



Appendix 2 - Civil & Structural

Moanbaun, Mountrath, Co. Laois

**HAYES HIGGINS PARTNERSHIP,
GAS HOUSE LANE,
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Dwg.Cat: Planning Issue

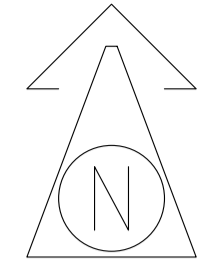
Signed: _____
George Goodson

DRAWING / DOCUMENT REGISTER & ISSUE SHEET - CIVIL

Project: Moanbaun, Mountrath, Co.Laois		Issue Date and Revision No.		Sheet: 1 of: 1											
Job No. 22KK017		Day	05												
		Month	03												
		Year	24												
Drawing/ Document No.	Drawing / Document title	Scale													
C-000	Civil Notes	As Shown	PL1												
C-001	Existing Site Layout	1:250 A1	PL1												
C-002	Proposed Site Layout	1:250 A1	PL1												
C-003	Proposed Site Build Ups Layout	1:250 A1	PL1												
C-004	Proposed Traffic Signs & Road Markings Layout	As Shown	PL1												
C-005	DMURS Compliance Layout	1:250 A1	PL1												
C-010	Proposed Watermain Layout	1:250 A1	PL1												
C-015	Proposed Drainage Layout	1:250 A1	PL1												
C-040	Swept Path Analysis Fire Tender	1:250 A1	PL1												

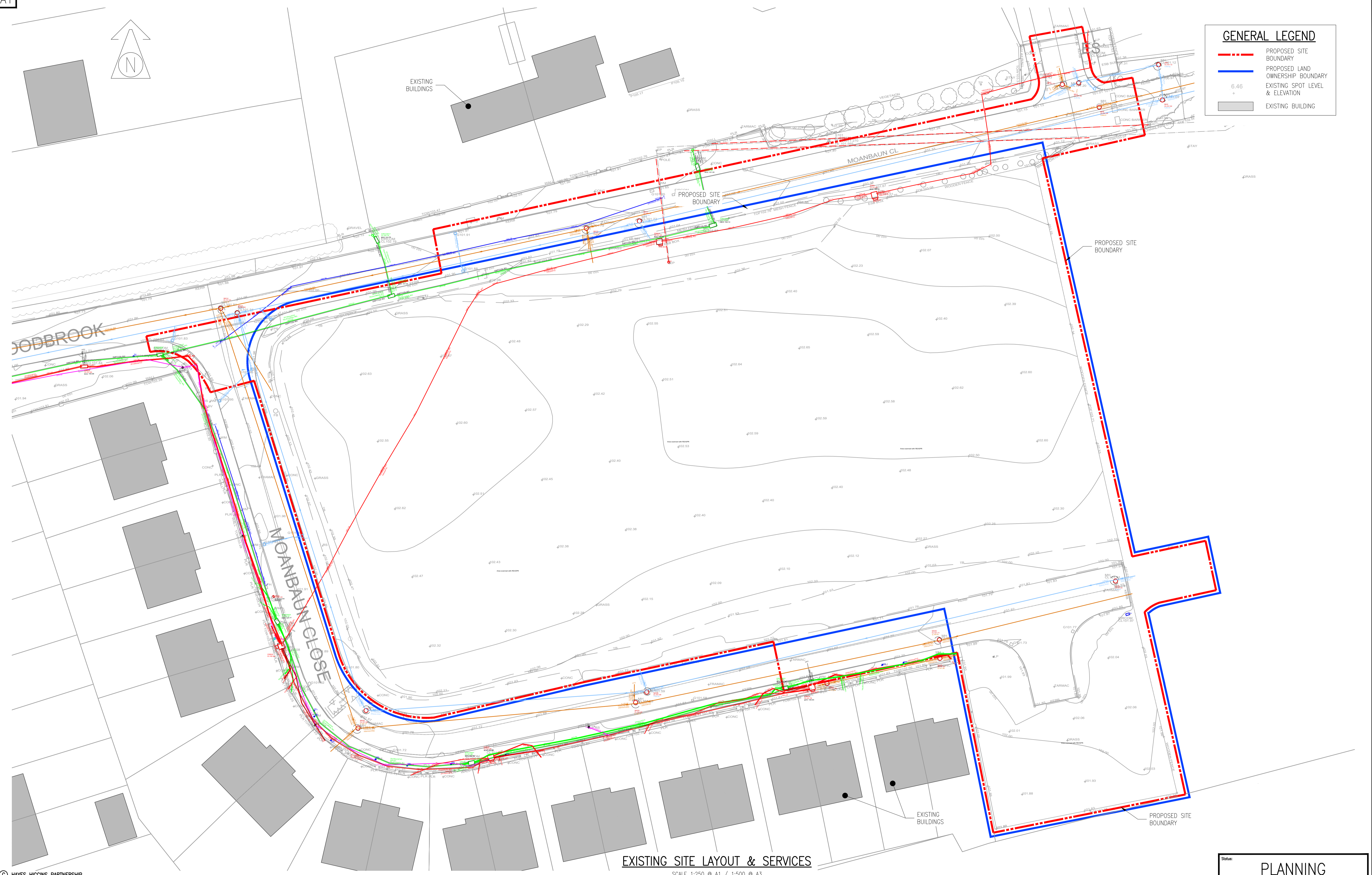
Copies issued to:		Number of Copies :													
Architect (VDA)	E														
McGahon Surveyors (QS)	E														
Hayes Higgins (M&E)	E														
Issue By	GG														
HHP	1A3														

*, P1, T1, C1 : Designates Drawings and/or Revisions Issued



GENERAL LEGEND

- - - PROPOSED SITE BOUNDARY
- PROPOSED LAND OWNERSHIP BOUNDARY
- 6.46 + Existing Spot Level & Elevation
- EXISTING BUILDING



EXISTING SITE LAYOUT & SERVICES
SCALE 1:250 @ A1 / 1:500 @ A3

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Referenced drawings	
Dwg No.	Dwg Title

Issue register					
Rev.	Date	Description	Des.	Chkd.	Appvd.
PL1	05.03.24	PLANNING ISSUE	GC	TD	NP

NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SERVICE ENGINEERS DRAWINGS & SPECIFICATIONS.
2. ALL LEVELS ARE STRUCTURAL UNLESS NOTED OTHERWISE.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT BUILDING REGULATIONS.
4. DO NOT SCALE – WORK TO FIGURE DIMENSIONS ONLY.

Drawing Title:
EXISTING SITE LAYOUT & SERVICES

Date: 12.02.24
Scale: 1:250 @ A1 / 1:500 @ A3

Drawn By: G.GOODSON
Checked By: T.DELANEY
Approved By: N.PATTERSON

Client:
LAOIS COUNTY COUNCIL

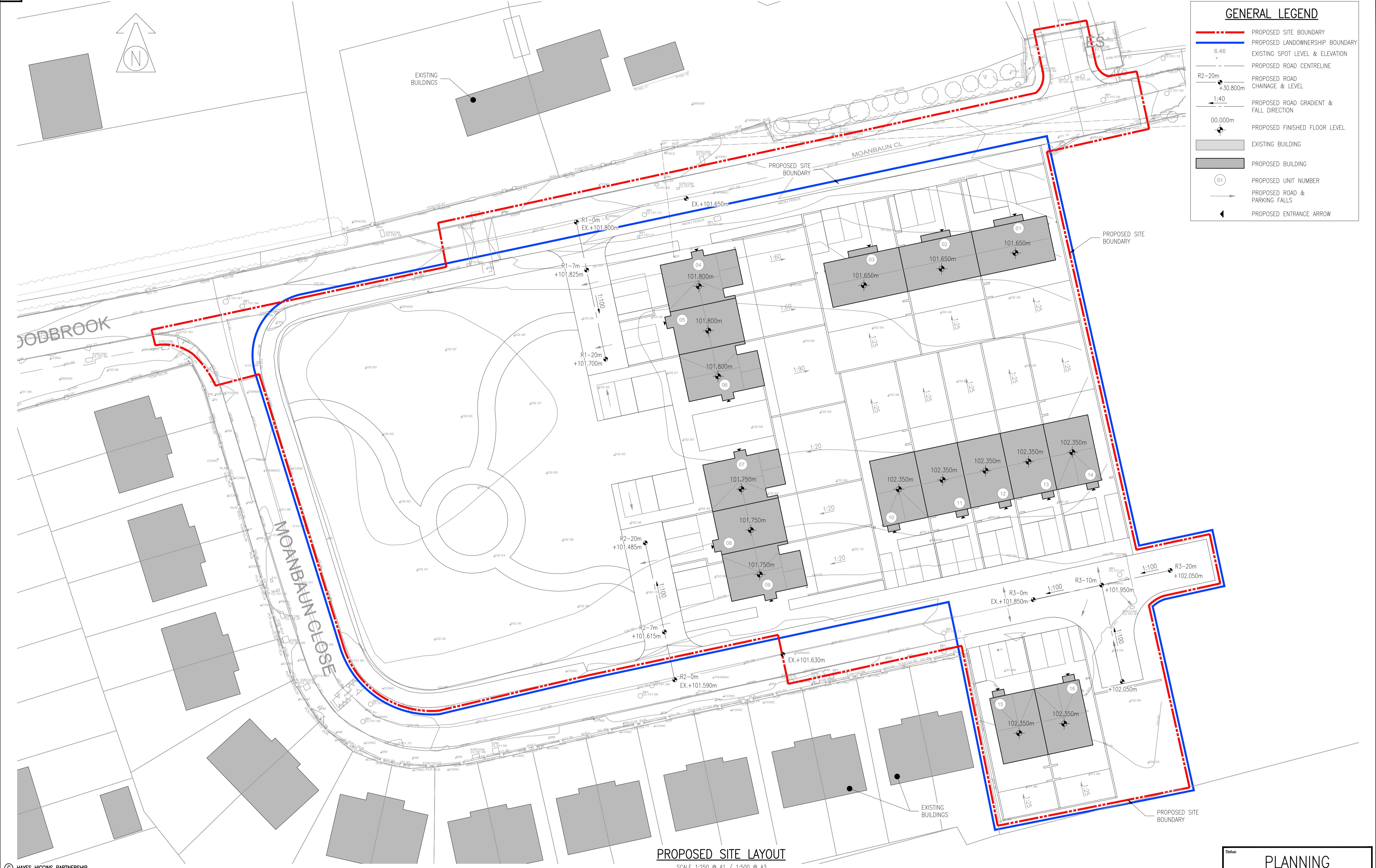
Job Description:
PROPOSED HOUSING DEVELOPMENT AT MOANBAUN, MOUNTRATH, Co. LAOIS.

