Invergordon

Project No. 2186

DIHD23035_C0017_ZZ_00_DR_A_0203

Revision 02

Proposed Safe Routes to School

Status
S2 - PLANNING

Date Created
16/07/24

Scale
1 : 1000

Drawn by
WM

Sheet
@ A1

GENERAL

- RAMSAY AND CHALMERS' DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ARCHITECTS AND SERVICES ENGINEERS DRAWINGS AND THE SPECIFICATION.
- THE DRAWINGS SHOW THE DESIGN INTENTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE DETAILED SETTING OUT DIMENSIONS AND LEVELS FROM THE ARCHITECTS DRAWINGS.
- CONTRACTOR TO VERIFY SITE DIMENSIONS, LEVELS AND DETAILS OF EXISTING SERVICES PRIOR TO PHYSICAL SITE START.
- THE CONTRACTOR MUST CONSULT THE ENGINEER IMMEDIATELY IF:
GROUND CONDITIONS VARY ON SITE.
EXISTING BUILDINGS VARY ON SITE.
DIMENSIONS AND LEVELS SHOWN ARE CHANGED BY ANYONE ON SITE.
ANY UNPREESEN CONDITIONS INFLUENCE THE PROPOSALS SHOWN.
- ALL LEVELS IN METRES ABOVE LOCAL ORDNANCE DATUM UNLESS NOTED OTHERWISE.
- ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
- DO NOT SCALE - IF IN DOUBT, ASK!
- LARGE SCALE DETAILS TAKE PRECEDENCE OVER SMALLER SCALE DETAILS.
- ALL PROPRIETARY PRODUCTS TO BE USED STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS. ALL REFERENCES TO MANUFACTURERS OR PROPRIETARY MATERIALS OR COMPONENTS MUST BE DEEMED TO INCLUDE EQUAL AND APPROVED.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INVOLVED IN CHANGES OR MODIFICATIONS REQUESTED AND APPROVED TO SUIT HIS PREFERRED METHOD OF WORK.
- THE MAIN CONTRACTOR MUST CHECK ALL AVAILABLE INFORMATION WELL IN ADVANCE OF THE COMMENCEMENT OF EACH WORK ELEMENT AND REFER ANY ITEMS REQUIRING CLARIFICATION OR SUPPLEMENTARY DETAILS TO THE ENGINEER.
- CONTRACTOR TO PROVIDE A SET OF AS BUILT DRAWINGS FOR INCLUSION INTO THE HEALTH AND SAFETY FILE. ONCE CONSTRUCTION IS COMPLETE.
- STRUCTURAL MEMBERS INCLUDING SLABS, BEAMS, COLUMNS AND WALLS ARE DESIGNED FOR THEIR STRENGTH AND LATERAL STABILITY, ASSUMING THAT ALL OF THESE COMPONENTS ARE CONNECTED AND CONSTRUCTED IN THEIR FINAL POSITION. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE BUILDING STRUCTURE AND EXCAVATIONS DURING THE CONSTRUCTION PERIOD, I.E. ITS TEMPORARY CONDITION, INCLUDING THE EFFECTS FROM CRANES AND HOISTS, WHERE THESE ARE SUPPORTED AND/OR RESTRAINED BY THE STRUCTURE.
- THE CONTRACTOR MUST UNDERTAKE ALL NECESSARY CALCULATIONS FOR THE TEMPORARY STRUCTURE AND BRACING AND WHERE NECESSARY, DETAILED MEMBER CHECKS AND STABILITY CHECKS FOR THE PERMANENT STRUCTURE. ALL ADDITIONAL WORK REQUIRED FOR THE TEMPORARY STABILITY OF THE STRUCTURE SHALL BE DEEMED TO BE INCLUDED BY THE CONTRACTOR AND MUST BE REMOVED FROM THE SITE ON THE COMPLETION OF THE PERMANENT STRUCTURE. IT IS THE CONTRACTORS RESPONSIBILITY TO CHECK THE PERMANENT WORKS FOR ANY LOADS APPLIED BY THE TEMPORARY WORK.
- ALL TEMPORARY WORKS DESIGNS ARE TO BE CARRIED OUT BY A SUITABLY EXPERIENCED COMPETENT PERSON APPOINTED BY THE CONTRACTOR. THESE DESIGNS ARE TO BE CHECKED BY AN APPROPRIATE PERSON.
- ALL WORK BY THE CONTRACTOR MUST BE CARRIED OUT IN SUCH A WAY THAT ALL REQUIREMENTS UNDER THE HEALTH AND SAFETY ACT, ARE SATISFIED.
- FIRE PROTECTION TO STRUCTURE TO BE SPECIFIED BY OTHERS.
- ALL NON-CLADDING INTERNAL PARTITIONS MUST COMPLY WITH BS 8224 PARTITIONS (INCLUDING MATCHING LININGS). ALL NON-CLADDING EXTERNAL PARTITIONS MUST BE RESTRAINED AT THE HEAD BY AN APPROPRIATE PROPRIETARY RESTRAINT SYSTEM FIXED TO THE STRUCTURE ABOVE.
- THE LEVELS AROUND ALL DOOR THRESHOLDS ARE TO BE DEFINED BY THE ARCHITECT. IT IS RECOMMENDED THAT A DRAINAGE CHANNEL IS INSTALLED AT THE OUTSIDE OF ALL INDUSTRIAL DOORS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE MANAGEMENT OF GROUND WATER. SURFACE WATER FLOWS FROM EXISTING FIELD DRAINAGE AND RUN-OFF FROM ADJACENT SITES DURING CONSTRUCTION. AN ALLOWANCE FOR THIS COST MUST BE MADE.
- THE CONTRACTOR MUST INSTALL APPROPRIATE CUT-OFF DRAINAGE AROUND THE PERIMETER OF THE SITE TO ENSURE THAT RUN-OFF FROM ADJACENT SITES IS MINIMISED.
- EXISTING FIELD DRAINS SHOULD BE ROUTED AROUND THE PERIMETER OF THE WORKS AND RE-CONNECTED TO THE ORIGINAL FIELD DRAIN PRIOR TO EXITING THE SITE.
- ANY GROUND AND GROUND WATER ENCOUNTERED WHICH IS NOT CONSISTENT WITH THE SITE INVESTIGATION REPORT MUST BE NOTIFIED TO THE ENGINEER IMMEDIATELY. ADDITIONAL TESTING OF THESE AREAS MAY BE REQUIRED AND AN ALLOWANCE FOR THIS COST SHOULD BE MADE.
- ALL FORMATIONS MUST BE FULLY PROTECTED PRIOR TO FINAL SURFACING BEING INSTALLED AND SHOULD NOT UNDER ANY CIRCUMSTANCES BE TRAFFICKED BY CONSTRUCTION VEHICLES.
- ALL FORMATIONS MUST BE WELL PROTECTED PRIOR TO ANY SITE TRAFFICKING. FORMALLY CONSTRUCTED TEMPORARY HAUL ROADS MUST BE INSTALLED TO FULLY PROTECT ALL FORMATIONS. AN ALLOWANCE FOR THIS COST MUST BE MADE.
- ALL DRAINAGE FILTER MATERIALS AND ATTENUATION DEVICES MUST BE INSTALLED AT THE END OF THE CONSTRUCTION TO ENSURE THAT SILTING DOES NOT OCCUR.
- ALL TANKING/WATERPROOFING TO BE SPECIFIED BY OTHERS.
- ALL RETAINING WALLS TO BE BACKFILLED WITH FREE DRAINING GRANULAR MATERIAL WITH A SUITABLE DRAINAGE SYSTEM TO PREVENT THE BUILD UP OF PORE PRESSURE BEHIND THE WALL.
- THE DRAWINGS AND SPECIFICATIONS HAVE BEEN PRODUCED ON THE BASIS THAT THE CONTRACTOR IS COMPETENT AND IS AWARE OF AND CAN IMPLEMENT STANDARD CONSTRUCTION DETAILS WITHOUT INPUT FROM RAMSAY AND CHALMERS. IF THERE IS ANY DOUBT OVER WHAT IS REQUIRED THEN THE CONTRACTOR MUST MAKE ENQUIRIES WITH RAMSAY AND CHALMERS.
- DURING EXCAVATIONS UNKNOWN SERVICES AND THOSE WHICH HAVE BEEN POORLY LOCATED MAY BE ENCOUNTERED AND SUITABLE ALLOWANCES SHOULD BE MADE FOR THIS.
- THE CONTRACTOR MUST PLAN AND IMPLEMENT HIS TEMPORARY SUPPORT AND CONSTRUCTION METHODOLOGY SO AS TO ENSURE THE PERMANENT WORKS ARE CONSTRUCTED AS DESIGNED.
- WHERE APPLICABLE ALL TECHNICAL REQUIREMENTS, PERFORMANCE STANDARDS AND DESIGN FOR THE CONSTRUCTION OF DWELLINGS MUST BE IN ACCORDANCE WITH ANY RELEVANT THIRD PARTY WARRANTY PROVIDERS REQUIREMENTS (E.G. NHBC, ZURICH, PREMIER GUARANTEE ETC).
- IF A DIFFERENCE EXISTS BETWEEN AN ELECTRONIC FILE AND THE PAPER DOCUMENT THAT HAS BEEN ISSUED BY RAMSAY AND CHALMERS THEN THE PAPER DOCUMENT WILL TAKE PRECEDENCE.
- IF A DISCREPANCY EXISTS BETWEEN THE SPECIFICATION ON THIS DRAWING AND THE PROJECT SPECIFIC DRAWINGS THEN THE REQUIREMENTS OF THE PROJECT SPECIFIC DRAWINGS WILL TAKE PRECEDENCE.
- ALL ITEMS OF PERMANENT PLANT AND ASSOCIATED SUPPORTS ARE TO BE ADEQUATELY ISOLATED FROM THE STRUCTURE (I.E. ANTI-VIBRATION MOUNTINGS TO BE PROVIDED). REFER TO DETAILS AND SPECIFICATIONS BY OTHERS.
- ALL CEILING SYSTEMS, NON-STRUCTURAL FITTINGS AND FIXTURES AND THEIR FIXINGS ARE TO BE DESIGNED BY A SPECIALIST. ONCE THESE HAVE BEEN SPECIFIED THE DESIGN CALCULATIONS AND DETAILS MUST BE FORWARDED TO RAMSAY AND CHALMERS FOR REVIEW AND COMMENT A MINIMUM OF 2 WEEKS PRIOR TO INSTALLATION.
- ALL CLADDING FLASHINGS AND FIXINGS ARE TO BE DESIGNED BY A SPECIALIST. ONCE THESE HAVE BEEN SPECIFIED THE DESIGN CALCULATIONS AND DETAILS MUST BE FORWARDED TO RAMSAY AND CHALMERS FOR REVIEW AND COMMENT A MINIMUM OF 2 WEEKS PRIOR TO INSTALLATION.

SITE SUPERVISION

- UNLESS OTHERWISE NOTED, THE CONSULTING ENGINEER WILL MAKE OCCASIONAL SITE INSPECTIONS ONLY.
- THIS LEVEL OF INSPECTION DOES NOT REMOVE OR DIMINISH THE CONTRACTOR'S RESPONSIBILITY AND LIABILITY FOR ENSURING THE WORKS ARE CONSTRUCTED STRICTLY IN ACCORDANCE WITH THE DESIGN AND SPECIFICATION AND TO PROVIDE THE NECESSARY LEVEL OF SITE SUPERVISION TO THIS EFFECT.

HEALTH & SAFETY

- CONTRACTOR TO BE AWARE OF ALL CURRENT HEALTH AND SAFETY REGULATIONS INCLUDING THE FOLLOWING:
CONSTRUCTION (DESIGN & MANAGEMENT) REGULATIONS 2015:
LIFTING OPERATIONS AND LIFTING EQUIPMENT REGULATIONS 1988:
THE MANUAL HANDLING OPERATIONS REGULATIONS 1992:
CONFINED SPACES REGULATIONS 1997:
CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 1989.
- ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT BRITISH STANDARDS AND CURRENT CODES OF PRACTICES:
BS EN 12811-1:2003 TEMPORARY WORKS EQUIPMENT, SCAFFOLDS, PERFORMANCE REQUIREMENTS AND GENERAL DESIGN.
BS 5874: 2017 CODE OF PRACTICE FOR THE PLANNING, DESIGN, SETTING UP AND USE OF TEMPORARY SUSPENDED ACCESS EQUIPMENT;
BS 5875: 2019 CODE OF PRACTICE FOR TEMPORARY WORKS PROCEDURES;
BS8037-1: 2017 CODE OF PRACTICE PERMANENTLY INSTALLED, SUSPENDED ACCESS EQUIPMENT;
BS EN 1997-1: 2004 GEOTECHNICAL DESIGN, GENERAL RULES.

CIVIL ENGINEERING / EXTERNAL WORKS

- ALL CIVIL ENGINEERING AND EXTERNAL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING DOCUMENTS:-
LOCAL AUTHORITY STANDARDS FOR ROAD CONSTRUCTION SPECIFICATION
DESIGN MANUAL FOR ROADS AND BRIDGES
SPECIFICATION FOR HIGHWAY WORKS
- REINSTATEMENT OF TRENCHES IS TO BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING DOCUMENTS:-
NEW ROADS AND STREET WORKS ACT 1991 - SPECIFICATION FOR THE REINSTATEMENT OF OPENINGS IN ROADS
DESIGN MANUAL FOR ROADS AND BRIDGES - NOVEMBER 2001 - VOLUME 4 : SECTION 2