Project No: 22KK017
Drawing Ref: C-001
Rev: PL1

Status: **PLANNING**

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GENERAL LEGEND	
	PROPOSED SITE BOUNDARY
	PROPOSED LANDOWNERSHIP BOUNDARY
	EXISTING SPOT LEVEL & ELEVATION
	PROPOSED ROAD CENTRELINE
	PROPOSED ROAD CHAINAGE & LEVEL
	PROPOSED ROAD GRADIENT & FALL DIRECTION
	PROPOSED FINISHED FLOOR LEVEL
	EXISTING BUILDING
	PROPOSED BUILDING
	PROPOSED UNIT NUMBER
	PROPOSED ROAD & PARKING FALLS
	PROPOSED ENTRANCE ARROW

PROPOSED SITE LAYOUT
SCALE 1:250 @ A1 / 1:500 @ A3

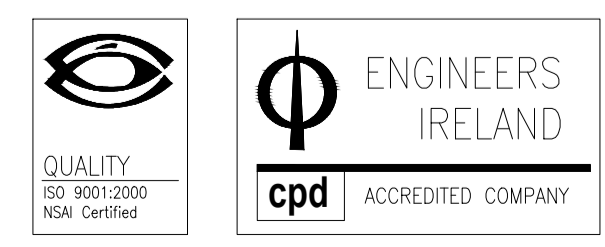
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Referenced drawings	
Dwg No.	Dwg Title

Issue register					
Rev.	Date	Description	Dwn.	Chkd.	Appvd.
PL1	05.03.24	PLANNING ISSUE	GC	TD	NP

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Drawing Title: PROPOSED SITE LAYOUT	
Date: 12.02.24	Scale: 1:250 @ A1 / 1:500 @ A3
Drawn By: G.GOODSON	Checked By: T.DELANEY
Approved By: N.PATTERSON	

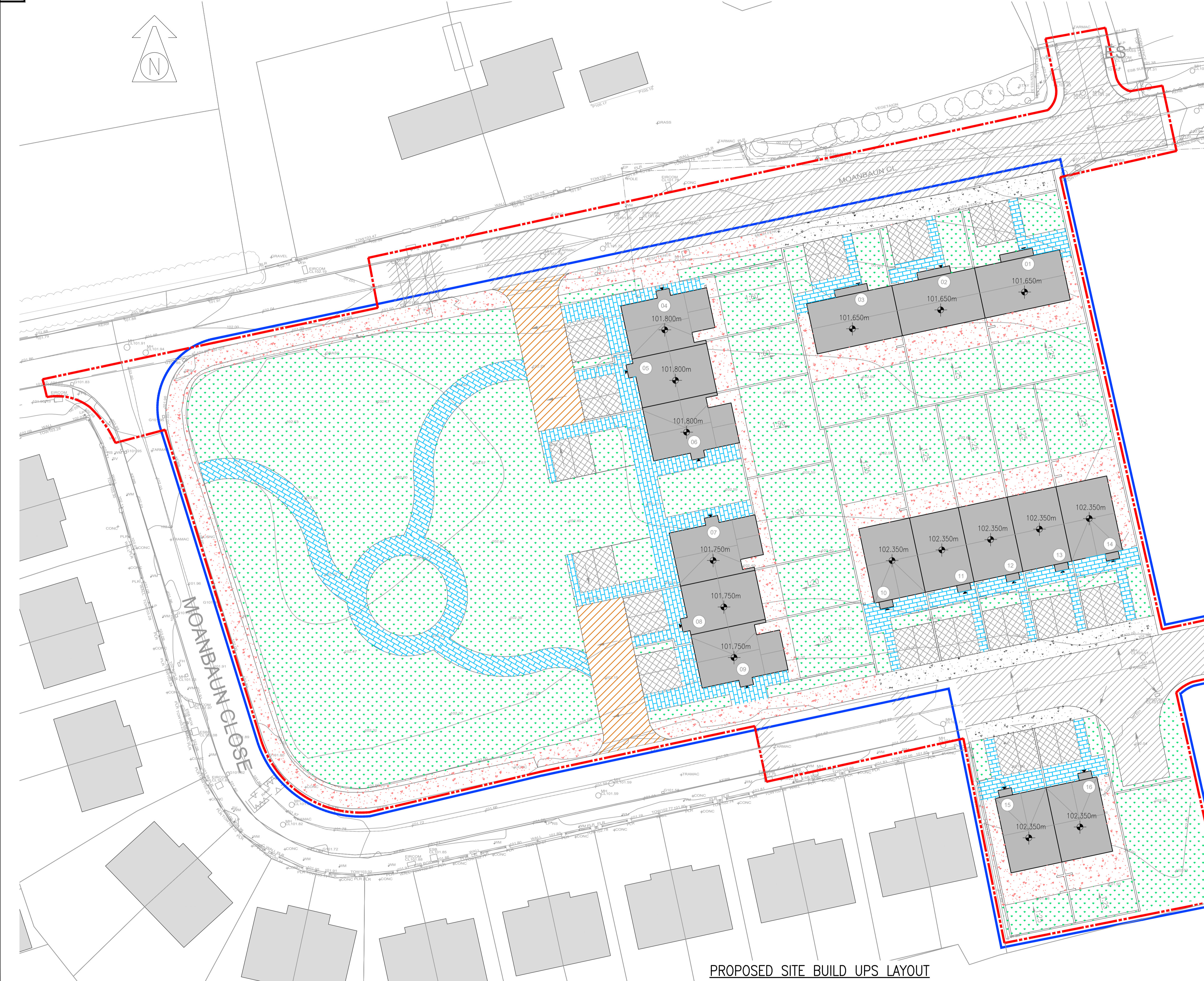
Client: LAOIS COUNTY COUNCIL		
Job Description: PROPOSED HOUSING DEVELOPMENT AT MOANBAUN, MOUNTRATH, Co. LAOIS.		
Project No: 22KK017	Drawing Ref: C-002	Rev: PL1

Status: **PLANNING**

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COPY: 22KK017-C-002 Proposed Site Layout.dwg



BUILD UP SPECIFICATION:

PROPOSED ROAD SPECIFICATION
 40mm OF PMSMA (10mm) WEARING COURSE ON
 POLYMER BOND COAT AT A RATE OF 0.5l per m²
 60mm OF PSMA (20mm) BASE COURSE ON
 80mm OF ACBC (28mm) BASE COURSE ON
 150mm CL 804 SUB-BASE LAYER COMPACTED HARDCORE ON
 350mm MINIMUM CLAUSE 6F2 CAPPING LAYER ON
 THRACE 40/40 EXTRUDED PPL GEOGRID OR EQUIVALENT APPROVED PLUS
 ADDITIONAL CAPPING TO MAKE UP LEVELS AS REQUIRED ON TERRAM.

PROPOSED HOME ZONE ROAD SPECIFICATION
 40mm OF 10mm SMA SURFACE (IS EN 13108-5) ON
 100mm OF 20mm AC 20 DENSE BIN (IS 131108-1) ON
 150mm CL 804 SUB-BASE LAYER COMPACTED HARDCORE ON
 350mm MINIMUM CLAUSE 6F2 CAPPING LAYER ON
 THRACE 40/40 EXTRUDED PPL GEOGRID OR EQUIVALENT
 APPROVED PLUS
 ADDITIONAL CAPPING TO MAKE UP LEVELS AS REQUIRED ON
 TERRAM.

PROPOSED RESIDENTIAL PARKING AREAS
 45mm SMA 10 SURF 40/60 SURFACE (IS EN 13108-5) COURSE ON
 POLYMER BOND COAT AT A RATE OF 0.5L PER M²
 90mm AC DENSE 20 BIN 40/60 BINDER COURSE (IS 131108-1) ON
 150MM CL808 SUBBASE ON
 350MM MIN CL 6F2 CAPPING LAYER ON
 THRACE 40/40 EXTRUDED PPL GEOGRID
 ADDITIONAL CAPPING TO MAKE UP LEVELS AS REQUIRED ON TERRAM
 NOTE: DEPTH OF CAPPING TBC SUBJECT TO CONTRACTORS ON SITE CBRS
 TEST AT A RATE OF 1 PER 20L/M OF ROADWAY

CONCRETE FOOTPATHS (NON TRAFFICKED)
 100mm THICK CONCRETE PATHS WITH (150MM THICK WHERE TRAFFICKED)
 IN ACCORDANCE WITH CL 2.19 AND 2.25 OF THE SITE
 DEVELOPMENTS WORKS MANUAL,
 C40 / 50 XF4 EXPOSURE CLASS CONCRETE ON
 150mm SUB-BASE CL808 ON
 350mm MIN 6F2 CAPPING
 THRACE 40/40 GEOGRID ON
 ADDITIONAL CAPPING TO MAKE UP LEVELS AS REQUIRED ON TERRAM

CONCRETE FOOTPATHS (TRAFFICKED)
 150mm THICK CONCRETE PATHS WITH
 IN ACCORDANCE WITH CL 2.19 AND 2.25 OF THE SITE
 DEVELOPMENTS WORKS MANUAL,
 C40 / 50 XF4 EXPOSURE CLASS CONCRETE ON
 150mm SUB-BASE CL808 ON
 350mm MIN 6F2 CAPPING
 THRACE 40/40 GEOGRID ON
 ADDITIONAL CAPPING TO MAKE UP LEVELS AS REQUIRED ON TERRAM

PROPOSED IMPERMEABLE PAVING SPECIFICATION
 60mm Thk. PAVING BLOCKS TO ARCH DETAILS ON
 50mm SAND/CEMENT TO ARCH DETAIL ON
 100mm LEAN MIX BEDDING ON
 150mm CL 804 SUB-BASE LAYER COMPACTED HARDCORE ON
 350mm MINIMUM 6F2 CAPPING LAYER ON
 THRACE 40/40 GEOGRID ON
 ADDITIONAL CAPPING TO MAKE UP LEVELS AS REQUIRED ON
 TERRAM

PROPOSED PLANTED AREA SPECIFICATION
 PROPOSED GRASSED AREAS TO LANDSCAPE ARCHITECTS DETAILS

GENERAL LEGEND

- PROPOSED SITE BOUNDARY
- PROPOSED LANDOWNERSHIP BOUNDARY
- EXISTING SPOT LEVEL & ELEVATION
- PROPOSED FINISHED FLOOR LEVEL
- EXISTING BUILDING
- PROPOSED BUILDING
- PROPOSED UNIT NUMBER
- PROPOSED ENTRANCE ARROW

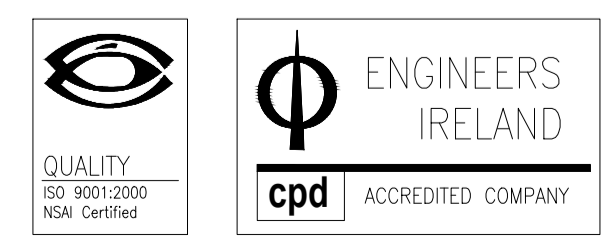
PROPOSED SITE BUILD UPS LAYOUT
 SCALE 1:250 @ A1 / 1:500 @ A3

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Referenced drawings		Issue register					
Dwg No.	Dwg Title	Rev.	Date	Description	Dwn.	Chkd.	Appvd.
PL1		05.03.24		PLANNING ISSUE	GG	TD	NP

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PROPOSED SITE BUILD UPS LAYOUT

Date: 12.02.24
 Scale: 1:250 @ A1 / 1:500 @ A3
 Drawn By: G.GOODSON
 Checked By: T.DELANEY
 Approved By: N.PATTERSON

Client: LAOIS COUNTY COUNCIL

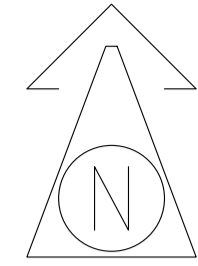
Job Description: PROPOSED HOUSING DEVELOPMENT AT MOANBAUN, MOUNTRATH, Co. LAOIS.

Project No: 22KK017
 Drawing Ref: C-003
 Rev: PL1

Status: **PLANNING**

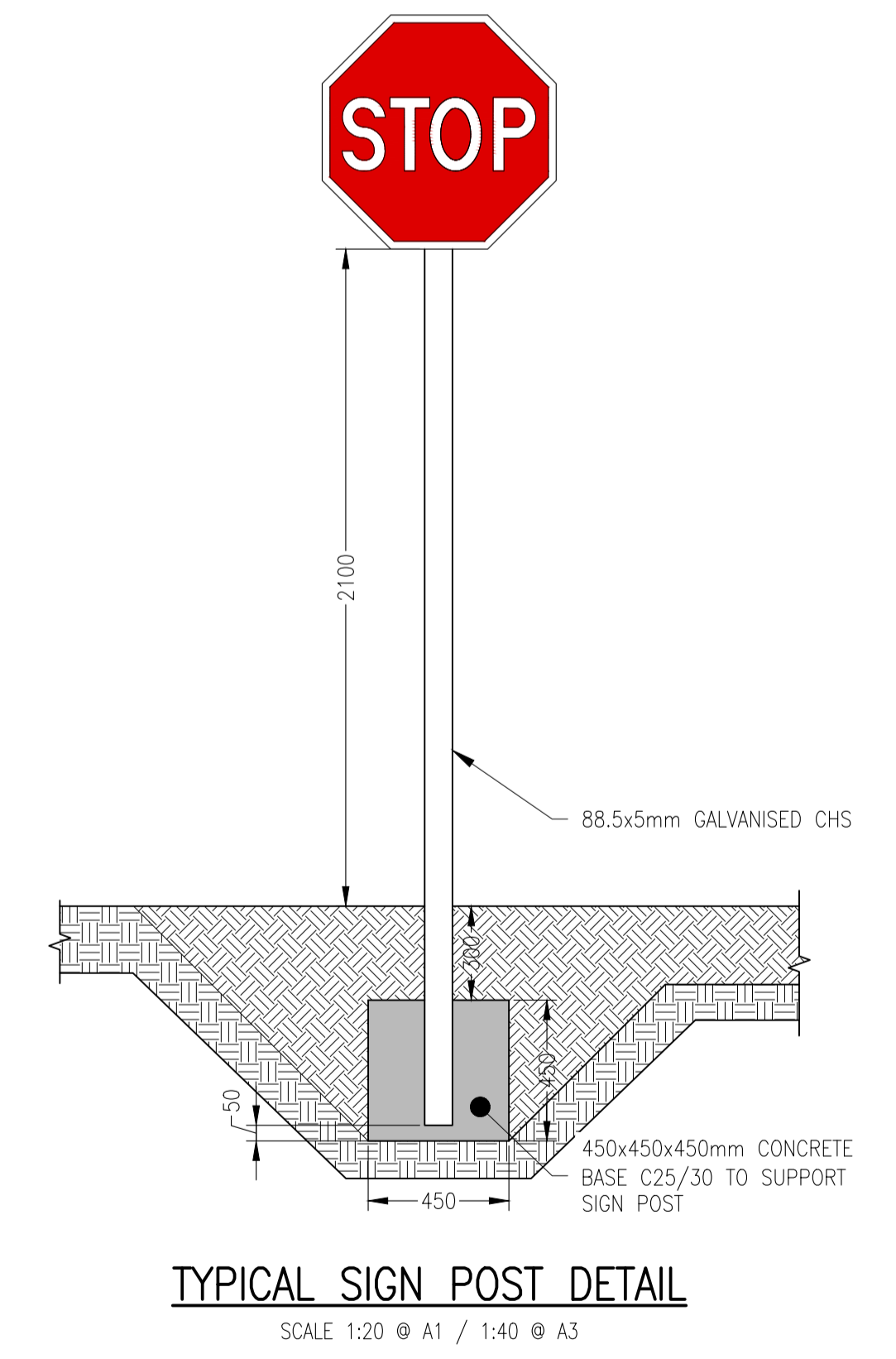
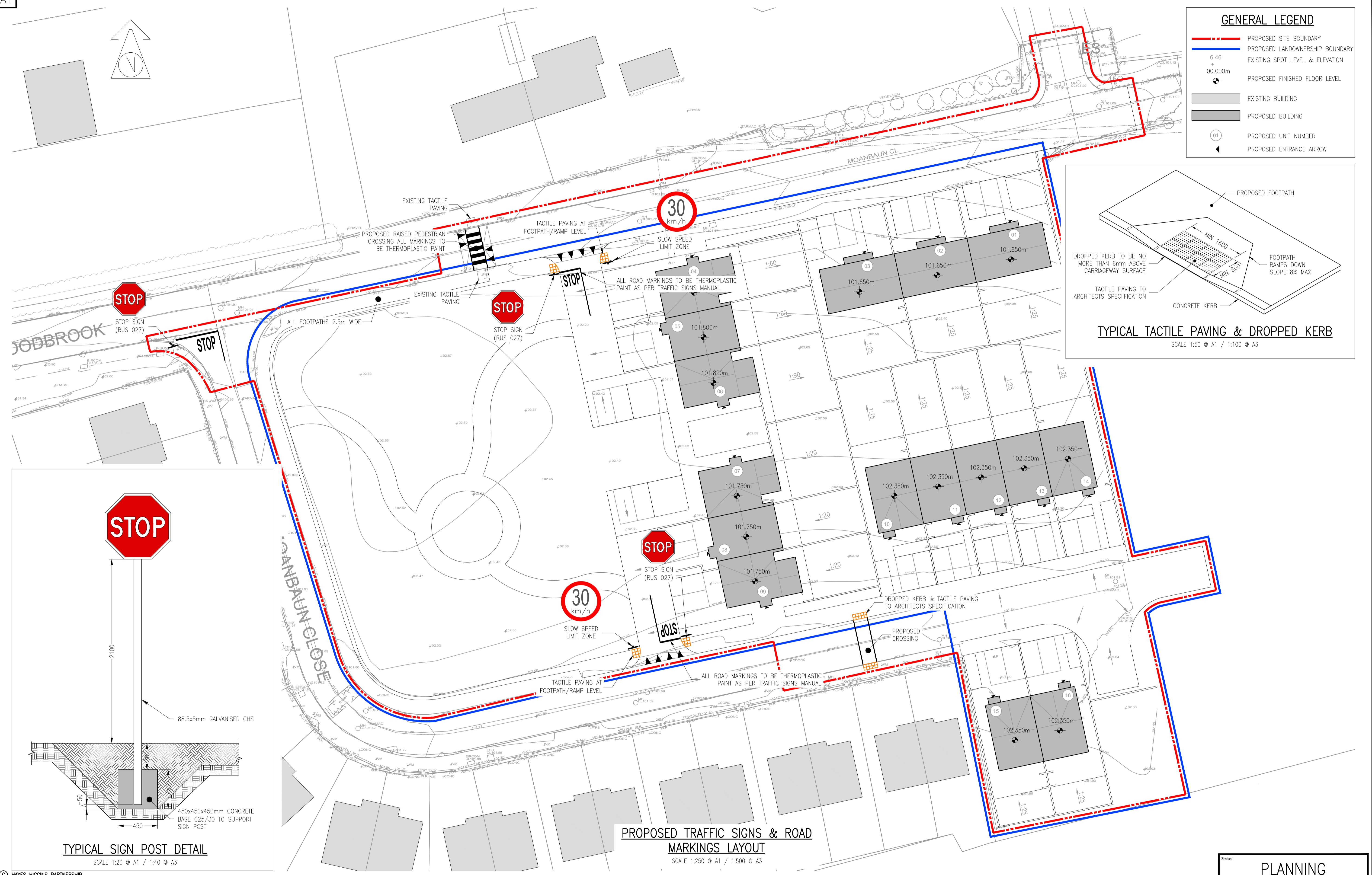
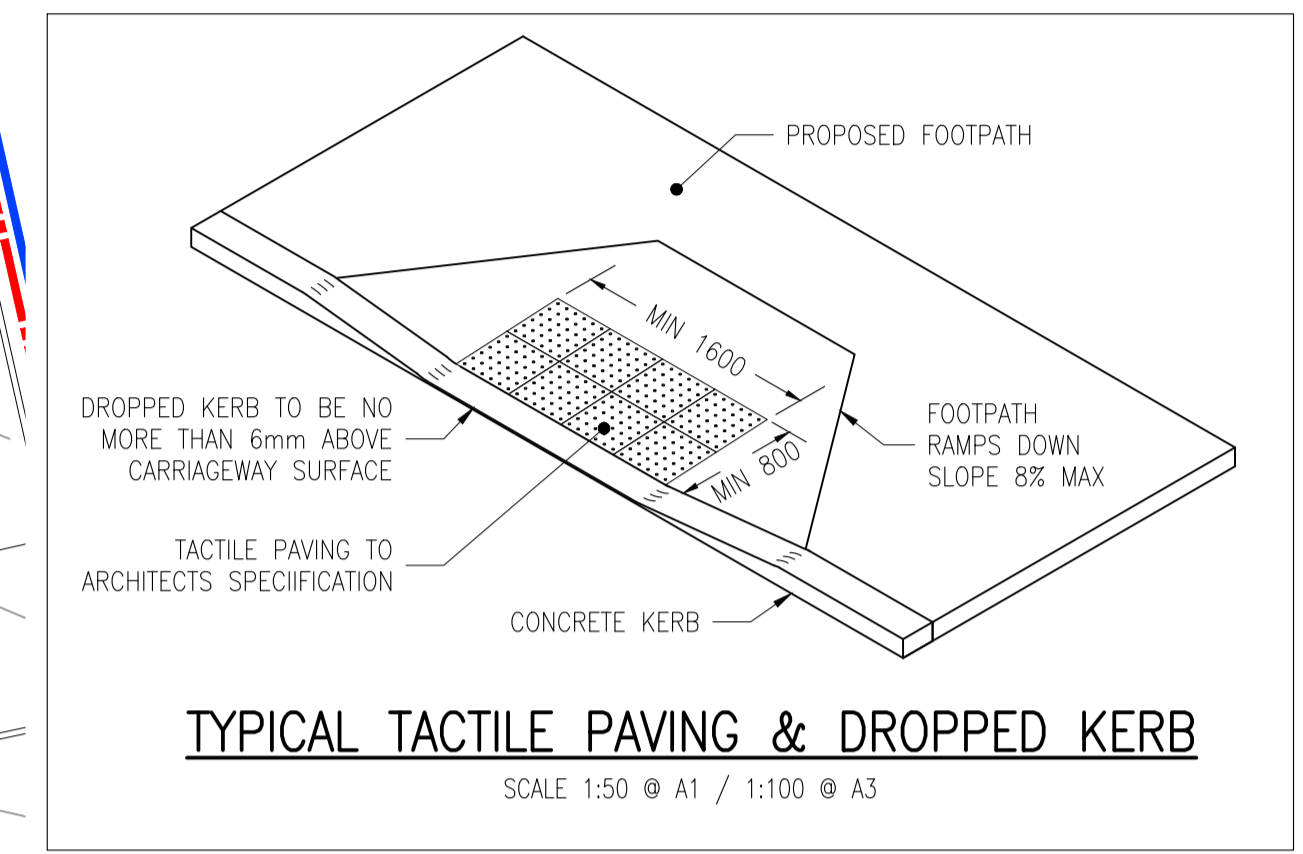
Hayes Higgins Partnership
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GENERAL LEGEND