EARTHWORKS

- EARTHWORKS TO COMPLY WITH THE REQUIREMENTS SET OUT IN THE SPECIFICATION FOR HIGHWAY WORKS, VOLUME 1, SERIES 800 - NOVEMBER 2008.
- ACCEPTABLE MATERIALS ARE DEFINED AS MATERIALS EXCAVATED FROM WITHIN THE SITE OR IMPORTED ONTO SITE WHICH MEET THE REQUIREMENTS OF TABLE 6/1.
- UNACCEPTABLE MATERIALS ARE DEFINED AS THE FOLLOWING:-
 - MATERIALS THAT DON'T MEET THE REQUIREMENTS OF TABLE 6/1.
 - PEAT
 - MATERIALS FROM SWAMPS, MARSHES AND BOGS
 - LOGS, STUMPS AND PERISHABLE MATERIAL
 - MATERIALS IN A FROZEN CONDITION
 - CLAY HAVING A LIQUID LIMIT > GREATER THAN 80 (BS 1377 - PART 2) OR PLASTICITY INDEX > EXCEEDING 45 (BS 1377 - PART 2).
 - MATERIALS SUSCEPTIBLE TO SPONTANEOUS COMBUSTION
 - CONTAMINATED MATERIALS INCLUDING CONTROLLED WASTES, HAZARDOUS WASTE AND RADIOACTIVE WASTE
- THE FORMATION MUST BE DEFINED AS THE TOP SURFACE OF CAPPING. WHERE NO CAPPING IS REQUIRED FORMATION WILL BE THE TOP SURFACE OF EARTHWORKS AT THE UNDERSIDE OF SUBBASE.
- THE SUB FORMATION MUST BE DEFINED AS THE TOP SURFACE OF EARTHWORKS AT THE UNDERSIDE OF CAPPING.
- IN ADDITION TO ANY GRADING REQUIREMENTS THE MAXIMUM PARTICLE SIZE OF ANY FILL MATERIAL MUST BE NO MORE THAN TWO-THIRDS OF THE COMPACTED LAYER THICKNESS.
- THE CONTRACTOR MUST EMPLOY ONLY PLANT AND WORKING METHODS WHICH ARE SUITED TO THE MATERIALS TO BE HANDLED AND TRANSPORTED. THEY ARE RESPONSIBLE FOR MAINTAINING THE NATURE OF ACCEPTABLE MATERIAL SO WHEN IT IS PLACED AND COMPACTED IT REMAINS ACCEPTABLE IN ACCORDANCE WITH THE CONTRACT.
- WHERE THE EXCAVATED MATERIAL REVEALS A COMBINATION OF ACCEPTABLE AND UNACCEPTABLE MATERIAL THE CONTRACTOR MUST CARRY OUT THE EXCAVATION IN SUCH A MANNER THAT THE ACCEPTABLE MATERIALS ARE EXCAVATED SEPARATELY FOR USE IN THE PERMANENT WORKS WITHOUT CONTAMINATION BY UNACCEPTABLE MATERIALS.
- TOPSOIL MUST WHEREVER PRACTICABLE BE USED IMMEDIATELY AFTER ITS STRIPPING AND IF NOT MUST BE STORED IN STOCKPILES OF HEIGHTS NOT EXCEEDING 2m. UNLESS OTHERWISE STATED, TOPSOIL MUST NOT BE STOCKPILED FOR MORE THAN TWO YEARS. TOPSOIL MUST NOT BE UNNECESSARILY TRAFFICKED EITHER BEFORE STRIPPING OR WHEN IN A STOCKPILE.
- EXCAVATIONS FOR FOUNDATIONS AND TRENCHES MUST BE ADEQUATELY SUPPORTED AT ALL TIMES.
- EXCAVATIONS REQUIRING BACKFILLING MUST REMAIN OPEN ONLY FOR THE MINIMUM PERIOD NECESSARY.
- EXCAVATIONS REQUIRING BACKFILLING IN EXISTING PAVED OR OTHER SURFACES, INCLUDING THOSE PAVED AREAS TO BE RECONSTRUCTED OR REPAIRED, MUST BE CARRIED OUT AND REINSTATED IN COMPLIANCE WITH CLAUSE 706.
- THE CONTRACTOR MUST KEEP EARTHWORKS FREE FROM WATER.
- MATERIAL MUST NOT BE FROST SUSCEPTIBLE IF IT IS USED WITHIN 400mm OF THE DESIGNED FINAL SURFACE.
- THE BOTTOM OF ALL FOUNDATION EXCAVATIONS MUST BE FORMED TO THE LINES AND LEVELS SHOWN ON THE DRAWINGS. POCKETS OF SOFT SOIL OR LOOSE ROCK MUST BE REMOVED AND THE RESULTING VOIDS AND ANY NATURAL VOIDS MUST BE FILLED WITH ST1 CONCRETE TO CLAUSE 2602. AFTER FIN PLACING OF BLINDING CONCRETE SHOWN ON THE DRAWINGS, NO TRIMMING OF THE SIDE FACES OF THE EXCAVATION IS TO BE CARRIED OUT FOR 24 HOURS.
- PLANT MOVEMENT ACROSS STARTER LAYER MATERIAL MUST BE RESTRICTED TO THAT PLANT WHICH IS NECESSARY FOR ITS DEPOSITION, SPREADING AND COMPACTION. THE CONTRACTOR MUST TAKE ALL REASONABLE MEASURES TO PREVENT DAMAGE TO THE UNDERLYING STRATA, WHENEVER INCREASING USE OF THE EXCAVATION PLANT OR A REDUCTION OF THE NUMBER OF PASSES OF COMPACTION PLANT.
- EMBANKMENTS AND OTHER AREAS OF FILL MUST BE CONSTRUCTED EVENLY OVER THEIR FULL WIDTH AND THEIR FULLEST POSSIBLE EXTENT AND THE CONTRACTOR MUST CONTROL AND DIRECT CONSTRUCTIONAL PLANT AND OTHER VEHICULAR TRAFFIC UNIFORMLY OVER THEM. DAMAGE BY CONSTRUCTIONAL PLANT AND OTHER VEHICULAR TRAFFIC MUST BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE CHARACTERISTICS AND STRENGTH AS THE MATERIAL HAD BEFORE IT WAS DAMAGED.
- EMBANKMENTS AND OTHER AREAS OF UNSUPPORTED FILLS MUST NOT BE CONSTRUCTED WITH STEEPER SIDE SLOPES, OR TO GREATER WIDTHS THAN THOSE SHOWN ON THE DRAWINGS, EXCEPT TO PERMIT ADEQUATE COMPACTION AT THE EDGES BEFORE TRIMMING BACK, OR TO FORM THE FINAL PROFILE FOLLOWING ANY SETTLEMENT OF THE FILL AND THE UNDERLYING MATERIAL.
- WHERE PIPES IN EMBANKMENTS OR IN OTHER AREAS OF FILL ARE TO BE CONSTRUCTED OTHER THAN IN A TRENCH, THE FILL MUST BE BROUGHT UP TO AND OVER THEM EQUALLY ON BOTH SIDES. THE FILL MUST BE DEPOSITED IN EVEN LAYERS AND MUST NOT BE HEAVED ABOVE THE PIPE. SPREADING AND COMPACTION MUST BE CARRIED OUT EVENLY WITHOUT DISLOCATING, DISTORTING OR DAMAGING THE PIPE. POWER RAMMERS ARE NOT TO BE USED WITHIN 300mm OF ANY PART OF THE PIPE OR JOINT.
- TILES REQUIRED AS PART OF THE PERMANENT WORKS TO SEPARATE EARTHWORKS MATERIALS MUST BE MANUFACTURED FROM SYNTHETIC OR OTHER FIBRES AS REQUIRED THEREIN AND BE IN THE FORM OF THIN PERMEABLE MEMBRANES.
- THE CONTRACTOR MUST PROVIDE EVIDENCE THAT THE GEOTEXTILE WILL BE SUFFICIENTLY DURABLE, WHEN INSTALLED IN CONTACT WITH THE MATERIALS TO BE SEPARATED, TO MAINTAIN ITS INTEGRITY FOR AT LEAST THE LIFE PERIOD REQUIRED.
- GEOTEXTILES MUST BE PROTECTED AT ALL TIMES AGAINST MECHANICAL OR CHEMICAL DAMAGE. THOSE SUSCEPTIBLE TO DAMAGE BY LIGHT MUST NOT BE UNCOVERED BETWEEN MANUFACTURE AND INCORPORATION IN THE PERMANENT WORKS. TEMPORARY EXPOSURE MUST NOT EXCEED 5 HOURS.
- THE GEOTEXTILE MUST BE Laid AND LAPPED AS DESCRIBED IN ACCORDANCE WITH CLAUSE 659 AND WHERE LAPPING IS EMPLOYED ADJACENT SHERES OR STRIPS OF GEOTEXTILE MUST BE OVERLAPPED BY AT LEAST 300mm.
- THE LAYER OF MATERIAL ON WHICH THE GEOTEXTILE IS TO BE PLACED MUST NOT HAVE PROTRUSIONS OR SHARP PROJECTIONS WHICH ARE LIKELY TO DAMAGE THE GEOTEXTILE DURING INSTALLATION OR IN SERVICE. THE METHOD OF INSTALLATION MUST ENSURE THAT THE GEOTEXTILE IS IN CONTINUOUS CONTACT WITH THE SURFACE ON WHICH IT IS TO BE PLACED AND THE GEOTEXTILE MUST NOT BE STRETCHED OR BRIDGED OVER HOLLOW OR HUMPS. OPERATION OF CONSTRUCTION PLANT DIRECTLY ON THE INSTALLED GEOTEXTILE WILL NOT BE PERMITTED AND ITS COVERING WITH FILL MATERIAL MUST TAKE PLACE IMMEDIATELY AFTER ITS LAYING.
- THE CONTRACTOR MUST CARRY OUT COMPACTION AS SOON AS PRACTICABLE AFTER DEPOSITION, ON ALL THOSE CLASSES OF FILL IN TABLE 6/1 WHICH REQUIRE TO BE COMPACTED.
- COMPACTION MUST BE EITHER METHOD OR END-PRODUCT AS REQUIRED FOR THE CLASS OF FILL IN TABLE 6/1, USING PLANT APPROPRIATE TO THE CLASS OF FILL AND THE SITE CONDITIONS.
- METHOD COMPACTION MUST BE UNDERTAKEN USING THE PLANT AND METHODS IN TABLE 6/4 APPROPRIATE TO THE COMPACTION REQUIREMENTS AS LISTED IN TABLE 6/1 FOR THE CLASS OF MATERIAL BEING COMPACTED.
- PLANT AND METHODS NOT INCLUDED IN TABLE 6/4 MUST ONLY BE USED PROVIDING THE CONTRACTOR DEMONSTRATES AT SITE TRIALS THAT A STATE OF COMPACTION IS ACHIEVED BY THE ALTERNATIVE METHOD EQUIVALENT TO THAT OBTAINED USING THE SPECIFIED METHOD.
- EARTHMOVING PLANT MUST NOT BE ACCEPTED AS COMPACTION EQUIPMENT NOR WILL THE USE OF A LIGHTER CATEGORY OF PLANT TO PROVIDE ANY PRELIMINARY COMPACTION TO ASSIST THE USE OF HEAVIER PLANT BE TAKEN INTO ACCOUNT WHEN ASSESSING THE AMOUNT OF COMPACTION REQUIRED FOR ANY LAYER.
- IF MORE THAN ONE CLASS OF MATERIAL IS BEING USED IN SUCH A WAY THAT IT IS NOT PRACTICABLE TO DEFINE THE AREAS IN WHICH EACH CLASS OCCURS, THE CONTRACTOR MUST COMPACT WITH PLANT OPERATING AS IF ONLY THE MATERIAL WHICH REQUIRES THE GREATER COMPACTIVE EFFORT IS BEING COMPACTED.
- CAPPING MUST BE PROVIDED ONLY IN THOSE LOCATIONS, TO BE CONSTRUCTED WITH CAPPING.
- CAPPING MUST BE CONSTRUCTED WITH CLASS #2 MATERIAL COMPLYING WITH TABLE 6/1.
- CAPPING MUST CONSIST OF ONE CLASS OF CAPPING MATERIAL THROUGHOUT ITS DEPTH.
- THE SUB-FORMATION MUST HAVE THE SAME LONGITUDINAL GRADIENT, CROSSFALL AND SURFACE LEVEL TOLERANCES AS THE FORMATION.
- THE CONTRACTOR MUST LIMIT ANY UNPROTECTED AREA OF SUB-FORMATION, WHICH IS TO RECEIVE CAPPING TO SUIT THE OUTPUT OF THE PLANT IN USE AND THE RATE OF DEPOSITION OF CAPPING.
- NO UNPROTECTED SUB-FORMATION WHICH IS TO RECEIVE CAPPING TO REMAIN CONTINUOUSLY EXPOSED TO RAIN CAUSING DEGRADATION, NOR BE LEFT UNCOVERED OVERNIGHT.
- FILTER LAYERS CONSTRUCTED OF GRANULAR FILTER LAYER MATERIAL MUST BE PROTECTED FROM DAMAGE BY TRAFFIC AND CONSTRUCTION PLANT.
- CONSTRUCTION PLANT AND OTHER VEHICULAR TRAFFIC (EXCEPT THAT REQUIRED FOR THE CONSTRUCTION OF CAPPING) MUST NOT BE OPERATED ON THE SUB-FORMATION, UNLESS ADEQUATE PROTECTION, IF NECESSARY IN ADDITION TO ANY WEATHER PROTECTION, IS PROVIDED.
- CONSTRUCTION PLANT AND OTHER VEHICULAR TRAFFIC MUST NOT BE OPERATED ON THE SUB-FORMATION OR FOUNDATION AREAS WHERE THEY ARE WITHIN 300mm OF THE EXISTING GROUND LEVEL, AFTER TOPSOIL HAS BEEN STRIPPED, BEFORE USING CONSTRUCTION PLANT OR OTHER VEHICULAR TRAFFIC AT OR ABOVE SUB-FORMATION OR FOUNDATION.
- SAMPLING AND TESTING OF EARTHWORKS MATERIALS MUST BE CARRIED OUT IN ACCORDANCE WITH BS EN 12476.

PIPEWORK

- EXTERNAL PIPEWORK TO BE:-
VITRIFIED CLAY PIPES
PIPES UP TO AND INCLUDING 150mm Ø TO BE VITRIFIED CLAY 28kN/m STRENGTH TO BE BS EN206-1 PIPES BETWEEN 225mm Ø AND 300mm Ø TO BE VITRIFIED CLAY CLASS 160 TO BS EN206-1.
OR
THERMOPLASTIC STRUCTURAL WALL PIPES - 150mm Ø TO 300mm Ø
UNPLASTICATED PVC PIPES, JOINTS AND FITTINGS FOR GRAVITY SEWERS MUST COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 1508 AND BS EN 1401-1.
STRUCTURAL WALL uPVC SEWER PIPES MUST COMPLY WITH THE RELEVANT PROVISIONS OF WS 4-5501.
- SOLVENT CEMENTS FOR JOINTING uPVC MUST COMPLY WITH THE RELEVANT REVISIONS OF BS 4338 - PART 3 AND BS EN 1401-1 FOR PIPES AND FITTINGS COMPLYING WITH BS 4660:200. SOLVENT CEMENT MAY ALSO COMPLY WITH BS 6209.
- uPVC PIPES MUST COMPLY WITH THE LOCAL WATER AUTHORITIES REQUIREMENTS.
- ALL OTHER EXTERNAL PIPEWORK TO BE CLASS H PRECAST CONCRETE TO BS EN 5911 PART M OR EQUAL AND APPROVED.

DRAINAGE

- THE MAIN CONTRACTOR WILL INVESTIGATE AND CONFIRM INVERT LEVELS ON EXISTING DRAINAGE AT POINTS OF NEW MANHOLE INSTALLATION AND CONNECTIONS PRIOR TO STARTING DRAINAGE WORK.
- ALL DRAIN AND SEWER SYSTEMS OUTSIDE BUILDINGS IN ACCORDANCE WITH BS EN 752.
- ALL CAST IRON GULLIES AND MANHOLES TO BS EN 124, WHERE CONCRETE OR PLASTIC ARE USED APPROPRIATE BRITISH STANDARDS TO APPLY.
- ALL DRAINAGE PIPES AND MANHOLES TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF SEWERS FOR SCOTLAND.
- WHERE FIELD DRAINAGE SYSTEMS ARE SHOWN WITHOUT LEVELS, EXPLORATORY EXCAVATIONS SHALL TAKE PLACE PRIOR TO COMMENCEMENT OF THIS WORK ELEMENT TO DETERMINE FINAL LINES AND LEVELS.
- BEDDING AND BACKFILL TO IG14-4:8-11A AS FOLLOWS:-

LOCATION	COVER TO SOFFIT	BEDDING
ROADS	≥1.2m	CLASS 3' GRANULAR BED AND SURROUND
	≥1.2m	CONCRETE PROTECTION
NON ADAPTABLE	≥0.9m	CLASS 3' GRANULAR BED AND SURROUND
BELOW CAR PARKING	≥0.9m	CONCRETE PROTECTION
HARD AND SOFT LANDSCAPING	≥0.6m	CLASS 3' GRANULAR BED AND SURROUND
	≥0.6m	CONCRETE PROTECTION
UNDERSLABS		CLASS 3' GRANULAR BED AND SURROUND
- MANHOLE/ INSPECTION CHAMBERS/ ACCESS FITTING TO COMPLY WITH BS EN 752.
- AI EXTERNAL PIPE WORK TO BE EITHER SMOOTH WALLED uPVC OR THERMOPLASTIC STRUCTURED WALL (UNLESS NOTED OTHERWISE), BE USED UP TO A MAXIMUM OF 500mm Ø AND BE TERRACOTTA IN COLOUR.
- ALL PVC AND STRUCTURED WALLED PIPES SHALL BE RATED TO WITHSTAND STANDARD JETTING PRESSURES AS DESCRIBED IN WS 4-35-01.
- PIPE JOINTS TO BE IN ACCORDANCE WITH BS EN 752 AND TO INCORPORATE A RUBBER GASKET.
- FLEXIBLE/CONCRETE JOINTS ARE TO BE PROVIDED IN CONCRETE SURROUNDS BY INSERTING 20mm FIREBRICK, AT ONE END OF 9m MAXIMUM PRE-CUT PIPE TO MANHOLE AND TO HEIGHT AND WIDTH EQUAL TO THE CONCRETE CROSS SECTION.
- ALL DIMENSIONS AND LEVELS TO BE CHECKED ON SITE AND THE ENGINEER NOTIFIED OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK.
- ALL DRAINAGE TO BE INSTALLED TO THE SATISFACTION OF THE LOCAL AUTHORITY.
- ALL MATERIALS AND WORKMANSHIP IS TO BE IN ACCORDANCE WITH THE LATEST EDITIONS OF SEWERS FOR SCOTLAND AND BS EN 752 DRAIN AND SEWER SYSTEMS OUTSIDE BUILDINGS UNLESS OTHERWISE NOTED.
- ALL PIPEWORK TO BE AS APPROVED BY SCOTISH WATER IN ACCORDANCE WITH THE LATEST EDITION OF SEWERS FOR SCOTLAND.
- WHERE PIPES OF UNEQUAL DIAMETER CONNECT INTO A MANHOLE, PIPE SOFFITS TO BE LEVEL UNLESS OTHERWISE NOTED.
- TESTING OF SEWERS TO BE IN ACCORDANCE WITH BS EN 1610.
- ALL WORKS TO THE PUBLIC SEWERS TO BE AGREED WITH AND APPROVED BY SCOTTISH WATER.
- THE LOCATION OF EXISTING DRAINAGE INDICATED ON THE DRAWINGS HAS BEEN EXTRACTED FROM RECORD DRAWINGS AND SITE SURVEY INFORMATION. THE CONTRACTOR MUST VERIFY THE LOCATIONS AND LEVEL OF THE DRAINAGE AFFECTED BY THE NEW WORKS PRIOR TO ANY CONSTRUCTION.
- FOR LOCATION OF EXISTING SERVICES REFER TO THE EXISTING UTILITIES DRAWINGS.
- ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE AND THE ENGINEER NOTIFIED OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORKS.
- GROUNDWATER CONTROL MEASURES MUST BE TAKEN BY THE CONTRACTOR TO ENSURE EXCAVATIONS ARE FREE OF GROUNDWATER DURING INSTALLATION AND BACKFILLING OF DRAINAGE WORKS.
- THE CONTRACTOR TO ENSURE NO FINES ARE DRAWN FROM THE ADJACENT SOIL DURING GROUNDWATER CONTROL OPERATIONS.
- THE FOLLOWING CONCRETE MIXES ARE TO BE USED (ALL IN ACCORDANCE WITH BS 5329):-
 - CONCRETE SURROUND TO PIPES TO BE C20.
 - CONCRETE BASE AND BACKFILL TO MANHOLES TO BE C20.
- THE ABOVE CONCRETE MIXES IN CONTACT WITH THE GROUND ARE TO BE GRADE DS-2 AND ACEC CLASSIFICATION AC2, DETERMINED IN ACCORDANCE WITH THE BRE SPECIAL DIGEST 1, PART 2, TABLES 5-8.
- ALL PRECAST CONCRETE COMPONENTS (I.E. PIPE, MANHOLES, RINGS, ETC.) MUST BE TO DESIGN SULPHATE CLASS DS-2 AND CHEMICAL DESIGN DC-3 IN ACCORDANCE WITH BRE SPECIAL DIGEST 1 AND BS 5911.
- ANY DRAINAGE SOLUTION WHICH IS SHOWN ON THE DRAWINGS MAY BE SUBJECT TO A SEPA C&L LICENSE APPLICATION AND AS SUCH THE DRAINAGE SOLUTION MAY REQUIRE TO BE ALTERED TO SUIT SEPA'S REQUIREMENTS IN RELATION TO C&L.

ROADS FOR ADOPTION

- ALL WORK TO COMPLY WITH HIGHLAND COUNCIL'S 'STANDARDS FOR ROAD CONSTRUCTION CONSENT AND ADOPTION'.
- PRIOR TO ROAD CONSTRUCTION WORKS, CONTRACTOR TO SUBMIT CBR VALUES AND DETAILS OF ANY CAPPING TO:-
THE HIGHLAND COUNCIL, HEADQUARTERS, GLENQUHART ROAD, INVERNESS, IV3 5XU.
- ROAD SIGNS AND MARKINGS TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE 'TRAFFIC SIGNS AND REGULATION AND GENERAL DIRECTIONS'.
- THE CONTRACTOR IS RESPONSIBLE FOR CHECKING THE LINE AND LEVEL OF EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES FROM THE DESIGN INFORMATION MUST BE REPORTED TO THE SITE MANAGER AND SITE ENGINEER IN WRITING.
- STREET OCCUPATION SHOULD BE Sought FROM THE LOCAL AUTHORITY PRIOR TO ANY WORKS COMMENCING ON A PUBLIC ROAD.
- CYCLEWAYS AND SHARED PEDESTRIAN/CYCLE ROUTES TO COMPLY WITH "CYCLING BY DESIGN" STANDARDS.
- PRIOR TO ANY LIGHTING CABLES BEING BACKFILLED AND COLUMNS BEING ERECTED CONTRACTOR MUST CONTACT THE LOCAL AUTHORITY'S LIGHTING ENGINEER FOR APPROVAL.
- ALL CABLES TO BE WITHIN PVC DUCT AT 450mm DEPTH IN FOOTPATHS AND VERGES AND 750mm DEPTH IN CARPARKWAYS.
- DUCTS TO BE 2 x 100mm COLOURED PURPLE SAND BEDDED WITH INDICATOR TAPE.
- 450mm x 450mm NAL CHAMBER OR EQUAL AND APPROVED TO BE PROVIDED AT CHANGES IN DIRECTION AND AT EACH COLUMN.
- CHAMBER TO BE SURROUNDED WITH 150mm ST1 CONCRETE AND A D400 COVER WITH TWO COURSES OF ENGINEERING BRICK.
- THE VISIBILITY ENVELOPES ARE TO BE UNDER THE CONTROL OF THE ROADS AUTHORITY. VISIBILITY ENVELOPES ARE TO BE KEPT CLEAR OF PLANTING AND OBSTRUCTIONS.
- 900mm HIGH POSTS AND WIRE FENCES ARE TO BE ERECTED TO DELINEATE THE EXTENT OF THE VISIBILITY ENVELOPES.
- DRIVEWAYS ARE TO BE DRAINED TO THE SURFACE WATER SEWER VIA A FOOTPATH OR CHANNEL OR GULLY. NO SURFACE WATER SHOULD FLOW ACROSS THE FOOTPATH OR ROAD FROM THE DRIVEWAYS.
- ALL STREET NAMEPLATES AND FLAG SIGNS ARE TO BE FIXED TO 2 No. TUBULAR STEEL POSTS. ALL OTHER SIGNS ARE TO BE FIXED TO 1 No. TUBULAR STEEL POST.

SEWERS FOR ADOPTION

- SEWERAGE INSTALLATION WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITION OF SEWERS FOR SCOTLAND.
- SEWERS UP TO A MAXIMUM OF 600mm DIAMETER TO BE:-
PVC STRUCTURAL WALL GRAVITY SEWER PIPES WITH MANUFACTURER'S FLEXIBLE JOINTS AND COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 1508 AND BS EN 1401-1.
STIFFNESS CLASSIFICATION SN8 AND WS 4-5501. THESE WILL ONLY BE PERMITTED FOR COMMERCIAL AND INDUSTRIAL SITE DRAINAGE WHERE SCOTTISH WATER IS SATISFIED THAT THE EFFLUENT WILL NOT ADVERSELY AFFECT THE STRUCTURAL INTEGRITY OF THE PIPES.
- SEWER DIAMETERS GREATER THAN 600mm TO BE CONCRETE WITH MANUFACTURERS' FLEXIBLE JOINTS AND COMPLY WITH THE RELEVANT PROVISIONS OF BS 5911.
- CONCRETE PROTECTION TO SEWERS TO BE IN ACCORDANCE WITH CURRENT SCOTTISH WATER SPECIFICATION. CONCRETE PROTECTION SHOWN ON DRAWINGS IS FOR uPVC PIPEWORK AND IS INDICATIVE ONLY. CONCRETE SURROUND IS TO BE USED FOR VITRIFIED CLAY AND CONCRETE PIPEWORK.
- MANHOLES TO BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT CLAUSE OF SEWERS FOR SCOTLAND. SAFETY CHAIRS TO BE PROVIDED WHERE OUTLET PIPE IS 600mm Ø OR GREATER. LADDERS TO BE PROVIDED WHERE THE DEPTH IS GREATER THAN 6m.
- DISCONNECTION CHAMBERS TO BE PROVIDED ON FOUL AND SURFACE WATER DRAINS CONNECTING TO SEWERS. CHAMBERS TO BE:-
500mm Ø NON-ENTRY uPVC CHAMBERS WHERE DEPTH TO INVERT IS 3.0m OR LESS
OR
1200mm Ø PRECAST CONCRETE CHAMBER WHERE DEPTH TO INVERT EXCEEDS 3.0m
- GULLY AND PROPERTY CONNECTIONS TO BE 150mm Ø AND POSITIONS TO BE VERIFIED ON SITE PRIOR TO INSTALLATION OF BRANCHES. GULLY LOCATIONS TO BE SET AS PER ROADS LAYOUT DRAWING.
- SEWER LAYING NEAR TO TREES AND TREE PLANTING ADJACENT TO SEWER TO BE INSTALLED IN ACCORDANCE WITH SECTION 2.14.10 OF SEWERS FOR SCOTLAND.
- FL/LS TO BE CHECKED AGAINST ARCHITECTS FINAL DRAWINGS PRIOR TO COMMENCEMENT OF SITE WORKS.
- ALL LEVELS RELATE TO ORDNANCE DATUM.
- SEWERS SHOULD BE CONSTRUCTED BY A COMPETENT CONTRACTOR AND IN ACCORDANCE WITH THE LATEST EDITION OF SEWERS FOR SCOTLAND.
- APPROPRIATE NOTICE, AND A PROGRAMME OF WORKS SHOULD BE PROVIDED TO SCOTTISH WATER PRIOR TO COMMENCEMENT OF DRAINAGE WORKS. IN ACCORDANCE WITH SCOTTISH WATERS DOCUMENT 'GUIDE FOR OBTAINING NEW WATER AND WASTE WATER SERVICES', IN ORDER TO ALLOW THEM TO PROGRAMME SITE AUDITS AND TESTING.
- IN ACCORDANCE WITH THE LATEST EDITION OF SEWERS FOR SCOTLAND AND 'GUIDE FOR OBTAINING NEW WATER AND WASTE WATER SERVICES', ONCE THE WORKS ARE COMPLETED, AND SATISFACTORY 'AS BUILT' DRAWINGS AND A CCTV SURVEY OF THE WORKS HAVE BEEN SUBMITTED, A COMPLETION CERTIFICATE CAN BE APPLIED FOR. THE DEFECTS LIABILITY PERIOD WILL START ONCE THE COMPLETION CERTIFICATE HAS BEEN ISSUED BY SCOTTISH WATER.
- THE DEFECTS LIABILITY PERIOD WILL BE A MINIMUM OF 24 MONTHS OR UNTIL THE LAST PROPERTY IS CONNECTED, WHICHEVER IS LONGER. SCOTTISH WATER WILL OPERATE AND MAINTAIN THE DRAINAGE SYSTEM DURING THE DEFECTS LIABILITY PERIOD. HOWEVER, THE DEVELOPER REMAINS RESPONSIBLE FOR ANY REPAIR WORKS REQUIRED DURING THIS PERIOD. DEFECT INFORMATION AS PER SEWERS FOR SCOTLAND 1.3.19 - 1.3.31 INCLUSIVE.
- DURING THE FINAL 3 MONTHS OF THE DEFECTS LIABILITY PERIOD, AN APPLICATION CAN BE MADE TO SCOTTISH WATER FOR A TRANSFER CERTIFICATE TO VEST THE DRAINAGE SYSTEM WITH THEM.
- PRIOR TO ADOPTION, THE DRAINAGE SYSTEM MUST BE DE-SILTED AND A FURTHER CCTV SURVEY CARRIED OUT. SCOTTISH WATER WILL ALSO CARRY OUT A JOINT INSPECTION OF THE WORKS WITH THE DEVELOPER OR THEIR AGENTS.
- DRAINAGE SHOULD BE CONSTRUCTED BASED ON THE INVERT LEVELS PROVIDED ON LONGITUDINAL SECTIONS. GRADIENTS SHOWN SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES.
- MANHOLE COVER LEVELS TO BE CHECKED AGAINST THE CORRESPONDING ROADS SECTION DRAWINGS PRIOR TO CONSTRUCTION. COVER LEVELS SHOWN SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES.

WATER MAINS

- ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITION OF WATER FOR SCOTLAND PUBLISHED BY WRc PLC.
- ALL SERVICE PIPES TO HAVE 750mm MINIMUM COVER AND MAXIMUM 1350mm COVER TO GROUND LEVEL.
- ALL WATER MAINS TO HAVE 900mm MINIMUM COVER TO THE CROWN OF THE PIPE AND NOT MORE THAN 1350mm COVER TO GROUND LEVEL, UNLESS OTHERWISE AGREED WITH SCOTTISH WATER.
- ALL BEDDING AND BACK-FILLING MUST BE DONE WITH CERTIFIED INERT MATERIAL FROM OFF SITE.
- ALL BARRIER PIPE JOINTS ARE TO BE PROPERTY MECHANICAL (FLUID) COMPRESSION JOINT FITTINGS AS APPROVED BY SCOTTISH WATER.
- ALL PIPE JOINTS ARE TO BE BUTT FUSED.
- PRESSURE TESTING OF THE PROPOSED WATER MAINS TO BE UNDERTAKEN AS PER THE PIPE MANUFACTURERS' TESTING PROCEDURES.
- THE DEVELOPER WILL REQUIRE TO CHLORINATE THE NEW MAIN IN ACCORDANCE WITH THE WATER BYELAWS. A SAMPLE SHOULD BE TAKEN AND ANALYSED BY AN ACCREDITED LABORATORY, WITH THE RESULTS CERTIFICATE BEING PASSED TO SCOTTISH WATER.
- ALL WORKS CARRIED OUT BY THE DEVELOPER WILL NEED TO BE INSPECTED BY SCOTTISH WATER TO ENSURE COMPLIANCE WITH THE WATER BYELAWS (TRACK AND BYELAWS INSPECTIONS).
- ALL BURIED MAINS ARE TO BE INSTALLED WITH PE100 (HPPE) PIPE MATERIAL.
- MAINS TO BE POSITIONED RELATIVE TO OTHER UTILITIES IN ACCORDANCE WITH APPENDIX G OF WATER FOR SCOTLAND UNLESS OTHERWISE NOTED.
- CONSTRUCTION DETAILS TO BE IN ACCORDANCE WITH APPENDIX H OF WATER FOR SCOTLAND UNLESS OTHERWISE NOTED.
- MAIN LAYING NEAR TO TREES AND TREE PLANTING ADJACENT TO MAINS TO BE INSTALLED IN ACCORDANCE WITH SECTION 2.3.10 OF WATER FOR SCOTLAND.
- ALL SLUICE VALVES TO CLOSE IN ACCORDANCE WITH SCOTTISH WATERS LOCAL POLICY AGREEMENT.
- ALL LEVELS RELATED TO ORDNANCE DATUM.
- ALL PLOTS TO BE PROVIDED WITH A SINGLE 20mm Ø CONNECTION UNLESS OTHERWISE NOTED. WORKS TO BE CARRIED OUT BY THE S.O. UNITS WITH A No. 90 WORK BEDROUNES TO BE PROVIDED WITH A SINGLE 32mm Ø CONNECTION.
- THE MINIMUM DISTANCE BETWEEN SERVICE CONNECTIONS ON THE WATER MAIN SHALL BE 450mm AND BE INSTALLED FROM THE WATER MAIN AT 90 DEGREES.
- ALL SERVICE PIPES INSTALLED UNDER DRIVEWAYS TO BE OF BARRIER PIPE MATERIAL.
- ALL WATER MAIN PIPEWORK TO BE 10 BAR SDRT1 PRESSURE RATING.
- EXCEPT WHERE SELF ANCHORING JOINTS ARE USED, THRUSTS FROM BENDS AND BRANCHES SHALL BE RESISTED BY CONCRETE THRUST BLOCKS CAST IN CONTACT WITH UNDISTURBED GROUND.
- ANCHORAGE IS REQUIRED AT BRANCHES, BENDS, DEAD ENDS, END FIRE HYDRANTS OR WASH OUT HYDRANTS, EVEN IF TEMPORARY.
- ALL BARRIER PIPE TO BE IN ACCORDANCE WITH APPENDIX M OF WATER FOR SCOTLAND UNLESS NOTED OTHERWISE.
- ALL MAINS TO BE DESIGNED AND LAD TO BE IN ACCORDANCE WITHIN APPENDIX N OF WATER FOR SCOTLAND UNLESS NOTED OTHERWISE.
- ALL BACKFILL AND BEDDING AS PER STANDARD DETAILS AND TO BE IN ACCORDANCE WITH APPENDIX O OF WATER FOR SCOTLAND UNLESS NOTED OTHERWISE.
- FOR FLATS AND MULTIPLE OCCUPANCY PREMISES, MANIFOLD CONNECTIONS ARE PERMITTED WITH A MAXIMUM OF 3 CONNECTIONS FROM A 32mm CONNECTION.
- ALL JOINTING OF PIPES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF SW'S SPECIFICATION 404 AND AS PER THE JOINTING PROCEDURE IN APPENDIX P FOR ELECTROFUSION AND THE JOINTING METHODS AS DESCRIBED IN PART 3 OF THIS SPECIFICATION AND THE MANUFACTURERS' RECOMMENDATIONS. SCOTTISH WATER MAY ISSUE A PREFERRED LIST OF MATERIALS AND SIZES. THIS SHALL ENSURE COMPATIBILITY WITH MATERIALS CURRENTLY USED AND ALLOW SCOTTISH WATER TO MINIMISE STOCKS HELD FOR MAINTENANCE PURPOSES.
- ALL PIPE WORK GREATER THAN 32mm TO BE DESIGNED BY AND CONSTRUCTED BY WIRS ACCREDITED COMPANIES.
- ALL FIRE MAINS MUST BE INSTALLED WITH RED FIRE MARKER TAPE WRAPPED AROUND THE PIPE ALONG THE ENTIRE LENGTH OF THE LAD MAIN AS PER APPENDIX Q OF WATER FOR SCOTLAND UNLESS NOTED OTHERWISE.
- CONTRACTORS SHOULD BEFORE COMMENCING ON THE CONSTRUCTION OF THE WORKS, WRITTEN AGREEMENT TO THE PROPOSED DESIGN WILL BE REQUIRED FROM SCOTTISH WATER AND A PRESTART MEETING ARRANGED TO CONFIRM SPECIFICATION COMPLIANCE AND INFORM OF ANY PHASING/TIME SCALE OF THE CONSTRUCTION AS DETAILED IN APPENDIX Q.
- BOUNDARY BOX'S SHALL BE INSTALLED IN THE FOOTWAY OR SERVICE STRIP WITHIN 750MM FROM THE PROPERTY BOUNDARY AND, WHERE POSSIBLE, SITED TO AVOID VEHICLE CROSSING POINTS.
- BOUNDARY BOX TUBES AND COVERS TO BE INSTALLED AS PER BS 5834.
- FOR THE PURPOSES OF METERED CONNECTIONS, SCOTTISH WATER SHALL STATE THEIR PREFERRED METERING OPTIONS INCLUDING METER TYPE AND SIZE.
- PRESSURE TESTING OF ALL MAINS IS TO ENSURE THE STRUCTURAL INTEGRITY OF THE CONSTRUCTED ASSET, AND MINIMISE ANY FUTURE LEAKAGE. PRESSURE TESTING IS COMPLETED TO PROVIDE SW WITH THE ASSURANCE THAT THE VESTED ASSET WILL HAVE THE REQUISITE LIFE SPAN BEFORE ANY SW INTERVENTION IS REQUIRED. PRESSURE TESTING SHALL BE COMPLETED AND ASSOCIATED REPORTING SHALL BE IN ACCORDANCE WITH SECTION 3.5 AND IN ACCORDANCE WITH APPENDIX R OF WATER FOR SCOTLAND UNLESS NOTED OTHERWISE.