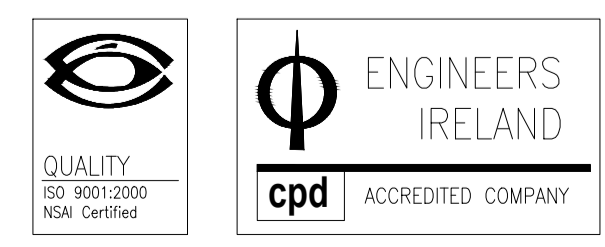
- PROPOSED SITE BOUNDARY
- PROPOSED LANDOWNERSHIP BOUNDARY
- 6.46 + 00.000m + 00.000m EXISTING SPOT LEVEL & ELEVATION
- PROPOSED FINISHED FLOOR LEVEL
- EXISTING BUILDING
- PROPOSED BUILDING
- 01 PROPOSED UNIT NUMBER
- ▶ PROPOSED ENTRANCE ARROW



PROPOSED TRAFFIC SIGNS & ROAD MARKINGS LAYOUT
SCALE 1:250 @ A1 / 1:500 @ A3

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- NOTES:**
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PROPOSED TRAFFIC SIGNS & ROAD MARKINGS LAYOUT

Date: 12.02.24 Scale: AS SHOWN

Drawn By: G.GOODSON Checked By: T.DELANEY Approved By: N.PATTERSON

Client: LAOIS COUNTY COUNCIL

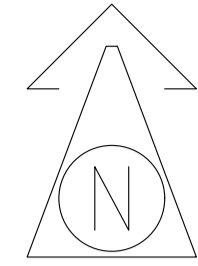
Job Description: PROPOSED HOUSING DEVELOPMENT AT MOANBAUN, MOUNTRATH, Co. LAOIS.

Project No: 22KK017 Drawing Ref: C-004 Rev: PL1

Status: **PLANNING**

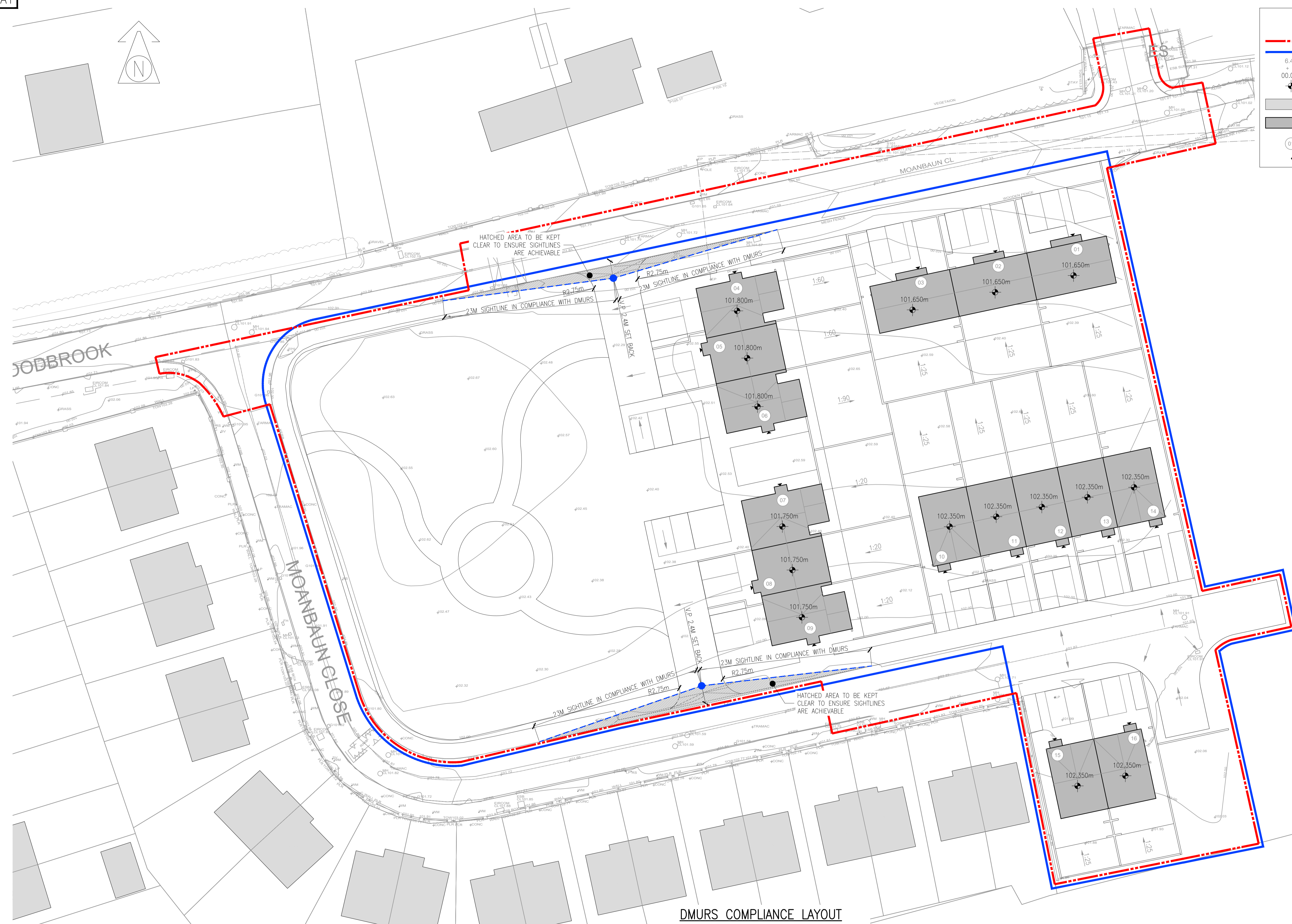
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GENERAL LEGEND

- PROPOSED SITE BOUNDARY
- PROPOSED LANDOWNERSHIP BOUNDARY
- 6.46
+
00.000m
⬆️ EXISTING SPOT LEVEL & ELEVATION
- ⬆️ PROPOSED FINISHED FLOOR LEVEL
- EXISTING BUILDING
- PROPOSED BUILDING
- ⊙ 01 PROPOSED UNIT NUMBER
- ⬆️ PROPOSED ENTRANCE ARROW



DMURS COMPLIANCE LAYOUT
SCALE 1:250 @ A1 / 1:500 @ A3

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Referenced drawings	
Dwg No.	Dwg Title
PL1	05.03.24

Issue register				
Rev.	Date	Description	Dwn.	Chkd.
PL1	05.03.24	PLANNING ISSUE	GG	TD

- NOTES:**
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DMURS COMPLIANCE LAYOUT

Date: 12.02.24
Scale: 1:250 @ A1 / 1:500 @ A3

Drawn By: G.GOODSON
Checked By: T.DELANEY
Approved By: N.PATTERSON

Client: LAOIS COUNTY COUNCIL

Job Description: PROPOSED HOUSING DEVELOPMENT AT MOANBAUN, MOUNTRATH, Co. LAOIS.

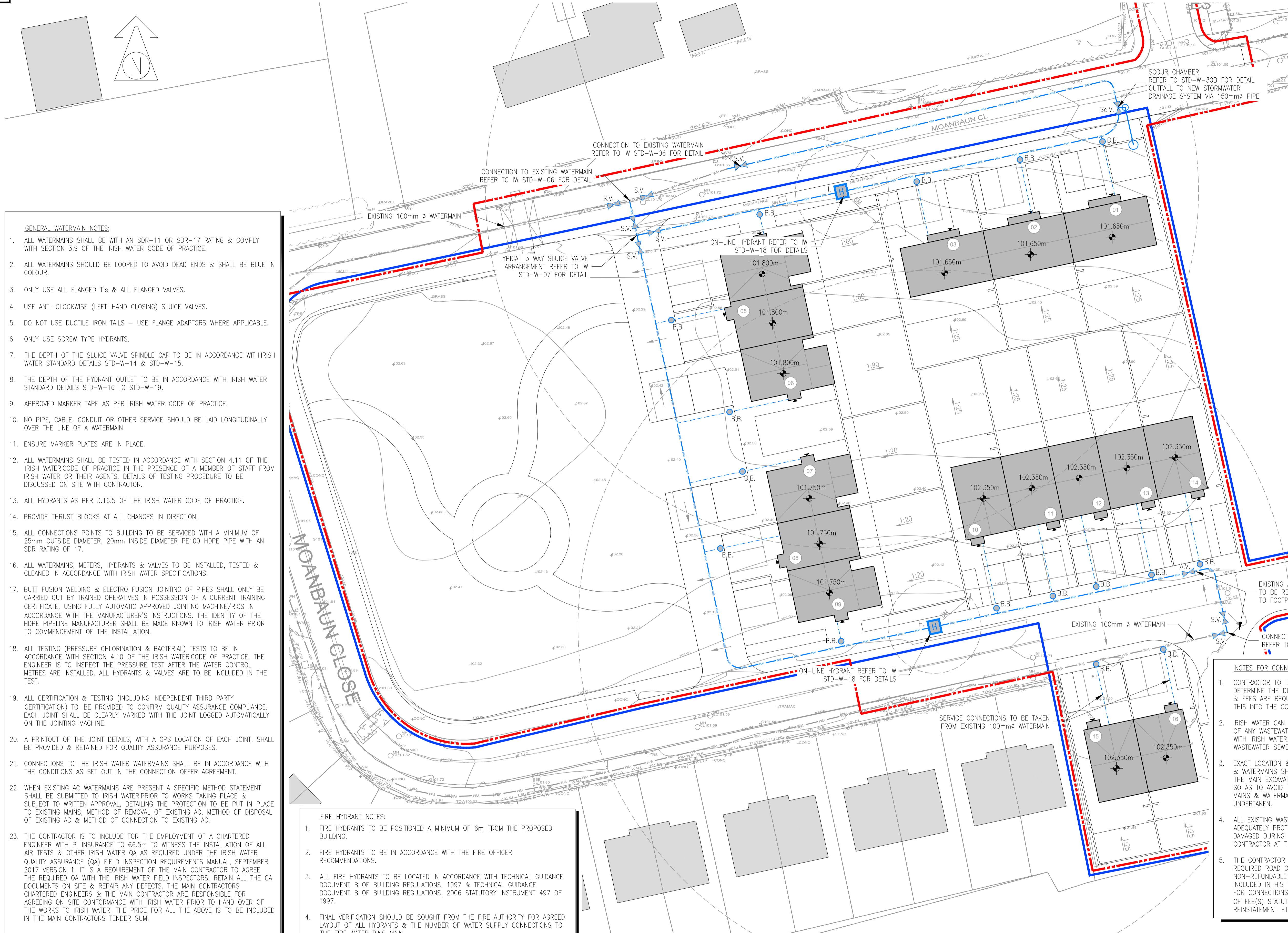
Project No: 22KK017
Drawing Ref: C-005
Rev: PL1

Status: **PLANNING**

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COPY: 22KK017-C-005 DMURS Compliance Layout.dwg



GENERAL LEGEND

- PROPOSED SITE BOUNDARY
- PROPOSED LANDOWNERSHIP BOUNDARY
- EXISTING SPOT LEVEL & ELEVATION
- PROPOSED FINISHED FLOOR LEVEL
- EXISTING BUILDING
- PROPOSED BUILDING
- 01 PROPOSED UNIT NUMBER
- ▶ PROPOSED ENTRANCE ARROW

WATERMAIN LEGEND

- EXISTING WATERMAIN
- PROPOSED 100mm Ø PE80-SDR17
- PROPOSED HYDRANT
- S.V. PROPOSED SLUICE VALVE
- A.V. PROPOSED AIR VALVE
- Sc.V. PROPOSED SCOUR VALVE
- B.B. PROPOSED BOUNDARY BOX

- #### GENERAL WATERMAIN NOTES:
1. ALL WATERMANS SHALL BE WITH AN SDR-11 OR SDR-17 RATING & COMPLY WITH SECTION 3.9 OF THE IRISH WATER CODE OF PRACTICE.
 2. ALL WATERMANS SHOULD BE LOOPED TO AVOID DEAD ENDS & SHALL BE BLUE IN COLOUR.
 3. ONLY USE ALL FLANGED T's & ALL FLANGED VALVES.
 4. USE ANTI-CLOCKWISE (LEFT-HAND CLOSING) SLUICE VALVES.
 5. DO NOT USE DUCTILE IRON TAILS - USE FLANGE ADAPTORS WHERE APPLICABLE.
 6. ONLY USE SCREW TYPE HYDRANTS.
 7. THE DEPTH OF THE SLUICE VALVE SPINDLE CAP TO BE IN ACCORDANCE WITH IRISH WATER STANDARD DETAILS STD-W-14 & STD-W-15.
 8. THE DEPTH OF THE HYDRANT OUTLET TO BE IN ACCORDANCE WITH IRISH WATER STANDARD DETAILS STD-W-16 TO STD-W-19.
 9. APPROVED MARKER TAPE AS PER IRISH WATER CODE OF PRACTICE.
 10. NO PIPE, CABLE, CONDUIT OR OTHER SERVICE SHOULD BE LAID LONGITUDINALLY OVER THE LINE OF A WATERMAIN.
 11. ENSURE MARKER PLATES ARE IN PLACE.
 12. ALL WATERMANS SHALL BE TESTED IN ACCORDANCE WITH SECTION 4.11 OF THE IRISH WATER CODE OF PRACTICE IN THE PRESENCE OF A MEMBER OF STAFF FROM IRISH WATER OR THEIR AGENTS. DETAILS OF TESTING PROCEDURE TO BE DISCUSSED ON SITE WITH CONTRACTOR.
 13. ALL HYDRANTS AS PER 3.16.5 OF THE IRISH WATER CODE OF PRACTICE.
 14. PROVIDE THRUST BLOCKS AT ALL CHANGES IN DIRECTION.
 15. ALL CONNECTIONS POINTS TO BUILDING TO BE SERVICED WITH A MINIMUM OF 25mm OUTSIDE DIAMETER, 20mm INSIDE DIAMETER PE100 HDPE PIPE WITH AN SDR RATING OF 17.
 16. ALL WATERMANS, METERS, HYDRANTS & VALVES TO BE INSTALLED, TESTED & CLEANED IN ACCORDANCE WITH IRISH WATER SPECIFICATIONS.
 17. BUTT FUSION WELDING & ELECTRO FUSION JOINTING OF PIPES SHALL ONLY BE CARRIED OUT BY TRAINED OPERATIVES IN POSSESSION OF A CURRENT TRAINING CERTIFICATE, USING FULLY AUTOMATIC APPROVED JOINTING MACHINE/RIGS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE IDENTITY OF THE HDPE PIPELINE MANUFACTURER SHALL BE MADE KNOWN TO IRISH WATER PRIOR TO COMMENCEMENT OF THE INSTALLATION.
 18. ALL TESTING (PRESSURE CHLORINATION & BACTERIAL) TESTS TO BE IN ACCORDANCE WITH SECTION 4.10 OF THE IRISH WATER CODE OF PRACTICE. THE ENGINEER IS TO INSPECT THE PRESSURE TEST AFTER THE WATER CONTROL METRES ARE INSTALLED. ALL HYDRANTS & VALVES ARE TO BE INCLUDED IN THE TEST.
 19. ALL CERTIFICATION & TESTING (INCLUDING INDEPENDENT THIRD PARTY CERTIFICATION) TO BE PROVIDED TO CONFIRM QUALITY ASSURANCE COMPLIANCE. EACH JOINT SHALL BE CLEARLY MARKED WITH THE JOINT LOGGED AUTOMATICALLY ON THE JOINTING MACHINE.
 20. A PRINTOUT OF THE JOINT DETAILS, WITH A GPS LOCATION OF EACH JOINT, SHALL BE PROVIDED & RETAINED FOR QUALITY ASSURANCE PURPOSES.
 21. CONNECTIONS TO THE IRISH WATER WATERMANS SHALL BE IN ACCORDANCE WITH THE CONDITIONS AS SET OUT IN THE CONNECTION OFFER AGREEMENT.
 22. WHEN EXISTING AC WATERMANS ARE PRESENT A SPECIFIC METHOD STATEMENT SHALL BE SUBMITTED TO IRISH WATER PRIOR TO WORKS TAKING PLACE & SUBJECT TO WRITTEN APPROVAL, DETAILING THE PROTECTION TO BE PUT IN PLACE TO EXISTING MAINS, METHOD OF REMOVAL OF EXISTING AC, METHOD OF DISPOSAL OF EXISTING AC & METHOD OF CONNECTION TO EXISTING AC.
 23. THE CONTRACTOR IS TO INCLUDE FOR THE EMPLOYMENT OF A CHARTERED ENGINEER WITH PI INSURANCE TO €6.5m TO WITNESS THE INSTALLATION OF ALL AIR TESTS & OTHER IRISH WATER QA AS REQUIRED UNDER THE IRISH WATER QUALITY ASSURANCE (QA) FIELD INSPECTION REQUIREMENTS MANUAL, SEPTEMBER 2017 VERSION 1. IT IS A REQUIREMENT OF THE MAIN CONTRACTOR TO AGREE THE REQUIRED QA WITH THE IRISH WATER FIELD INSPECTORS, RETAIN ALL THE QA DOCUMENTS ON SITE & REPAIR ANY DEFECTS. THE MAIN CONTRACTORS CHARTERED ENGINEERS & THE MAIN CONTRACTOR ARE RESPONSIBLE FOR AGREEING ON SITE CONFORMANCE WITH IRISH WATER PRIOR TO HAND OVER OF THE WORKS TO IRISH WATER. THE PRICE FOR ALL THE ABOVE IS TO BE INCLUDED IN THE MAIN CONTRACTORS TENDER SUM.