NOT FOR CONSTRUCTION

GENERAL NOTES:-

- THE CONTRACTOR MUST CONSULT THE CIVIL/STRUCTURAL DESIGN ENGINEER IMMEDIATELY IF:
- GROUND CONDITIONS VARY ON SITE.
 - EXISTING BUILDINGS VARY ON SITE.
 - DIMENSIONS OR LEVELS SHOWN ARE CHANGED BY ANYONE ON SITE.
 - COMPLETE OR PARTIALLY COMPLETE STRUCTURES ARE TO BE SUBJECT TO CONSTRUCTION CLOSING OR AFFECTED BY TEMPORARY WORKS.

DO NOT SCALE - IF IN DOUBT, ASK.

LARGE SCALE DETAILS TAKE PRECEDENCE OVER SMALL SCALE DETAILS.

ALL MATERIALS ARE TO BE USED STRICTLY IN ACCORDANCE WITH MANUFACTURERS' INSTRUCTIONS.

THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS INVOLVED IN CHANGES OR MODIFICATIONS REQUESTED AND APPROVED, TO SUIT HIS PREFERRED WORK METHOD.

ALL NECESSARY METHOD STATEMENTS MUST BE PROVIDED PRIOR TO COMMENCEMENT OF ASSOCIATED SITE OPERATIONS.

THIS DRAWING SHOULD ONLY BE USED FOR CONSTRUCTION PURPOSES WHEN THE ISSUE STATUS IS 'FOR CONSTRUCTION'.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.

ALL LEVELS ARE IN METERS UNLESS OTHERWISE STATED.

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A	MJD	-	INITIAL ISSUE	2009/2020
Rev.	By	App.	Description	Date
Project				

PHASE 2, CROMLET PARK, INVERGORDON.

Drawing Title

CIVIL ENGINEERING / EXTERNAL WORKS NOTES

Architect

COLIN ARMSTRONG ARCHITECTS

Drawing ID

XXX-RAC-XX-XX-DR-C-0960-A

Job No.	Scale	Issue Status
C4933	N/A - A1	FOR INFORMATION

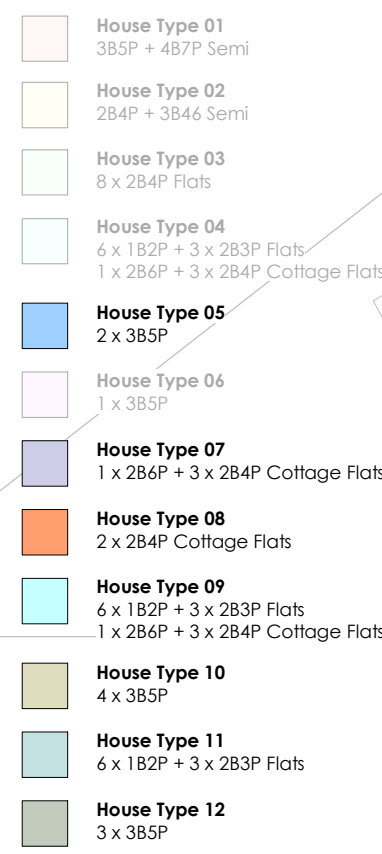
Ramsay & Chalmers

Consulting Structural & Civil Engineers

Chatan Mews Offices, 18 Chatan Place, Aberdeen, AB10 6RD

01224 560700

www.ramsaychalmers.co.uk



The Green Space Strategy and BNG enhancements will be delivered in line with the approved landscape plan, ensuring an integrated approach to ecology and public open space. The construction programme is estimated to be two years, during which phased implementation of landscaping, habitat enhancements, and public open space provision will take place.

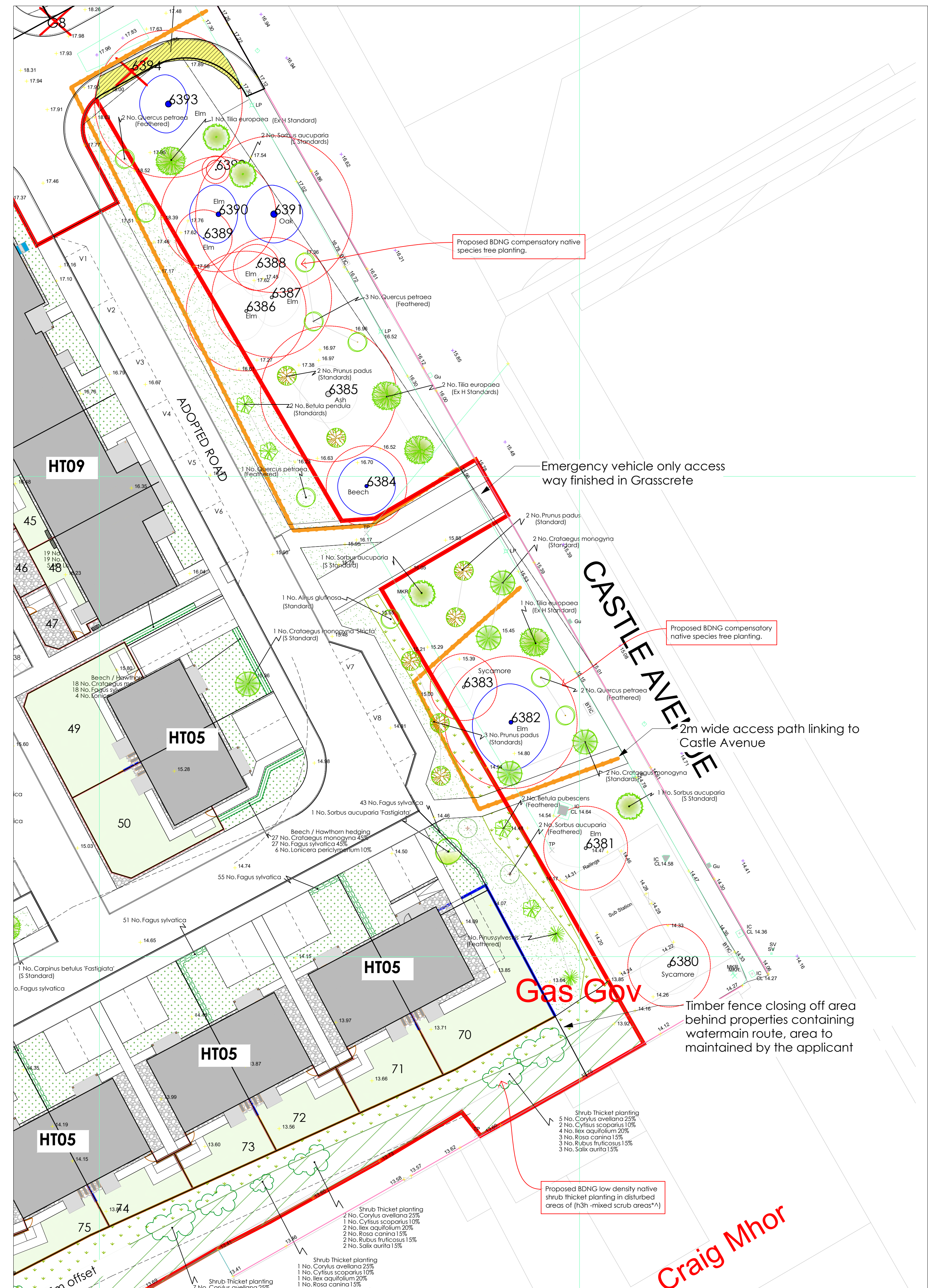
06	Additional linking path & fence added as per Access Officers comments	12/05/25
05	Revised following Transport Planning comments	19/03/25
04	Revised following Transport Planning comments	10/10/24
03	Feature wall revised to avoid visibility splays	16/07/24
02	Additional visitor spaces added & path links widened to 3m	20/06/24
01	Original - First Issue	-
Rev	Description	Date








@ A1



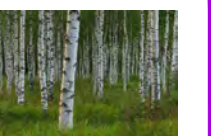
NOTES:
Proposed off-site BNG tree planting to be undertaken in areas owned by The Highland Council using native tree species trees to provide additional biodiversity enhancements in response to Atmos Consulting's PEA and BNGC reports ^{1A}(October 24).
20no. trees to be planted along Castle Avenue and 12no. are to be planted next to the back path open space.

For details of the supplementary native species thicket planting added to habitat area h3h^{1A} and open space areas and the planting schedule refer to drawing:
D1HD2305S-C0571-ZZ-ZZ-DR-L-000002 Rev 1.

REVISIONS

1:	20.03.25 Planting plan revised to suit the new CAA site layout. D1H2D23035_C00117_27.00_DR_A_0201 Rev 05. Open space paths revised, tree planting, seeding and wildflower seedling revised.Gravel mowing margins added to all units. Rear gardens revised with new bins and paths. Revised entrances to H107 blocks. Revised gardens at blocks H108, H109 and H111. Additional grass areas at paths in western open space areas added KW
2:	20.05.25 Landscape proposals revised to new site plan with additional footpath link to Castle Avenue.KW

KEITH L WOOD
LANDSCAPE DESIGN



1, Old Branziet Cottage, Balmore,
By Torrance, Glasgow, G64 4AH.
Tel: 01360 620358 Mob: 07584 054586
email: keith.l.wood@btopenworld.com
www.keithlwoodlandscapedesign.scot

Project Title: HOUSING DEVELOPMENT, CROMLET PARK,
PHASE 2, INVERGORDON, IV 18 8AH.

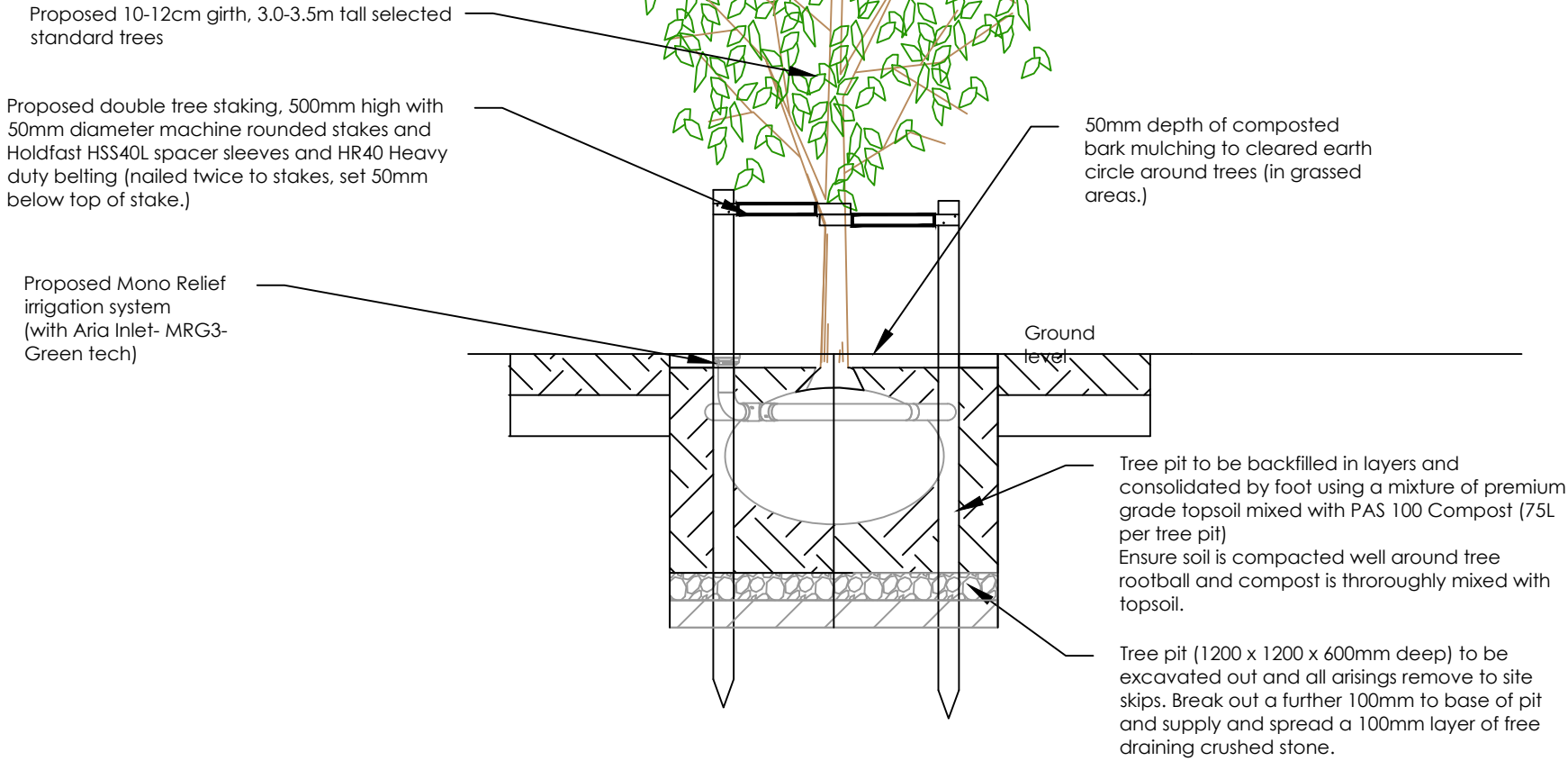
CLIENT: THE HIGHLAND COUNCIL

DRAWING TITLE: BIODIVERSITY NET GAIN TREE PLANTING PLAN- OFF-SITE AREAS.

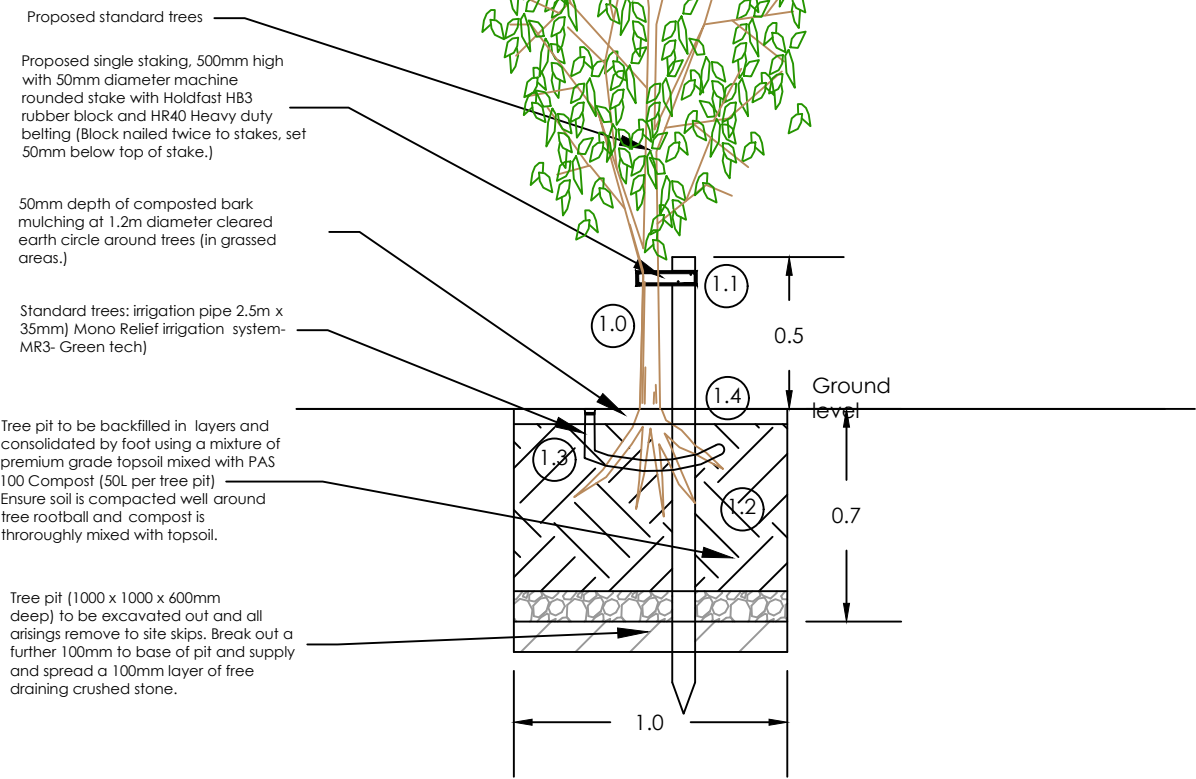
PLANNING

Scale	1:250@ A1	Date	06.11.24
Drawn	k wood	Rev.	02
Dwg No.			
D1HD23035-C0571-ZZ-ZZ-DR-L-000004			