- #### FIRE HYDRANT NOTES:
1. FIRE HYDRANTS TO BE POSITIONED A MINIMUM OF 6m FROM THE PROPOSED BUILDING.
 2. FIRE HYDRANTS TO BE IN ACCORDANCE WITH THE FIRE OFFICER RECOMMENDATIONS.
 3. ALL FIRE HYDRANTS TO BE LOCATED IN ACCORDANCE WITH TECHNICAL GUIDANCE DOCUMENT B OF BUILDING REGULATIONS, 1997 & TECHNICAL GUIDANCE DOCUMENT B OF BUILDING REGULATIONS, 2006 STATUTORY INSTRUMENT 497 OF 1997.
 4. FINAL VERIFICATION SHOULD BE SOUGHT FROM THE FIRE AUTHORITY FOR AGREED LAYOUT OF ALL HYDRANTS & THE NUMBER OF WATER SUPPLY CONNECTIONS TO THE FIRE WATER RING MAIN.

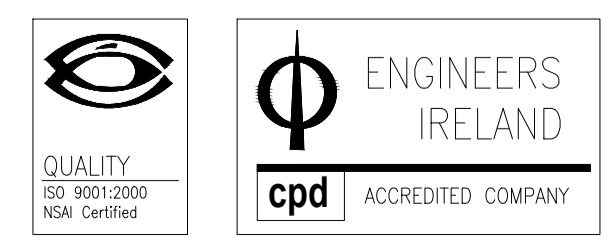
- #### NOTES FOR CONNECTION TO IRISH WATER SERVICES
1. CONTRACTOR TO LIAISE WITH IRISH WATER PRIOR TO MOBILISATION ON SITE TO DETERMINE THE DURATION OF THE APPROVAL PROCESS & WHAT DOCUMENTATION & FEES ARE REQUIRED BY IRISH WATER & THE LOCAL AUTHORITY & PROGRAM THIS INTO THE CONSTRUCTION PROGRAM.
 2. IRISH WATER CAN BE CONTACTED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY WASTEWATER SEWER & WATERMAIN WORKS. ALL DETAILS TO BE AGREED WITH IRISH WATER. IRISH WATER TO BE GIVEN 40 WORKING DAYS NOTICE FOR ALL WASTEWATER SEWER & WATERMAIN CONNECTION WORKS.
 3. EXACT LOCATION & DEPTH OF THE EXISTING WASTEWATER SEWERS, RISING MAINS & WATERMANS SHOULD BE ESTABLISHED BY THE CONTRACTOR IN ADVANCE OF THE MAIN EXCAVATION WORKS FOR THE NEW WASTEWATER SEWER & WATERMAIN SO AS TO AVOID THE POSSIBILITY TO THE EXISTING WASTEWATER SEWERS, RISING MAINS & WATERMAIN DURING CONSTRUCTION WORKS. SLIT TRENCHES TO BE UNDERTAKEN.
 4. ALL EXISTING WASTEWATER SEWERS, RISING MAINS & WATERMANS TO BE ADEQUATELY PROTECTED. ANY WASTEWATER SEWERS, RISING MAINS & WATERMANS DAMAGED DURING THE COURSE OF CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR AT THEIR OWN COST.
 5. THE CONTRACTOR SHALL APPLY FOR A ROAD OPENING LICENSE & PAY THE REQUIRED ROAD OPENING LICENSE FEE. THIS FEE IS NON-NEGOTIABLE & NON-REFUNDABLE FIGURE. THE CONTRACTOR SHALL BE DEEMED TO HAVE INCLUDED IN HIS TENDER PRICE FOR ALL REQUIREMENTS SUCH AS CONTRIBUTION FOR CONNECTIONS TO PUBLIC INFRASTRUCTURE, LICENSE APPLICATION, PAYMENT OF FEE(S) STATUTORY TIME PERIODS, TRAFFIC MANAGEMENT PLANS & APPLICATION REINSTATEMENT ETC.

PROPOSED WATERMAIN LAYOUT
SCALE 1:250 @ A1 / 1:500 @ A3

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Referenced drawings		Issue register					
Dwg No.	Dwg Title	Rev.	Date	Description	Desn.	Chkd.	Apprv.
PL1		05.03.24		PLANNING ISSUE	GG	TD	NP

- #### NOTES:
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 4. DO NOT SCALE - WORK TO FIGURE DIMENSIONS ONLY.



PROPOSED WATERMAIN LAYOUT

Date: 12.02.24
Scale: 1:250 @ A1 / 1:500 @ A3

Drawn By: G.GOODSON
Checked By: T.DELANEY
Approved By: N.PATTERSON

Client: LAOIS COUNTY COUNCIL

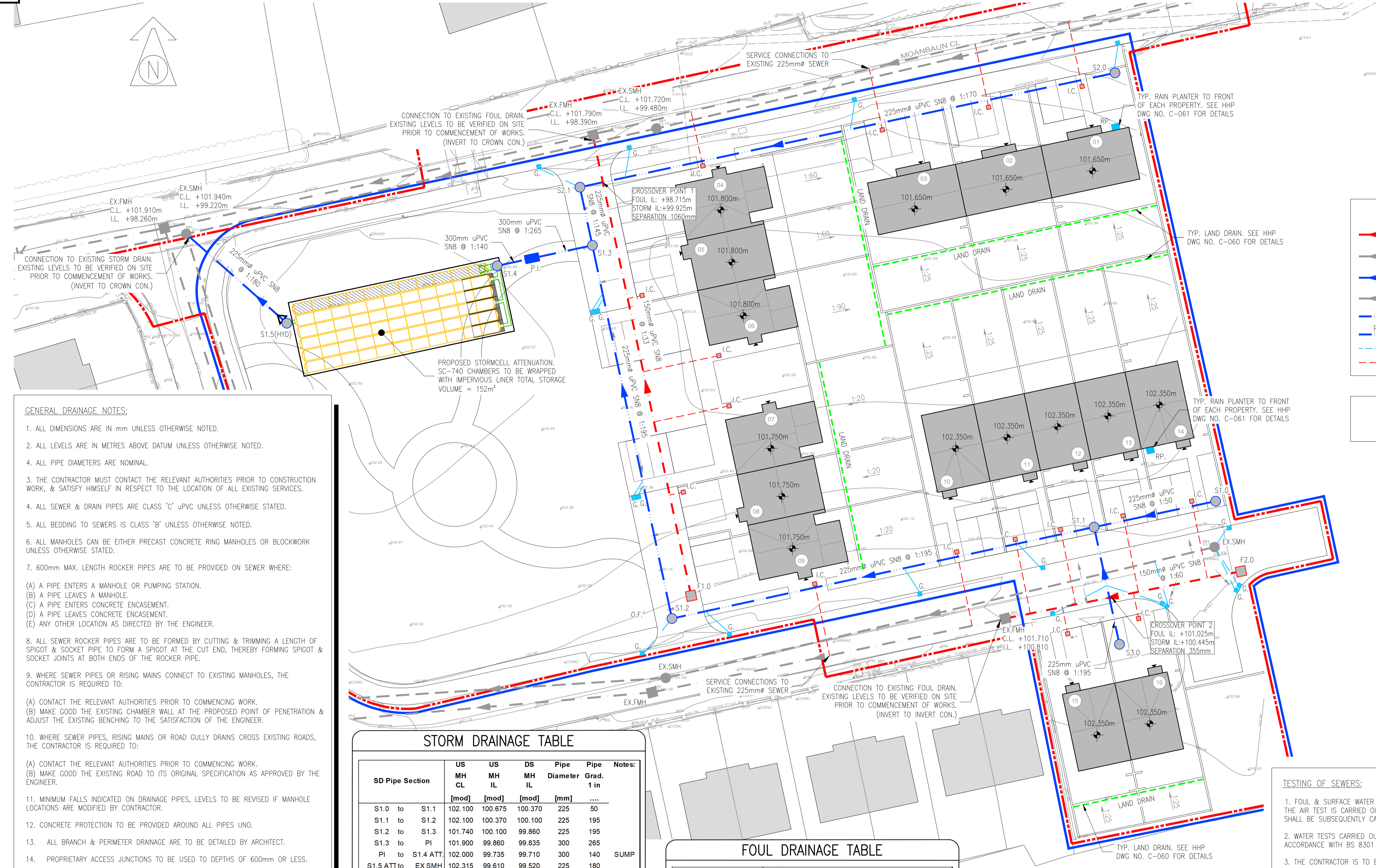
Job Description: PROPOSED HOUSING DEVELOPMENT AT MOANBAUN, MOUNTRATH, Co. LAOIS.

Project No: 22KK017
Drawing Ref: C-010
Rev: PL1

PLANNING

Hayes Higgins Partnership
Gas House Lane, Kilkenny.