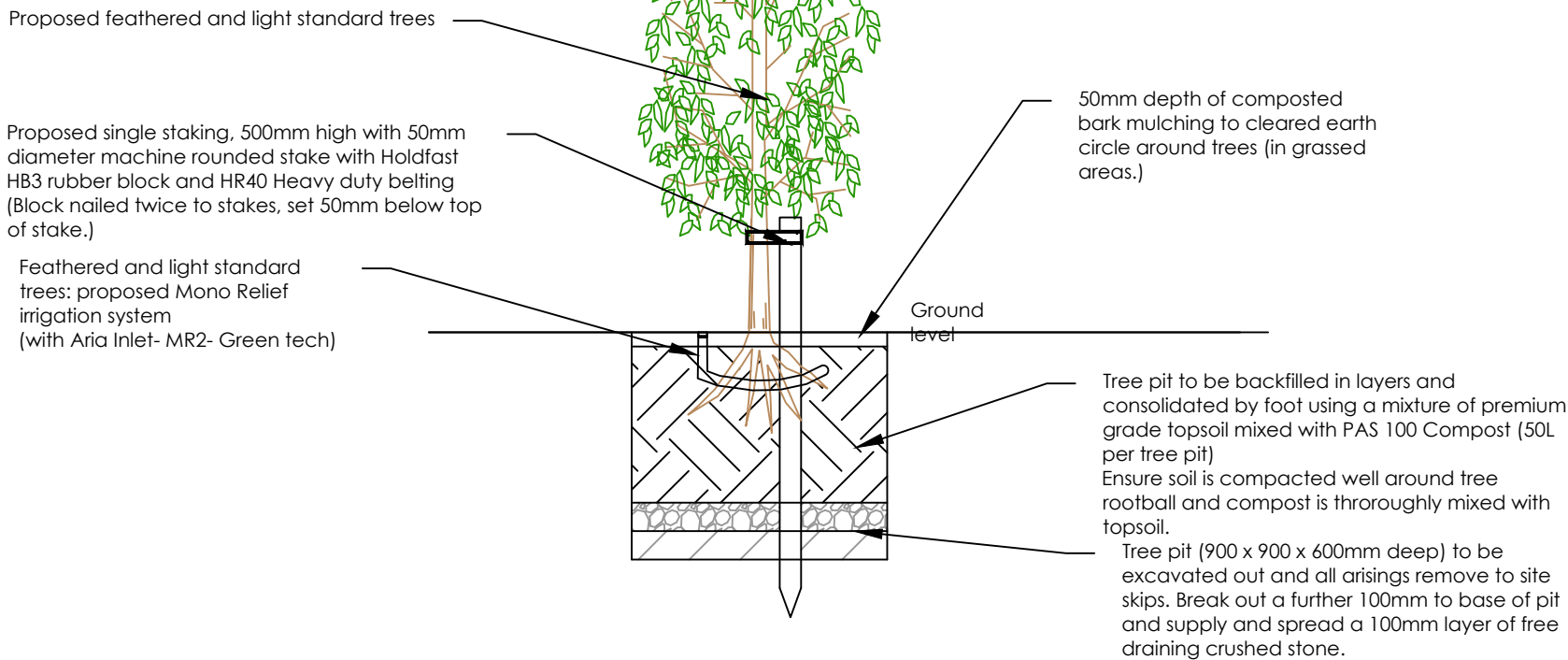
TREE PIT DETAIL - SELECTED STANDARD TREES 1:25



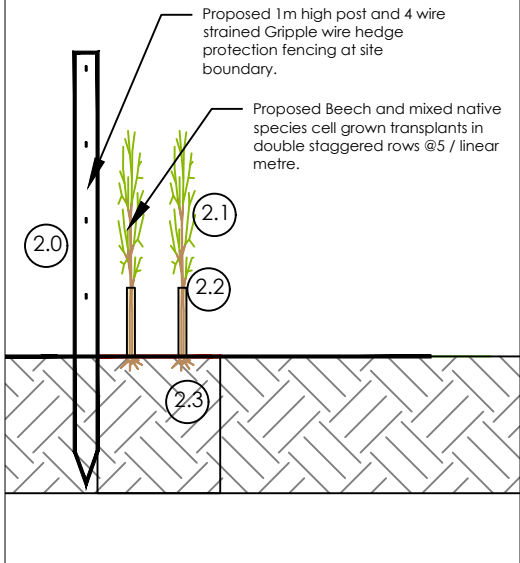
TREE PIT DETAIL - STANDARD TREES 1:25



TREE PIT DETAIL - FEATHERED / LIGHT STANDARD TREES 1:25



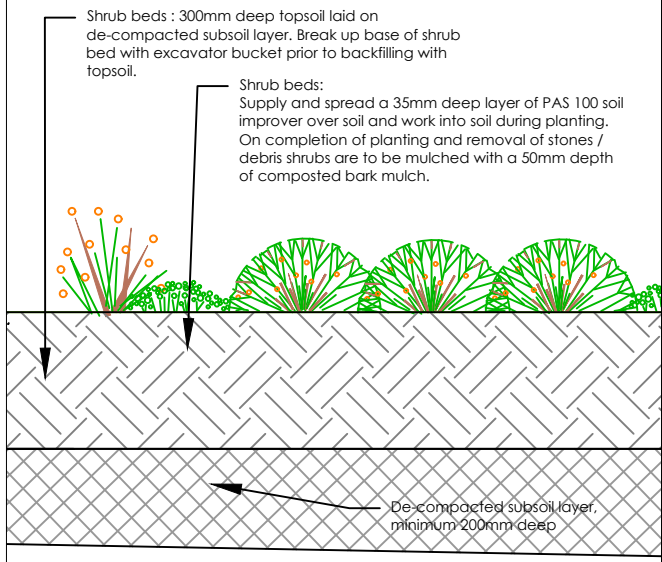
HEDGE DETAIL 1:25



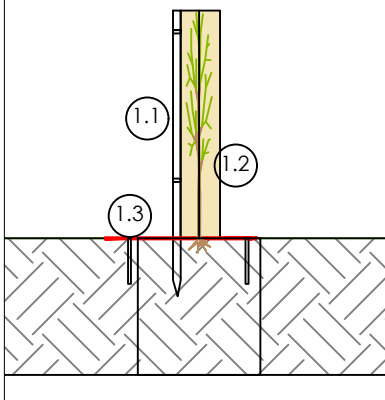
HEDGE PLANTING PROTECTION

- 1m high pressure treated 75 x 75 x 1350mm long softwood posts @ 1.8m centres with 4no. Gripple wires with 1no. Gripple tensioners on each wire.
- Beech or mixed native species cell grown transplants @ 5 plants / linear metre.
- Treebio* biodegradable spirals, 38mm diameter, 60cm high, with a single 90cm 10-12mm bamboo cane support.
- Hedging trench 450 x 300mm deep excavated out and a 35mm layer of PAS 100 soil improver spread over trench. Works in soil improver during planting. Complete with a 50mm depth of composted bark mulching.

SHRUB BED DETAIL 1:25



SHRUB THICKET



SHRUB THICKET PLANTING PROTECTION DETAILS

- 25 X 25X 750mm long pointed pressure treated softwood stakes driven into soil.
- Rainbow Terra* biodegradable tree shelters, 75-100mm diameter, 0.6m tall secured to stakes using 2no. cable ties. *Green-tech or similar.
- Ecomatt Bio, 50 x 50cm biodegradable mulch mats secured with 4no. bamboo canes at each corner.

TREE PIT DETAILS- SELECTED STANDARD TREES

- Selected standard trees: excavate out 1.2 x 1.2 x 0.6m deep tree pit and break out base for a further 100mm. Supply and spread a 100mm depth of free draining crushed stone (40-60mm size) to base of pits. Backfill pit with site salvaged (or approved premium grade topsoil) and lightly consolidate by foot. Incorporate 75L of PAS 100 soil improver into backfill mix during planting. Ensure good contact between backfilled topsoil and tree roots (rootball) to reduce any voids in backfilled tree pit material.
- Supply and plant proposed selected standard trees ensuring that the tree is vertical and planted at the nursery soil mark.
- Install double 50mm machine rounded stakes (FSC Certified and Scottish provenance) driven (vertically) into base of tree pits and finished with a straight top at 0.6m above finished ground level. Stakes to be spaced out to accommodate the proposed Holdfast spacer sleeves.
- Install and secure the tree stem with 2 no. Holdfast HR40 belting with Holdfast HSS40L spacer sleeves. Belting to be nailed to stakes at 50mm below top of stakes.
- Supply and install a Mono Relief Grande irrigation pipe, 60mm diameter with Aria inlet (ref: MRG 5- Green-tech.) around tree rootball and finish inlet at ground level.
- Supply and spread a 50mm depth of composted bark mulching around tree base.
- Thoroughly water newly planted trees as per the quantities listed below.

TREE PIT DETAILS- STANDARD TREES

- Standard trees: excavate out 1.0 x 1.0 x 0.6m deep tree pit and break out base for a further 100mm. Supply and spread a 100mm depth of free draining crushed stone (40-60mm size) to base of pits. Backfill pit with site salvaged (or approved premium grade topsoil) and lightly consolidate by foot. Incorporate 50L of PAS 100 soil improver into backfill mix during planting. Ensure good contact between backfilled topsoil and tree roots (rootball) to reduce any voids in backfilled tree pit material.
- Supply and plant proposed feathered and standard trees ensuring that the tree is vertical and planted at the nursery soil mark.
- Install single 50mm machine rounded stakes (FSC Certified and Scottish Provenance) driven (vertically) into base of tree pits and finished with a straight top at 0.5m above finished ground level.
- Install and secure the tree stem with 1 no. Holdfast HR40 belting with Holdfast HB3 rubber block. Block to be nailed to stakes at 50mm below top of stakes.
- Supply and install a Mono Relief irrigation pipe, 35mm diameter (ref: MR3 - Green-tech.) around tree roots and finish inlet at ground level.
- Supply and spread a 50mm depth of composted bark mulching around tree base.
- Thoroughly water newly planted trees as per the quantities listed below.

TREE PIT DETAILS- FEATHERED / LIGHT STANDARD TREES

- Feathered / light standard trees: excavate out 0.9 x 0.9 x 0.6m deep tree pit and break out base for a further 100mm. Supply and spread a 100mm depth of free draining crushed stone (40-60mm size) to base of pits. Backfill pit with site salvaged (or approved premium grade topsoil) and lightly consolidate by foot. Incorporate 50L of PAS 100 soil improver into backfill mix during planting. Ensure good contact between backfilled topsoil and tree roots (rootball) to reduce any voids in backfilled tree pit material.
- Supply and plant proposed feathered and standard trees ensuring that the tree is vertical and planted at the nursery soil mark.
- Install single 50mm machine rounded stakes (FSC Certified and Scottish Provenance) driven (vertically) into base of tree pits and finished with a straight top at 0.5m above finished ground level.
- Install and secure the tree stem with 1 no. Holdfast HR40 belting with Holdfast HB3 rubber block. Block to be nailed to stakes at 50mm below top of stakes.
- Supply and install a Mono Relief irrigation pipe, 35mm diameter (ref: MR2 - Green-tech.) around tree roots and finish inlet at ground level.
- Supply and spread a 50mm depth of composted bark mulching around tree base.
- Thoroughly water newly planted trees as per the quantities listed below.

HEDGING / SHRUB BEDS

- Hedging trench: excavate out a 450mm wide x 450mm deep trench in topsoiled areas and backfilled with a premium grade topsoil. Supply and spread a 35mm deep layer of PAS 100 soil improver over hedging trench and work into soil during planting.
- Shrub beds: Supply and spread a 450mm depth of premium quality topsoil over a clean de-compacted subsoil layer. Supply and spread a 35mm layer of PAS 100 soil improver and work into soil during cultivations.
- Cultivate shrub beds and remove any stones greater than 35mm and pit plant shrubs (300 x 300 x 300mm deep pits) and heel in shrubs after planting.
- Supply and spread a 50mm depth of composted bark mulching over hedging bases and shrub beds.
- Rabbit protection fencing: Supply and install rabbit protection fencing to hedging and shrub bed areas as directed by Tulloch Homes / Landscape Architect. (See detail below.)

NEW TREE PLANTING WATERING REQUIREMENTS- (The Aboricultural Association.)

- New trees should be watered in when planted and at the point of bud burst in spring, and should continue to be watered throughout spring and summer until the leaves have fallen in autumn. Evergreens should be watered a little during winter in response to a period of dry weather. Watering should continue for at least 3 summers after planting, further to this the tree should be able to access water from the surrounding soil.
- During the height of summer water should be applied at a rate of 20 litres of water every other day, or a minimum of 50 litres of water per week, during May, June, July and August. (This figure is the aim to reach during the height of summer and can be gradually be increased to this in spring and decreased before ceasing watering in the autumn.
- If the tree has an irrigation pipe then half of the water should be poured down the pipe and the other half on the surface of the tree pit.
- Ensure water is draining away after 10 minutes after application.
- Timings and frequency of watering visits, based on the above quantities for the newly planted trees should be agreed with the Project Landscape Architect or Landscape Manager, to tie in with the prevailing weather conditions during the five year establishment period.

REVISIONS

- 20.03.25 Planting plan revised to suit the new CAA site layout: DIHD23035_C0017_ZZ_00_DR_A_0201 Rev 05. Open space paths revised, tree planting, seeding and wildflower seeding revised. Gravel mowing margins added to all units. Rear gardens revised with new bins and paths. Revised entrances to HT07 blocks. Revised gardens at blocks HT08, HT09 and HT11. Additional grass areas at paths in western open space area added. KW
- 20.05.25 Landscape proposals revised to new site plan with additional footpath link to Castle Avenue. KW

KEITH L WOOD
LANDSCAPE DESIGN



1, Old Branziet Cottage, Balmore,
By Torrance, Glasgow, G64 4AH.
Tel : 01360 620358 Mob: 07584 054586
email: keith.l.wood@btopenworld.com
www.keithlwoodlandscapedesign.scot

Project Title: HOUSING DEVELOPMENT, CROMLET PARK,
PHASE 2, INVERGORDON, IV 18 0AH.

CLIENT: THE HIGHLAND COUNCIL

DRAWING TITLE: LANDSCAPE PROPOSALS-
PLANTING DETAILS

PLANNING

Scale	1:25@ A2	Date	30.10.23
Drawn	k wood	Rev.	02
Dwg No.			
DIHD23035-C0571-ZZ-ZZ-DR-L-000003			



K WOOD- THE HIGHLAND COUNCIL- CROMLET PARK PHASE 2 HOUSING, INVERGORDON- PLANTING SCHEDULE 20.03.2023

Trees						
Species	Height	Girth	Pot Size	Specification	Density	Number
Alnus glutinosa	250-300cm	8-10cm	bare-root	Standard 8 brks 2x	Counted	1
Betula pendula	250-300cm	8-10cm	bare-root	Standard 8 brks 2x	Counted	2
Betula pendula Fastigiata	300-350cm	10-12cm	Rootballed	Selected Standard 8 brks 2x	Counted	4
Betula pubescens	150-175cm		bare-root	Feather 3 brks 2x	Counted	6
Cornus betulus Fastigiata	300-350cm	10-12cm	Rootballed	Selected Standard 4 brks 2x	Counted	1
Cornus monogyna	250-300cm	8-10cm	Rootballed	Standard 4 brks 2x	Counted	4
Cornus monogyna Stricta	300-350cm	10-12cm	Rootballed	Selected Standard 4 brks 2x	Counted	4
Fagus sylvatica	80-100cm		bare-root	1+2 Transplants 4 brks	5/m	837
Malus sylvestris	250-300cm	8-10cm	Rootballed	Standard 3 brks 2x	Counted	3
Prunus padus	250-300cm	8-10cm	bare-root	Standard 3 brks 2x	Counted	4
Prunus padus	150-175cm		bare-root	Feather 3 brks 2x	Counted	3
Quercus petraea	250-300cm	8-10cm	Rootballed	Standard 3 brks 2x	Counted	6
Quercus petraea	150-175cm		bare-root	Feather 3 brks 2x	Counted	12
Salix caprea	150-175cm		bare-root	Feather 3 brks 2x	Counted	2
Salix cinerea	150-175cm		bare-root	Feather 3 brks 2x	Counted	2
Sorbus aucuparia	150-175cm		bare-root	Feather 3 brks 2x	Counted	5
Sorbus aucuparia	300-350cm	10-12cm	Rootballed	Selected Standard 4 brks 2x	Counted	7
Sorbus aucuparia Fastigiata	300-350cm	10-12cm	Rootballed	Selected Standard 4 brks 2x	Counted	3
Tilia europaea	350-400cm	14-16cm	Rootballed	Extra Heavy Standard 4 brks 3x	Counted	4

Shrubs						
Species	Height	Pot Size	Specification	Density	Number	
Amelanchier canadensis	80-100cm	10L	Several shoots 3/4 brks	Counted	2	
Cornus sanguinea Midwinter Fire	50-60cm	3L	Bushy 3 brks	3/m ²	18	
Cornus maxima Purpurea	80-100cm	10L	Bushy specimen 4 brks	Counted	1	
Potentilla Gold digger	30-40cm	3L	Bushy 4 brks	3/m ²	131	

Conifers						
Species	Height	Pot Size	Specification	Density	Number	
Pinus sylvestris	100-125cm	Rootballed	Leader & laterals 2x	Counted	2	

Beech / Hawthorn Hedging mix						
Species	Height	Pot Size	Specification	Density	Percentage Contribution	Number
Cornus monogyna	80-100cm	Bare root	1+1: Transplants: 3 brks	5/m	45%	263
Fagus sylvatica	80-100cm	Bare root	1+2: Transplants: 4 brks	5/m	45%	263
Lonicera periclymenum	40-60cm	200cc	Cell grown transplant	5/m	10%	62
						Total: 588

Native species thicket mix						
Species	Height	Pot Size	Specification	Density	Percentage Contribution	Number
Corylus avellana	40-50cm	200cc	Cell grown transplant	1/m ²	25%	71
Cytisus scoparius	40-50cm	200cc	Cell grown transplant	1/m ²	10%	32
Ilex aquifolium	40-50cm	200cc	Cell grown transplant	1/m ²	20%	59
Rosa canina	40-50cm	200cc	Cell grown transplant	1/m ²	15%	46
Rubus fruticosus	40-50cm	200cc	Cell grown transplant	1/m ²	15%	46
Salix caprea	40-50cm	200cc	Cell grown transplant	1/m ²	15%	46
						Total: 300

- REVISIONS
- 20.03.23 Landscape plan revised to suit the new CAA site layout.
DH023035-C0017-22-DR-00000 Rev 05.
Open space paths revised, tree planting seeding and wildflower seeding revised. Gravel mowing margins added to all units. Rear gardens revised with new trees and paths. Revised entrances to HT07 blocks. Revised gardens at blocks HT08, HT09 and HT11. Additional grass areas of paths in western open space area added NW.
 - 20.05.23 Landscape proposals revised to new site plan with additional topsoil line to Castle Avenue NW.

KEITH L WOOD
LANDSCAPE DESIGN

1 Old Brunzate Cottage, Baltimore, By Torrance, Glasgow, G64 4AA.
Tel: 01620 624358 Mobile 07974 054566
email: keith.l.wood@kwpdesign.co.uk
www.keithwoodlandscapedesign.co.uk

Project Title: HOUSING DEVELOPMENT, CROMLET PARK, PHASE 2, INVERGORDON, IV 8 6AH.

CLIENT: THE HIGHLAND COUNCIL

DRAWING TITLE: LANDSCAPE PROPOSALS- PHASE 2 PLANTING PLAN.

PLANTING

Scale: 1:250 @ A0 Date: 06.11.24
Drawn: k.wood Rev: 02
Dwg No: DH023035-C0017-22-DR-00000



KEY

EXISTING TREES AND WOODLAND AREAS

- Existing trees retained and protected to BS5837:2012. For full tree details and Categories refer to PALS Tree Services Tree Survey October 2022.
- Category U trees recommended for felling (PALS Tree Services Tree Survey October 2022)
- Mixed species tree groups (Some pathside coppicing recommended by PALS Tree Survey October 2022.)
- Oak trees in central open space to be retained and protected. Path routes to be determined by tree positions (to be agreed with HCS Architects)
- Existing trees to be felled to accommodate the proposed housing and roads layout.
- Existing grasslands / scrub areas surrounding existing retained trees along southern boundary and at the central open space area to be fenced off and vegetation protected. Grasslands / mixed scrub areas to be managed and enhancement native species shrub planting added into areas, as advised by Almos Consulting.

PROPOSED NATIVE SPECIES SHRUB THICKET PLANTING TO OPEN SPACES

- Proposed low density call grown shrub transplants in biodegradable shelters with stakes and 2no. cable ties. Native shrub species mix including: Hazel 20%, Broom 10%, Holly 20%, Dog rose 10%, Bramble 30%, Willow 15%, Gorse 5% and Blackberry 15%. (Planting at 1m2 in random species groupings)

PROPOSED TREE PLANTING TO FRONT GARDENS AND STREETS

- Proposed 3.3m tall, selected standard tree planting - Hornbeam, Beech, Rowan and Cedar and Bird Cherry trees. Trees to be supplied with ArborTech shrimmer guards for protection.
- Proposed 2.5 - 3.0m tall, standard tree planting - Alder, Birch, Rowan and Bird Cherry trees. Trees to be supplied with ArborTech shrimmer guards for protection.
- Proposed Beech hedging of front gardens maintained at 0.9m. (Hedging to be protected with post and wire fencing and spire guards.)
- Proposed Beech / Hawthorn / Honeylocust hedging at front gardens maintained at 0.9m (Hedging to be protected with post and wire fencing.)

PROPOSED FEATHERED TREE PLANTING TO SITE BOUNDARIES AND OPEN SPACES

- Feathered 1.75m tall trees - Silver Birch species. Trees supplied with ArborTech shrimmer guards for protection.
- Feathered 1.75m tall trees - Downy Birch species. Trees supplied with ArborTech shrimmer guards for protection.
- Feathered 1.75m tall trees - Rowan species. Trees supplied with ArborTech shrimmer guards for protection.
- Feathered 1.75m tall trees - Oak species. Trees supplied with ArborTech shrimmer guards for protection.

PROPOSED 1.1-2m high feathered conifer trees - Pine species. Trees supplied with ArborTech shrimmer guards for protection.

PROPOSED GRASS SEEDING / TURFING / GRASS + WILDFLOWER SEEDING

- Proposed communal mown grass areas - areas to be topsoiled, cultivated, weed-killed, stone picked and grass seeded.
- Proposed front gardens: topsoiled, cultivated, stone picked and turf.
- Proposed rear gardens: topsoiled, cultivated and stone picked.
- Proposed species rich long grass areas to be sown with a grass / wildflower seed mix. Areas to be managed to promote the biodiversity of the areas with regular annual cutting of seeded areas and the control of invasive weed species.

PROPOSED SHRUB PLANTING TO OPEN SPACES

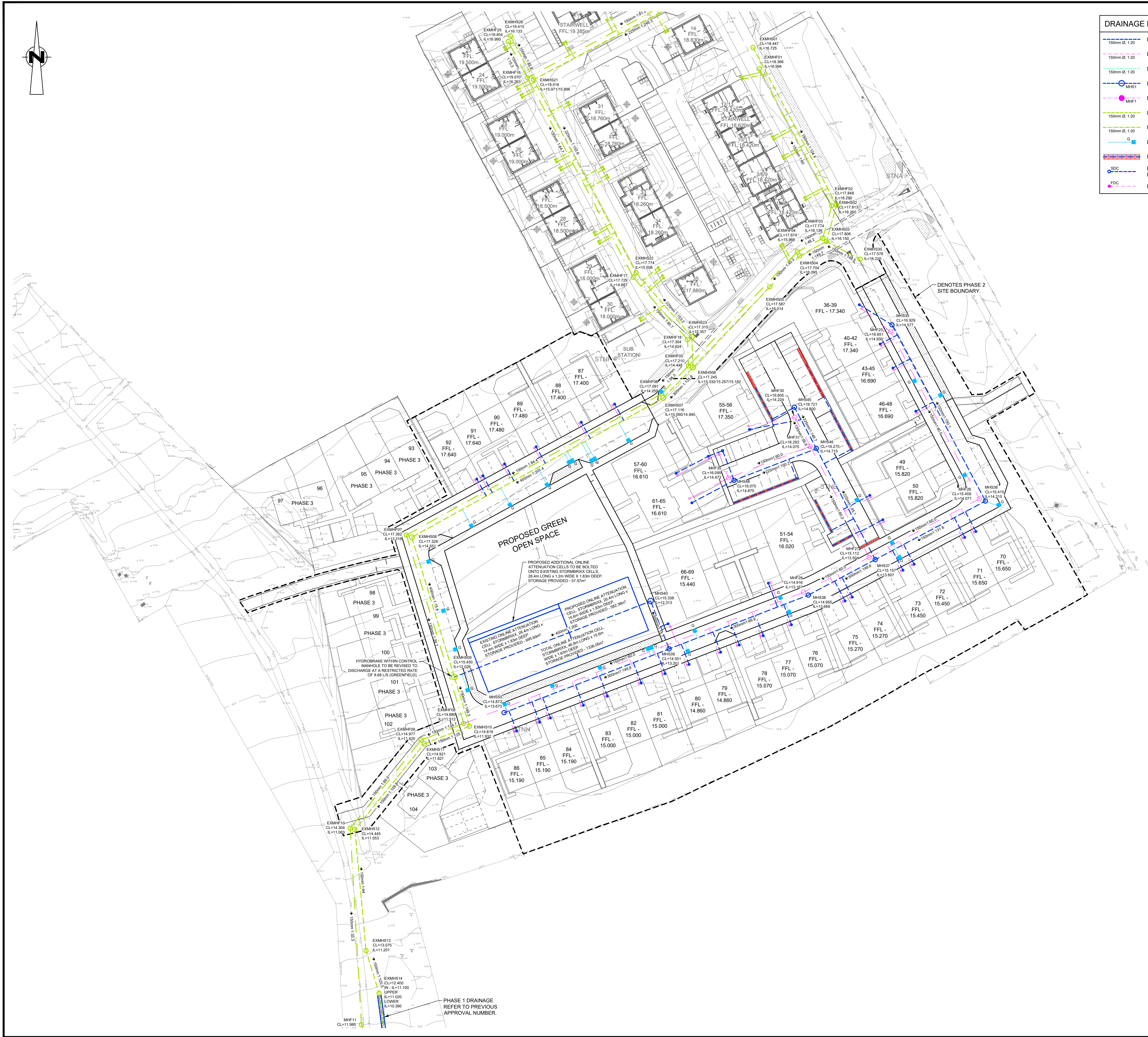
- Proposed shrub planting to open space areas at site entrance.

GRAVEL STRIPS AT BUILDINGS / FENCES

- Rear gardens with 50mm deep gravel finish laid on a weed control fabric on a compacted Type 1 base.
- Narrow strips at buildings / fences with 50mm deep gravel finish laid on a weed control fabric on a compacted Type 1 base.

REVISIONS

- 20.11.23 Landscape proposals revised to suit new site plan including revised attenuation system, revised gardens to plots 56-64 and 37-47. Trees 6487 and 6488 will have to be removed to accommodate the new attenuation system. Replacement trees added in the open space area in response to show gravel strips and gravel near garden walls.
- 03.04.24 Landscape proposals revised to improve the heritage appearance of plots 70-86 with increased Beech hedging and tree planting following discussions with HCS JW.
- 19.07.24 Landscape proposals revised to new site plan (CAA - A201 Rev 03) incorporating the latest transport planning comments.
- 04.09.24 Landscape proposals revised to omit trees and shrubs within junction visibility splay JW.
- 07.11.24 Landscape proposals updated to increase the biodiversity net gain requirements, as per Almos's report. Additional areas of native species thicket planting added to southern boundary and 2no. additional native species trees added to open space of Castle Ave. Tree planting locations revised to avoid clutter with drainage system: trees in front gardens (plots 71-85 and 88-92) omitted. See drawing 000004 for details of compensatory planting and tree planting of Back Path open space JW.
- 20.03.25 Planting plan revised to suit the new CAA site layout. DE422035, C0017, J2, J3, J4, J5, J6, J7, J8, J9, J10, J11, J12, J13, J14, J15, J16, J17, J18, J19, J20, J21, J22, J23, J24, J25, J26, J27, J28, J29, J30, J31, J32, J33, J34, J35, J36, J37, J38, J39, J40, J41, J42, J43, J44, J45, J46, J47, J48, J49, J50, J51, J52, J53, J54, J55, J56, J57, J58, J59, J60, J61, J62, J63, J64, J65, J66, J67, J68, J69, J70, J71, J72, J73, J74, J75, J76, J77, J78, J79, J80, J81, J82, J83, J84, J85, J86, J87, J88, J89, J90, J91, J92, J93, J94, J95, J96, J97, J98, J99, J100, J101, J102, J103, J104, J105, J106, J107, J108, J109, J110, J111, J112, J113, J114, J115, J116, J117, J118, J119, J120, J121, J122, J123, J124, J125, J126, J127, J128, J129, J130, J131, J132, J133, J134, J135, J136, J137, J138, J139, J140, J141, J142, J143, J144, J145, J146, J147, J148, J149, J150, J151, J152, J153, J154, J155, J156, J157, J158, J159, J160, J161, J162, J163, J164, J165, J166, J167, J168, J169, J170, J171, J172, J173, J174, J175, J176, J177, J178, J179, J180, J181, J182, 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	150mm Ø, 1:20	DENOTES SURFACE WATER SEWER.
	150mm Ø, 1:20	DENOTES FOUL WATER SEWER.
	150mm Ø, 1:20	DENOTES PRIVATE ROADS DRAINAGE.
	150mm Ø, 1:20	DENOTES SURFACE WATER MANHOLE.
	150mm Ø, 1:20	DENOTES FOUL WATER MANHOLE.
	150mm Ø, 1:20	DENOTES EXISTING SURFACE WATER SEWER.
	150mm Ø, 1:20	DENOTES EXISTING FOUL WATER SEWER.
	150mm Ø, 1:20	DENOTES GULLY AND TAIL.
	150mm Ø, 1:20	DENOTES ACO-CHANNEL.
	150mm Ø, 1:20	DENOTES SURFACE WATER DISCONNECTION MANHOLE.
	150mm Ø, 1:20	DENOTES FOUL WATER DISCONNECTION MANHOLE.

PIPE MATERIAL	COVER TO SOFFIT
DUCTILE IRON	550mm
FIRECLAY	750mm (PIPE TO HAVE CONCRETE ENCASURE)
PLASTIC	850mm (PIPE TO HAVE CONCRETE PROTECTION)

DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE
LESS THAN 375	1200
375 - 450	1350
450 - 700	1500
750 - 1050	1800
1125 - 1500	2100
>1500	CONSULT SCOTTISH WATER

TOPOGRAPHICAL SURVEY BASED ON (PROPERTY AND LAND SURVEYS) PROJECT '(1102201)'. DATE RECEIVED 11.10.2022.

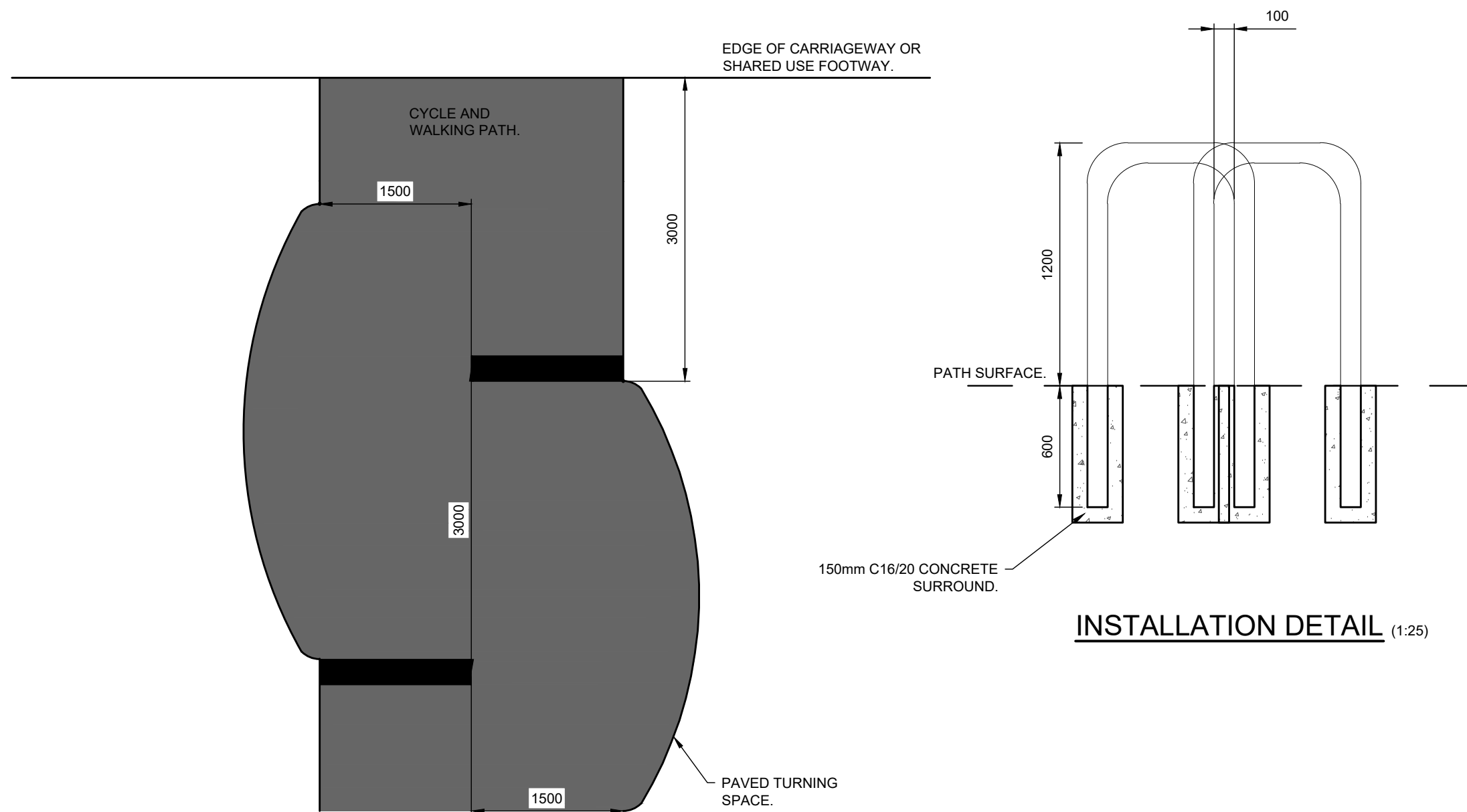
GENERAL NOTES:-			
THE CONTRACTOR MUST CONSULT THE CIVIL/STRUCTURAL DESIGN ENGINEER IMMEDIATELY IF: - EXISTING BUILDINGS VARY ON SITE. - DIMENSIONS OR LEVELS SHOWN ARE CHANGED BY ANYONE ON GROUND - COMPLETE OF ANY OF THE STRUCTURES ARE TO BE SUBJECT TO CONSTRUCTION LOADING OR AFFECTED BY TEMPORARY WORKS. DO NOT SCALE - IF IN DOUBT, ASK LARGE SCALE DETAILS TAKE PRECEDENCE OVER SMALL SCALE DETAILS. ALL MATERIALS ARE TO BE USED STRICTLY IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS INVOLVED IN CHANGES OR MODIFICATIONS REQUESTED AND APPROVED, TO SUIT HIS PREFERRED WORK METHOD. ALL NECESSARY METHOD STATEMENTS MUST BE PROVIDED PRIOR TO COMMENCEMENT OF OPERATIONS. THIS DRAWING SHOULD ONLY BE USED FOR CONSTRUCTION PURPOSES WHEN THE ISSUE STATUS IS "FOR CONSTRUCTION" ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED. ALL LEVELS ARE IN METERS UNLESS OTHERWISE STATED.			
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G	MUD	GENERAL PLAN AND FOOTWAYS REVISED BASED ON COMMENTS	19.03.2025
F	NJH	GENERAL UPDATE BASED ON SCOTTISH WATER COMMENTS	16.01.2025
E	NJH	GENERAL UPDATE BASED ON PLANNING COMMENTS	01.10.2024
D	MUD	- DRAINAGE REVISED TO PLANNING COMMENTS.	05.07.2024
C	MUD	- DEVELOPMENT RED BOUNDARY UPDATED.	06.12.2023
B	JCB	CELLULAR STORAGE UPDATED; BACKGROUND LAYOUT UPDATED.	13.11.2023
A	JCB	INITIAL ISSUE.	13.10.2023
Rev.	By	Description	Date

Job No. C4933	Scale 1:500 - A1 1:1000 - A3	Issue Status FOR PLANNING
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Consulting Structural & Civil Engineers
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01224 560700
www.ramsaychalmers.co.uk

NOTE:-

- A. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS
B. FINAL LOCATION OF CHICANE TO BE DECIDED ON SITE BY ENGINEER.
C. HOOPS TO BE 100mm, HOT DIP GALVANIZED STEEL TO BS EN 150146. ANY DAMAGE TO THE GALVANIZED FINISH TO BE MADE GOOD WITH ZINC RICH PAINT OF A LEAST EQUAL THICKNESS TO THE GALVANIZED ALL TO BS EN 12944: 1998.
D. SURFACING TO BE MADE GOOD AROUND CHICANE FOOTINGS TO MATCH SURROUNDING PATH AND TO PREVENT PONDING.
E. BARRIER TO TIE IN WITH PROPOSED/EXISTING FENCES AND/OR GATE POSTS TO PROPOSED/EXISTING ACCESS GATE.