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GENERAL LEGEND

- PROPOSED SITE BOUNDARY
- PROPOSED LANDOWNERSHIP BOUNDARY
- 6.46
+ 00.000m
● PROPOSED FINISHED FLOOR LEVEL
- █ EXISTING BUILDING
- █ PROPOSED BUILDING
- 01 PROPOSED UNIT NUMBER
- ◄ PROPOSED ENTRANCE ARROW

DRAINAGE LEGEND

- F1.0 DENOTES PROPOSED FOUL WATER DRAINAGE MANHOLE
- EX.FMH DENOTES EXISTING FOUL WATER DRAINAGE
- S1.0 DENOTES PROPOSED STORMWATER DRAINAGE MANHOLE
- EX.SMH DENOTES EXISTING STORMWATER DRAINAGE
- P.I. DENOTES PROPOSED HYDROBRAKE
- P.I. DENOTES PROPOSED BYPASS SEPARATOR
- G. DENOTES PROPOSED ROAD GULLY
- I.C. DENOTES PROPOSED INSPECTION CHAMBER

SUDS DRAINAGE LEGEND

- RP. DENOTES PROPOSED RAIN PLANTER

- #### GENERAL DRAINAGE NOTES:
1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED.
 2. ALL LEVELS ARE IN METRES ABOVE DATUM UNLESS OTHERWISE NOTED.
 4. ALL PIPE DIAMETERS ARE NOMINAL.
 3. THE CONTRACTOR MUST CONTACT THE RELEVANT AUTHORITIES PRIOR TO CONSTRUCTION WORK, & SATISFY HIMSELF IN RESPECT TO THE LOCATION OF ALL EXISTING SERVICES.
 4. ALL SEWER & DRAIN PIPES ARE CLASS 'C' uPVC UNLESS OTHERWISE STATED.
 5. ALL BEDDING TO SEWERS IS CLASS 'B' UNLESS OTHERWISE NOTED.
 6. ALL MANHOLES CAN BE EITHER PRECAST CONCRETE RING MANHOLES OR BLOCKWORK UNLESS OTHERWISE STATED.
 7. 600mm MAX. LENGTH ROCKER PIPES ARE TO BE PROVIDED ON SEWER WHERE:
 - (A) A PIPE ENTERS A MANHOLE OR PUMPING STATION.
 - (B) A PIPE LEAVES A MANHOLE.
 - (C) A PIPE ENTERS CONCRETE ENCASEMENT.
 - (D) A PIPE LEAVES CONCRETE ENCASEMENT.
 - (E) ANY OTHER LOCATION AS DIRECTED BY THE ENGINEER.
 8. ALL SEWER ROCKER PIPES ARE TO BE FORMED BY CUTTING & TRIMMING A LENGTH OF SPIGOT & SOCKET PIPE TO FORM A SPIGOT AT THE CUT END, THEREBY FORMING SPIGOT & SOCKET JOINTS AT BOTH ENDS OF THE ROCKER PIPE.
 9. WHERE SEWER PIPES OR RISING MAINS CONNECT TO EXISTING MANHOLES, THE CONTRACTOR IS REQUIRED TO:
 - (A) CONTACT THE RELEVANT AUTHORITIES PRIOR TO COMMENCING WORK.
 - (B) MAKE GOOD THE EXISTING CHAMBER WALL AT THE PROPOSED POINT OF PENETRATION & ADJUST THE EXISTING BENCHING TO THE SATISFACTION OF THE ENGINEER.
 10. WHERE SEWER PIPES, RISING MAINS OR ROAD GULLY DRAINS CROSS EXISTING ROADS, THE CONTRACTOR IS REQUIRED TO:
 - (A) CONTACT THE RELEVANT AUTHORITIES PRIOR TO COMMENCING WORK.
 - (B) MAKE GOOD THE EXISTING ROAD TO ITS ORIGINAL SPECIFICATION AS APPROVED BY THE ENGINEER.
 11. MINIMUM FALLS INDICATED ON DRAINAGE PIPES, LEVELS TO BE REVISED IF MANHOLE LOCATIONS ARE MODIFIED BY CONTRACTOR.
 12. CONCRETE PROTECTION TO BE PROVIDED AROUND ALL PIPES UNO.
 13. ALL BRANCH & PERIMETER DRAINAGE ARE TO BE DETAILED BY ARCHITECT.
 14. PROPRIETARY ACCESS JUNCTIONS TO BE USED TO DEPTHS OF 600mm OR LESS.
 15. 450x450mm INSPECTION CHAMBERS TO BE USED AT DEPTHS OF 600-900mm.
 16. 600x600mm INSPECTION CHAMBERS TO BE USED AT DEPTHS UP TO 1200mm
 17. MANHOLES TO DETAILS TO BE USED AT DEPTHS OVER 1200mm.
 18. ROAD GULLIES TO BE PROVIDED SO THAT MAX AREA CONTRIBUTING TO A SINGLE GULLY IS 180m².
 19. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH 'RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS FOR HOUSING AREAS', DEPARTMENT OF THE ENVIRONMENT.
 20. ALL FOUL & STORM MANHOLE BASES TO BE PRECAST CONCRETE PRE-BENCHED OFF SITE.

STORM DRAINAGE TABLE

SD Pipe Section	US MH CL	US MH IL	DS MH IL	Pipe Diameter [mm]	Pipe Grad. 1 in ...	Notes:
	[mod]	[mod]	[mod]	[mm]	
S1.0 to S1.1	102.100	100.675	100.370	225	50	
S1.1 to S1.2	102.100	100.370	100.100	225	195	
S1.2 to S1.3	101.740	100.100	99.860	225	195	
S1.3 to PI	101.900	99.860	99.835	300	265	
PI to S1.4 ATT	102.000	99.735	99.710	300	140	SUMP
S1.5 ATT to EX SMH	102.315	99.610	99.520	225	180	
S2.0 to S2.1	101.425	100.300	99.910	225	170	
S2.1 to S1.3	101.950	99.910	99.860	225	145	
S3.0 to S1.1	102.000	100.445	100.370	225	195	

NOTES:
 uPVC PIPES ASSUMED AS THE DRAINAGE MATERIAL, PLEASE NOTIFY ENGINEER IF DIFFERENT
 * = CONCRETE PROTECTION WILL BE PROVIDED OVER PIPES
 BD = Denotes Backdrop Manhole SUMP = Denotes 0.5m deep sump below pipe inverter

FOUL DRAINAGE TABLE

Pipe Section	U/S CL	U/S IL	D/S IL	Pipe Dia. (mm)	Gradient 1 in ...	Notes
	(m)	(m)	(m)	(mm)	1 in	
F1.0 to EXFMH	101.700	100.285	98.540	150	33	
* F2.0 to EXFMH	101.920	101.275	100.810	150	60	

NOTE
 * = CONCRETE PROTECTION WILL BE PROVIDED OVER PIPE
 uPVC PIPES ASSUMED AS THE DRAINAGE MATERIAL, PLEASE NOTIFY ENGINEER IF DIFFERENT.
 BD = Back Drop manhole

PROPOSED DRAINAGE LAYOUT
 SCALE 1:250 @ A1 / 1:500 @ A3

- #### TESTING OF SEWERS:
1. FOUL & SURFACE WATER SEWERS TO BE TESTED EITHER BY WATER OR AIR TEST. IF THE AIR TEST IS CARRIED OUT & THE RESULTS SHOW A FAILURE THEN A WATER TEST SHALL BE SUBSEQUENTLY CARRIED OUT TO DETERMINE ACCEPTANCE OR REJECTION.
 2. WATER TESTS CARRIED OUT SHALL BE TESTED IN UNDER A HEAD OF WATER IN ACCORDANCE WITH BS 8301 1995, & CARRIED OUT FOR A MINIMUM OF 30 MINUTES.
 3. THE CONTRACTOR IS TO ENGAGE AN ENGINEER WITH PROFESSIONAL INDEMNITY INSURANCE TO SUPERVISE ALL AIR/WATER TESTS ON MAINS BEFORE BACKFILLING.
 4. ON COMPLETION OF ALL SEWERS DRAINS & GULLIES, ALL SEWERS SHALL BE FLUSHED OUT & LEFT FREE FROM DEFECT & OBSTRUCTION & SUBSEQUENTLY A CCTV SURVEY SHALL BE CARRIED OUT BY AN INDEPENDENT CONTRACTOR OF THE AS BUILT DRAINAGE. THE CCTV SURVEY SHALL INCLUDE A REPORT & DVD & SHALL BE SUBMITTED TO THE ENGINEER & ARCHITECT PRIOR TO PRACTICAL COMPLETION.
 5. ON COMPLETION OF ALL SEWERS, DRAINS & GULLIES AN AS-BUILT SURVEY MUST BE SUBMITTED INCLUDING LOCATION OF MANHOLES RELATIVE TO THE BUILDING OUTLINE, COVER, INVERT LEVELS & PIPE DIAMETERS TO THE ENGINEER & ARCHITECT FOR THEIR REVIEW PRIOR TO PRACTICAL COMPLETION.

Referenced drawings		Issue register					
Dwg No.	Dwg Title	Rev.	Date	Description	Dwn.	Chkd.	Appvd.
PL1		05.03.24		PLANNING ISSUE	GG	TD	NP

- NOTES:**
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SERVICE ENGINEERS DRAWINGS & SPECIFICATIONS.
 2. ALL LEVELS ARE STRUCTURAL UNLESS NOTED OTHERWISE.
 3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT BUILDING REGULATIONS.
 4. DO NOT SCALE - WORK TO FIGURE DIMENSIONS ONLY.

QUALITY
ISO 9001:2000
NSA Certified

ENGINEERS
IRELAND
cpd ACCREDITED COMPANY

PROPOSED DRAINAGE LAYOUT

Date: 12.02.24
 Scale: 1:250 @ A1 / 1:500 @ A3
 Drawn By: G.GOODSON
 Checked By: T.DELANEY
 Approved By: N.PATTERSON

Client: LAOIS COUNTY COUNCIL

Job Description: PROPOSED HOUSING DEVELOPMENT AT MOANBAUN, MOUNTRATH, Co. LAOIS.