TYPICAL LAYOUT (1:50)

INSTALLATION DETAIL (1:25)

NOT FOR CONSTRUCTION

GENERAL NOTES:-

THE CONTRACTOR MUST CONSULT THE CIVIL/STRUCTURAL DESIGN ENGINEER IMMEDIATELY IF:
a) GROUND CONDITIONS VARY ON SITE.
b) EXISTING BUILDINGS VARY ON SITE.
c) DIMENSIONS OR LEVELS SHOWN ARE CHANGED BY ANYONE ON SITE.
d) COMPLETE OR PARTIALLY COMPLETE STRUCTURES ARE TO BE SUBJECT TO CONSTRUCTION LOADING OR AFFECTED BY TEMPORARY WORKS.

DO NOT SCALE - IF IN DOUBT, ASK.

LARGE SCALE DETAILS TAKE PRECEDENCE OVER SMALL SCALE DETAILS.

ALL MATERIALS ARE TO BE USED STRICTLY IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS INVOLVED IN CHANGES OR MODIFICATIONS REQUESTED AND APPROVED, TO SUIT HIS PREFERRED WORK METHOD.

ALL NECESSARY METHOD STATEMENTS MUST BE PROVIDED PRIOR TO COMMENCEMENT OF ASSOCIATED SITE OPERATIONS.

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ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.

ALL LEVELS ARE IN METERS UNLESS OTHERWISE STATED.

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A	MJD	-	INITIAL ISSUE	05.07.2024
Rev.	By	App.	Description	Date

Project
**PHASE 2, CROMLET PARK,
INVERGORDON.**

Drawing Title
TYPICAL BAFFLE BARRIER DETAIL.

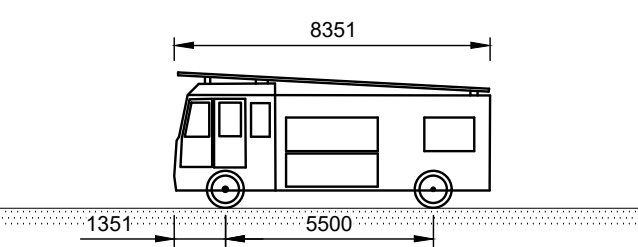
Architect
COLIN ARMSTRONG ARCHITECTS

Drawing ID
XXX-RAC-ZZ-XX-DR-C-0164-A

Job No.	Scale	Issue Status
C4933	AS SHOWN - A3	FOR PLANNING

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SCANIA RESCUE PUMP 18T	
	
OVERALL LENGTH	8.351 m
OVERALL WIDTH	3.0 m
OVERALL BODY HEIGHT	3.372 m
MINIMUM BODY GROUND CLEARANCE	0.337 m
TRACK WIDTH	2.8 m
LOCK TO LOCK TIME	6.00 SEC
WALL TO WALL TURNING RADIUS	8.500 m

NOTE
SITE LAYOUT BASED ON COLIN ARMSTRONG ARCHITECTS DRAWING "PROPOSED SITE PLAN" RECEIVED ON 19.03.2025.

NOT FOR CONSTRUCTION

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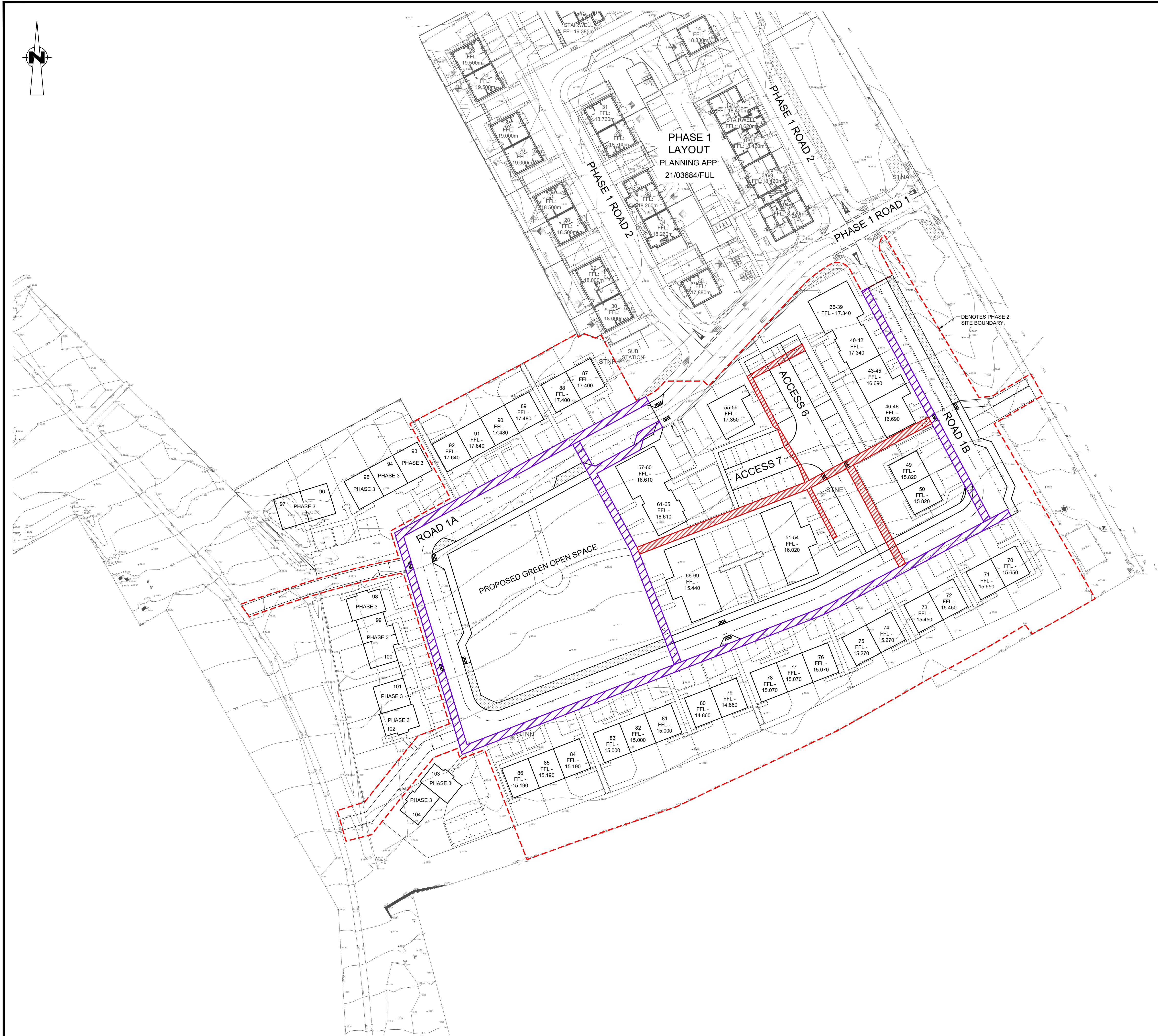
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ALL LEVELS ARE IN METERS UNLESS OTHERWISE STATED.

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B	MJD	-	PARKING AND FOOTWAYS REVISED BASED ON COMMENTS.	19.03.2025	
A	LSW	MJD	INITIAL ISSUE.	05.07.2024	
Rev.	By	App.	Description		Date

Project		
PHASE 2, CROMLET PARK, INVERGORDON		
Drawing Title		
PHASE 2 - PRIVATE ROAD FIRE APPLIANCE SWEEP PATHS		
Architect		
COLIN ARMSTRONG ARCHITECTS		
Drawing ID		
XXX-RAC-ZZ-XX-DR-C-0163-B		
Job No.	Scale	Issue Status
C4933	1:250 - A1 1:500 - A3	FOR INFORMATION
Ramsay & Chalmers		
Consulting Structural & Civil Engineers		
Chattan Mews Offices, 18 Chattan Place, Aberdeen, AB10 6RD		
01224 560700		
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LEGEND

- DENOTES SERVICE STRIP IN ADOPTABLE ROADS.
- DENOTES SERVICE STRIP IN PRIVATE ROADS.

NOTE

ALL SERVICES TO BE PLACED IN FOOTWAYS OR VERGES OF THE ADOPTABLE ROADS.

NOTE

SITE LAYOUT BASED ON COLIN ARMSTRONG ARCHITECTS DRAWING "PROPOSED SITE PLAN" RECEIVED ON 19.03.2025.

NOTE

TOPOGRAPHICAL SURVEY BASED ON (PROPERTY AND LAND SURVEYS) PROJECT "1102201". DATE RECEIVED 11.10.2022.

NOT FOR CONSTRUCTION

GENERAL NOTES:-

THE CONTRACTOR MUST CONSULT THE CIVIL/STRUCTURAL DESIGN ENGINEER IMMEDIATELY IF:
a) GROUND CONDITIONS VARY ON SITE.
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Rev	By	App	Description	Date
F	MJD	-	PARKING AND FOOTWAYS REVISED BASED ON COMMENTS.	19.03.2025
E	NHJ	MJD	GENERAL UPDATE BASED ON PLANNING COMMENTS.	01.10.2024
D	MJD	-	GENERAL UPDATE BASED ON PLANNING COMMENTS.	05.07.2024
C	MJD	-	DEVELOPMENT RED BOUNDARY UPDATED.	08.12.2023
B	MJD	-	BACKGROUND LAYOUT REVISED.	13.11.2023
A	JCB	MJD	INITIAL ISSUE.	15.10.2023

Project

PHASE 2, CROMLET PARK,
INVERGORDON.

Drawing Title

SERVICE ROUTES.

Architect

COLIN ARMSTRONG ARCHITECTS

Drawing ID

XXX-RAC-ZZ-XX-DR-C-0162-F

Job No.	Scale	Issue Status
C4933	1:500 - A1 1:1000 - A3	FOR PLANNING

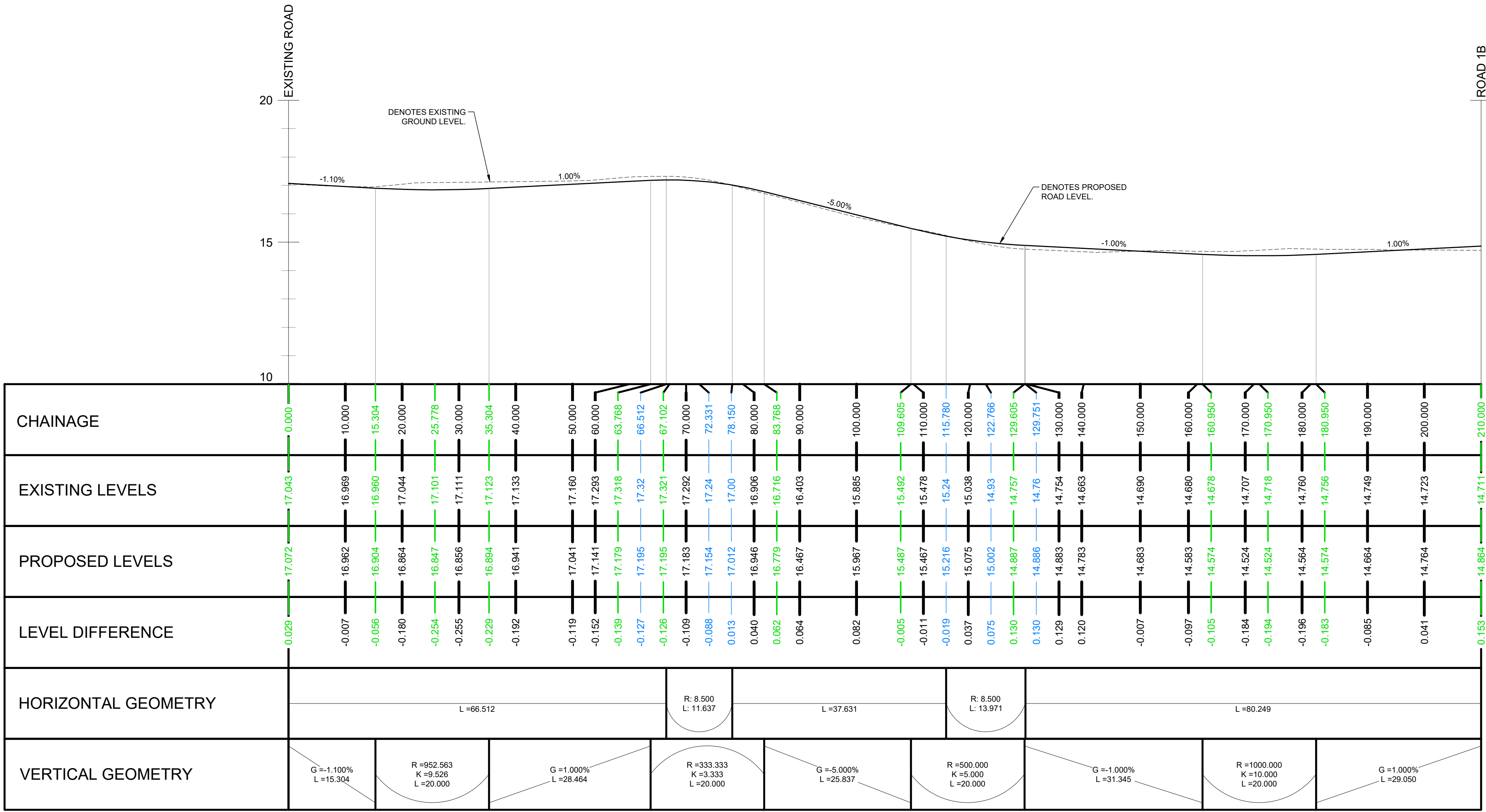
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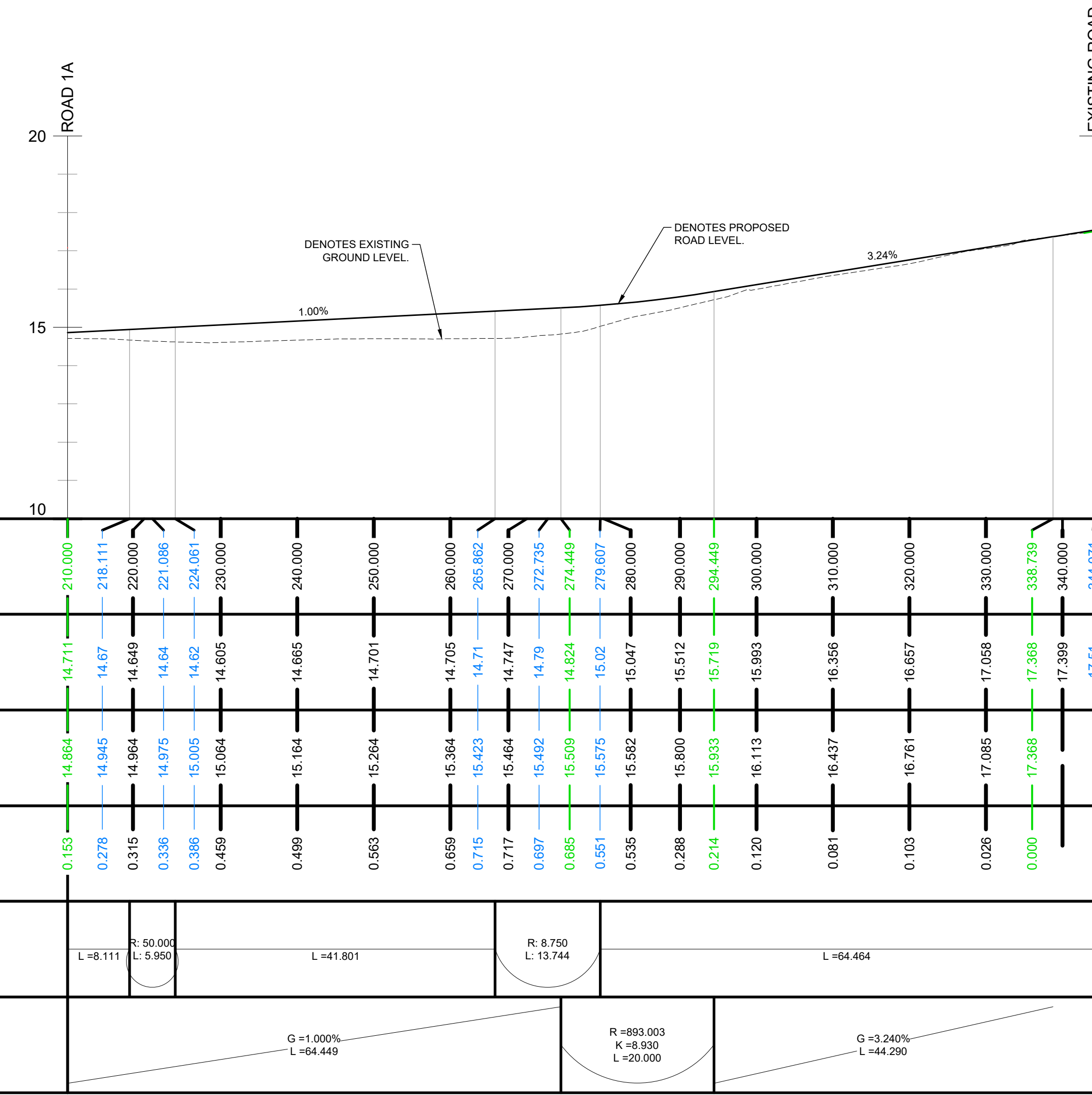
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01224 560700

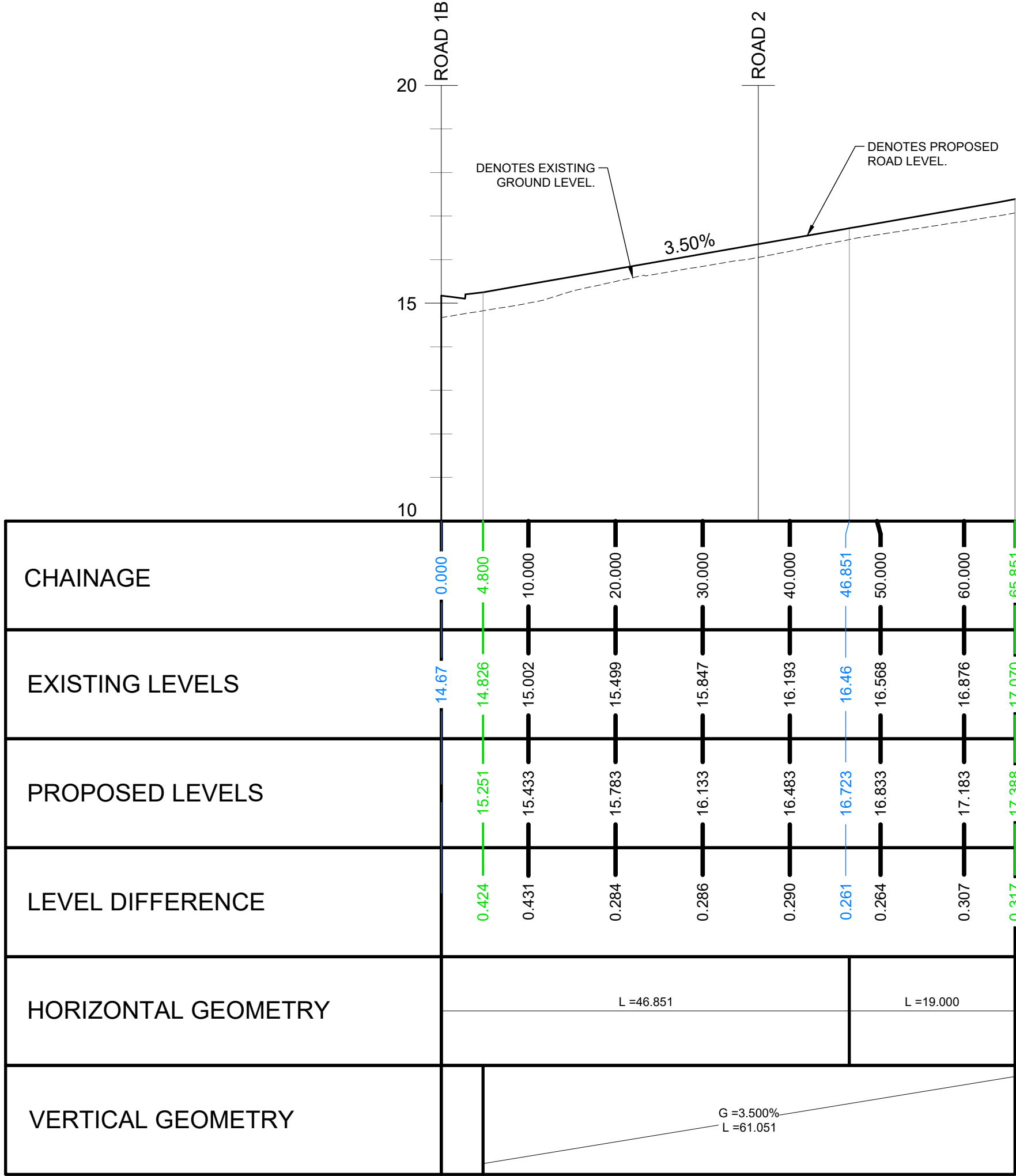
www.ramsaychalmers.co.uk



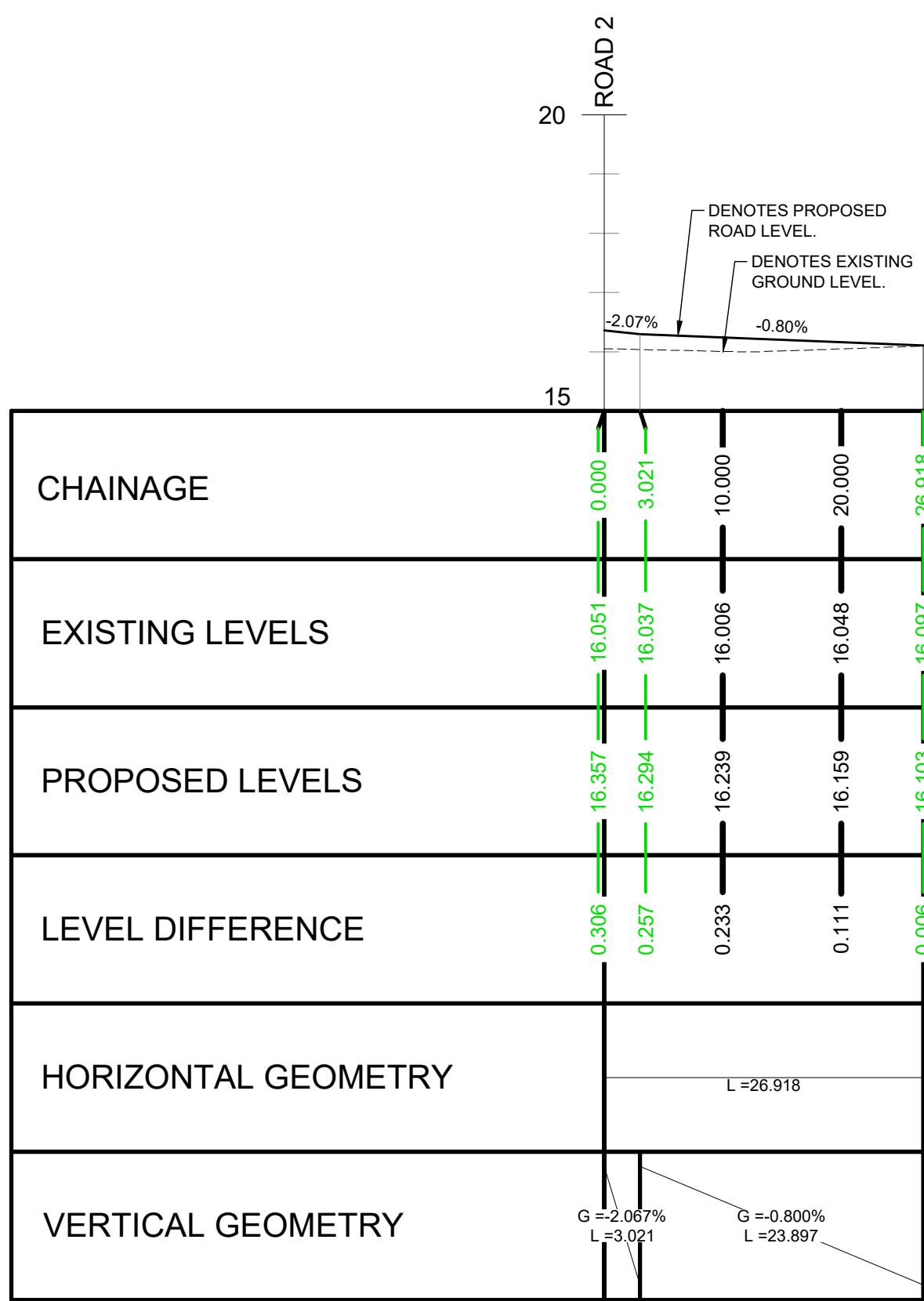
ROAD 1A ADOPTABLE ROAD PROFILE - CH 0.000 TO CH 210.000 (HORIZONTAL 1:500) (VERTICAL 1:100)



ROAD 1B ADOPTABLE ROAD PROFILE - CH 210.000 TO CH 344.071 (HORIZONTAL 1:500) (VERTICAL 1:100)



ROAD 2 ADOPTABLE ROAD PROFILE - CH 0.000 TO CH 60.851 (HORIZONTAL 1:500) (VERTICAL 1:100)



ROAD 3 ADOPTABLE ROAD PROFILE - CH 0.000 TO CH 26.918 (HORIZONTAL 1:500) (VERTICAL 1:100)

NOT FOR CONSTRUCTION

GENERAL NOTES:

THE CONTRACTOR MUST CONSULT THE CIVIL/STRUCTURAL DESIGN ENGINEER IMMEDIATELY IF:

- (a) GROUND CONDITIONS VARY ON SITE
- (b) EXISTING BUILDINGS ADJACENT TO SITE
- (c) DIMENSIONS OR LEVELS SHOWN ARE CHANGED BY ANYONE ON SITE
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TS	MAD	ROAD 2 PROFILE HAS BEEN REVISED	19.10.2025
TS	MAD	FINAL ISSUE	19.10.2025
TS	MAD	FOR PLANNING	19.10.2025

Project

PHASE 2, CROMLET PARK, INVERGORDON.

Drawing Title

ROAD PROFILES.

Architect

COLIN ARMSTRONG ARCHITECTS.

Drawing ID

XXX-RAC-ZZ-XX-DR-C-0161-B

Job No.

C4933

Scale

1:500 - A0
1:1000 - A2

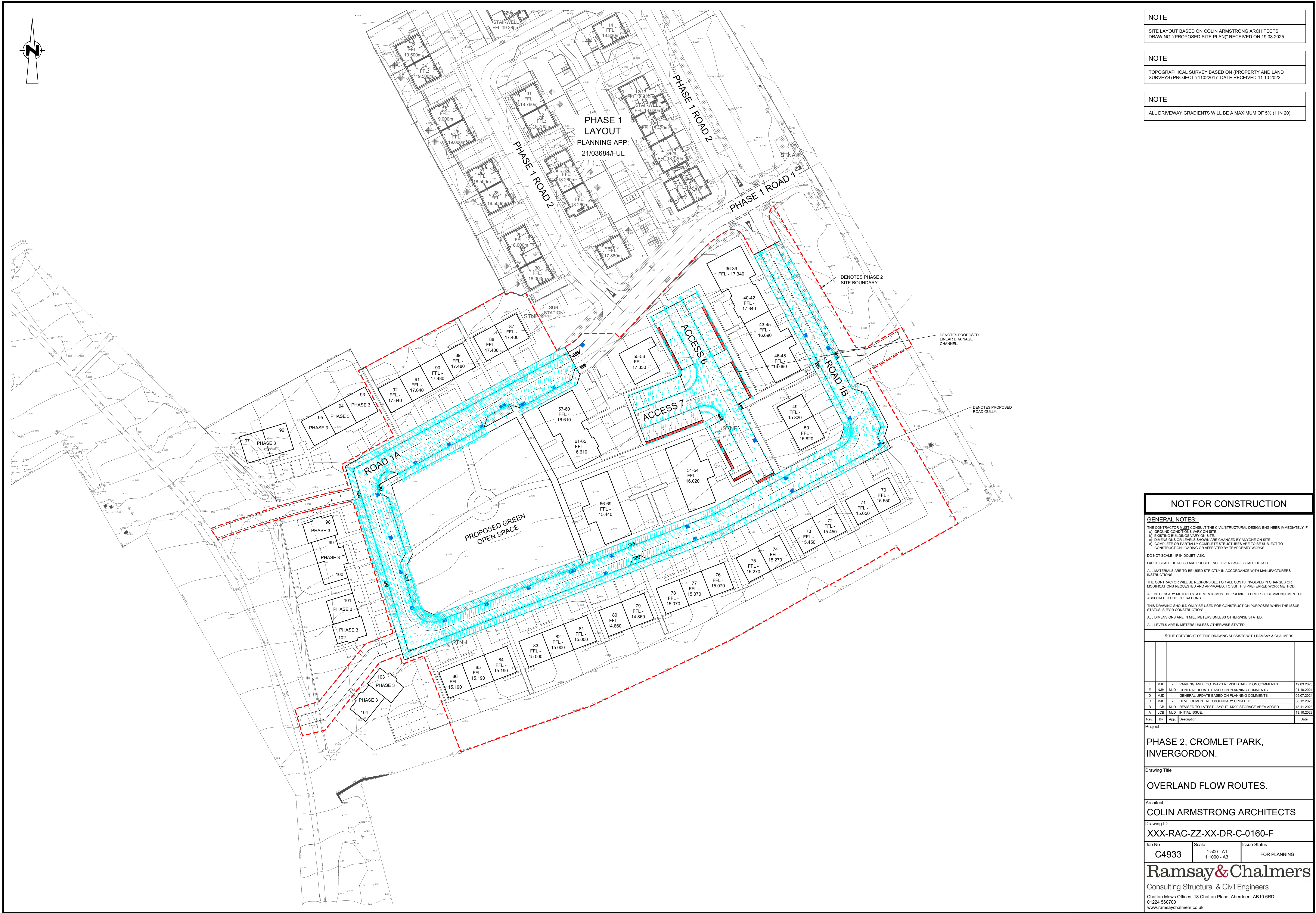
Issue Status

FOR PLANNING

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SITE LAYOUT BASED ON COLIN ARMSTRONG ARCHITECTS
DRAWING "*(PROPOSED SITE PLAN)*" RECEIVED ON 19.03.2025.

TOPOGRAPHICAL SURVEY BASED ON (PROPERTY AND LAND SURVEYS) PROJECT '(1102201)'. DATE RECEIVED 11.10.2022.

ALL DRIVEWAY GRADIENTS WILL BE A MAXIMUM OF 5% (1 IN 20).

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F	MJD	- PARKING AND FOOTWAYS REVISED BASED ON COMMENTS.	19/03/2025
E	NJH	GENERAL UPDATE BASED ON PLANNING COMMENTS.	01/10/2024
D	MJD	- GENERAL UPDATE BASED ON PLANNING COMMENTS.	05/07/2024
C	MJD	DEVELOPMENT RED BOUNDARY UPDATED.	08/12/2023
B	JCB	MJD REVISED TO LATEST LAYOUT, MDO STORAGE AREA ADDED.	13/11/2023
A	JCB	INITIAL ISSUE.	13/10/2020
Rev.	By	Description	Date

Project	
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PHASE 2, CROMLET PARK,
INVERGORDON.

1. *Journal of the American Medical Association*, 2000; 283: 2689-2696.

Drawing Title

OVERLAND FLOW ROUTES.

1. *Journal of the American Medical Association*, 2000; 283: 2689-2696.

Architect

COLIN ARMSTRONG ARCHITECTS

Drawing ID
XXXX-B10-77-XX-55-0-0100-5

XXX-RAC-ZZ-XX-DR-C-0160-F

Job No.	Scale	Issue Status
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C4033	1:500 - A1	FOR PLANNING
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C4933	1:1000 - A3	FOR PLANNING
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