Project No: 22KK017
 Drawing Ref: C-015
 Rev: PL1

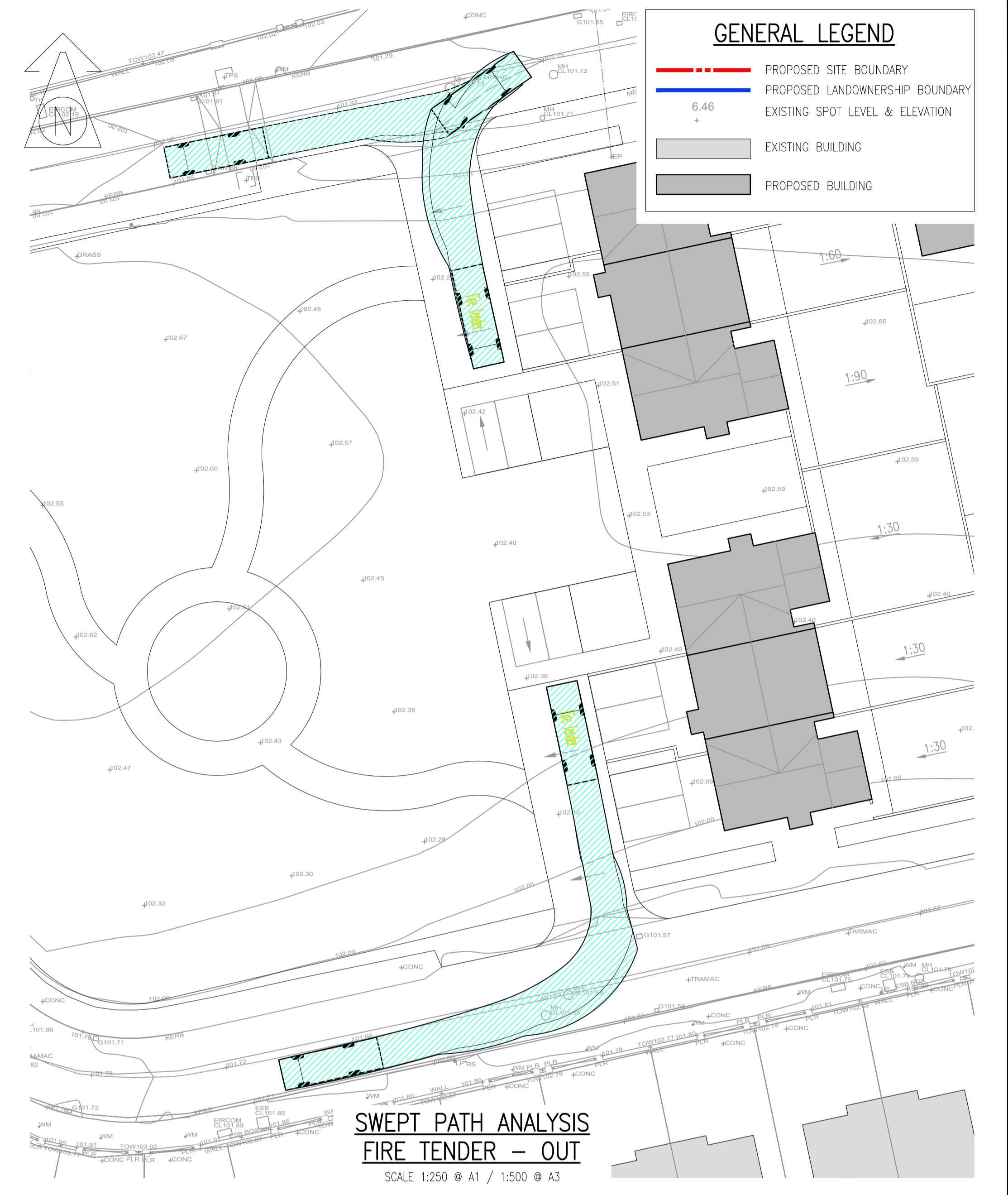
PLANNING

Hayes Higgins Partnership

Gas House Lane, Kilkenny.

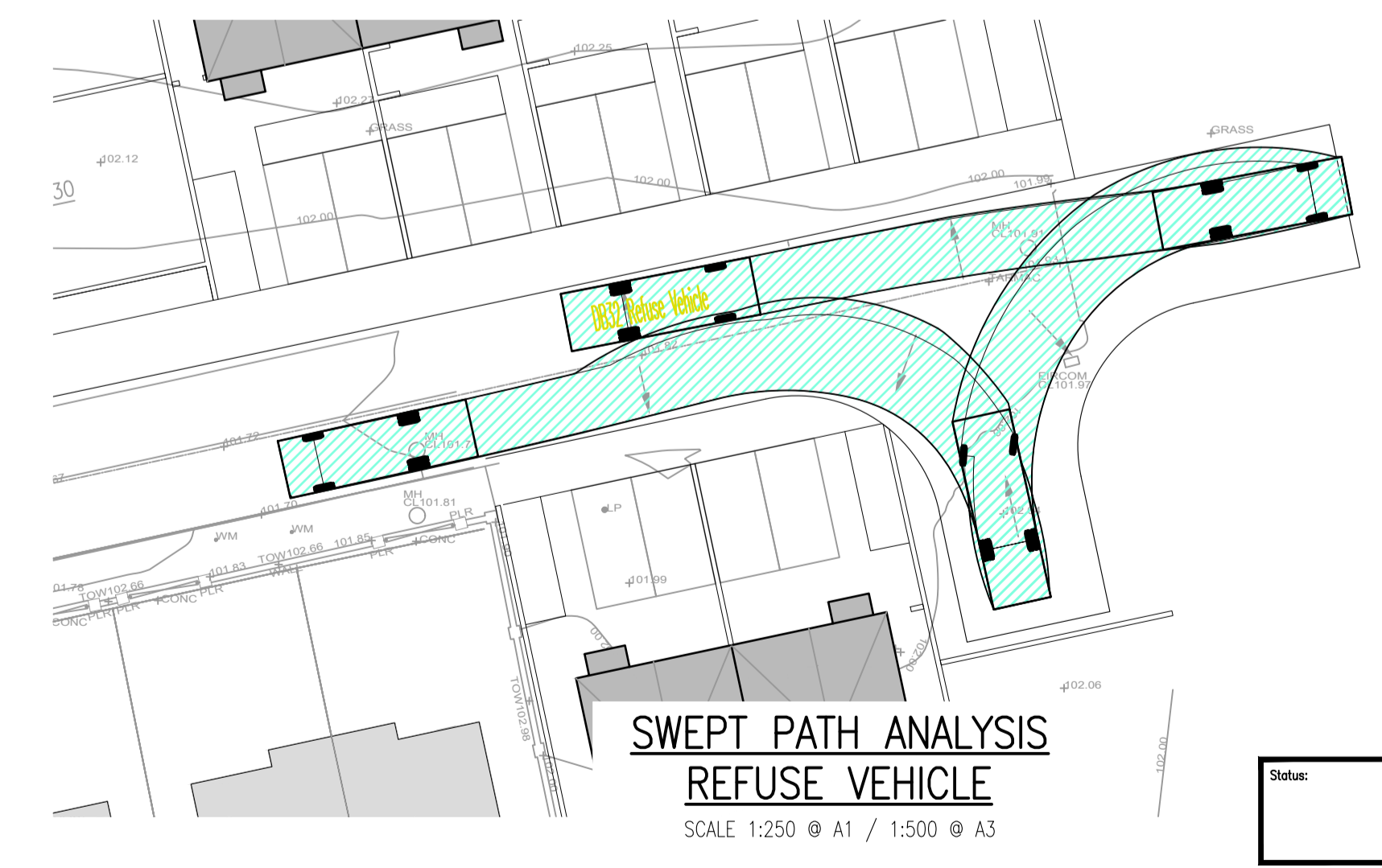
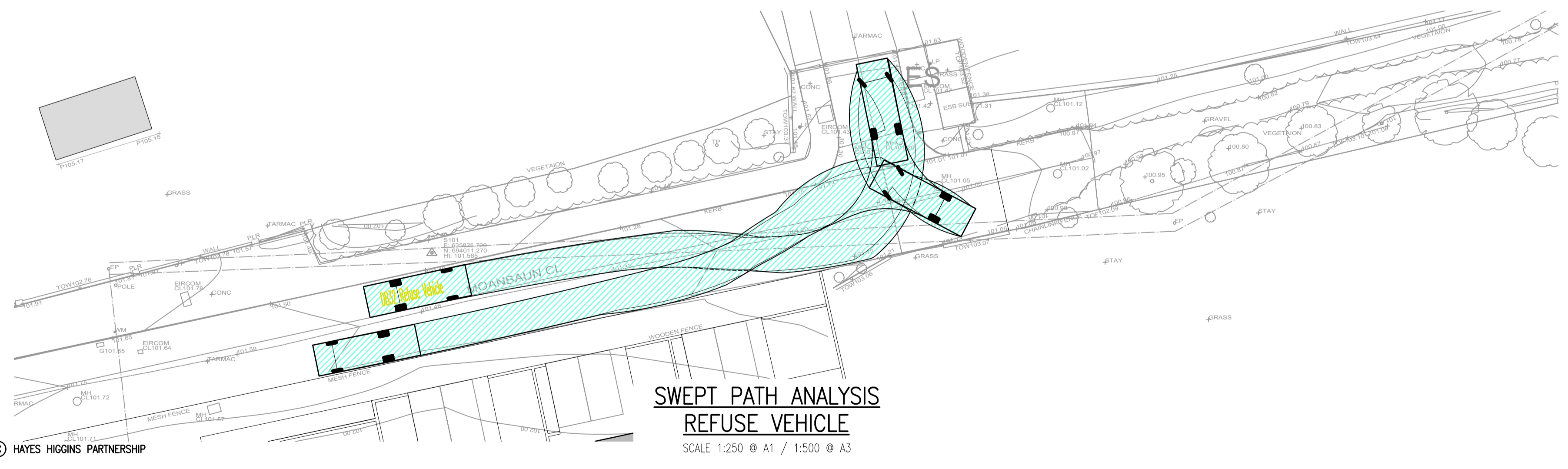
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GENERAL LEGEND

- PROPOSED SITE BOUNDARY
- PROPOSED LANDOWNERSHIP BOUNDARY
- 6.46 + EXISTING SPOT LEVEL & ELEVATION
- EXISTING BUILDING
- PROPOSED BUILDING



Status: **PLANNING**

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Referenced drawings		Issue register					
Dwg No.	Dwg Title	Rev.	Date	Description	Dwn.	Chkd.	Appvd.
PL1		05.03.24		PLANNING ISSUE	GC	TD	NP

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ENGINEERS IRELAND
cpd ACCREDITED COMPANY

Drawing Title: **SWEPT PATH ANALYSIS
FIRE TENDER &
REFUSE VEHICLE**

Date: 12.02.24
Scale: 1:250 @ A1 / 1:500 @ A3

Drawn By: G.GOODSON
Checked By: T.DELANEY
Approved By: N.PATTERSON

Client: LAOIS COUNTY COUNCIL

Job Description: PROPOSED HOUSING DEVELOPMENT AT MOANBAUN, MOUNTRATH, Co. LAOIS.

Project No: 22KK017
Drawing Ref: C-040
Rev: PL1

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