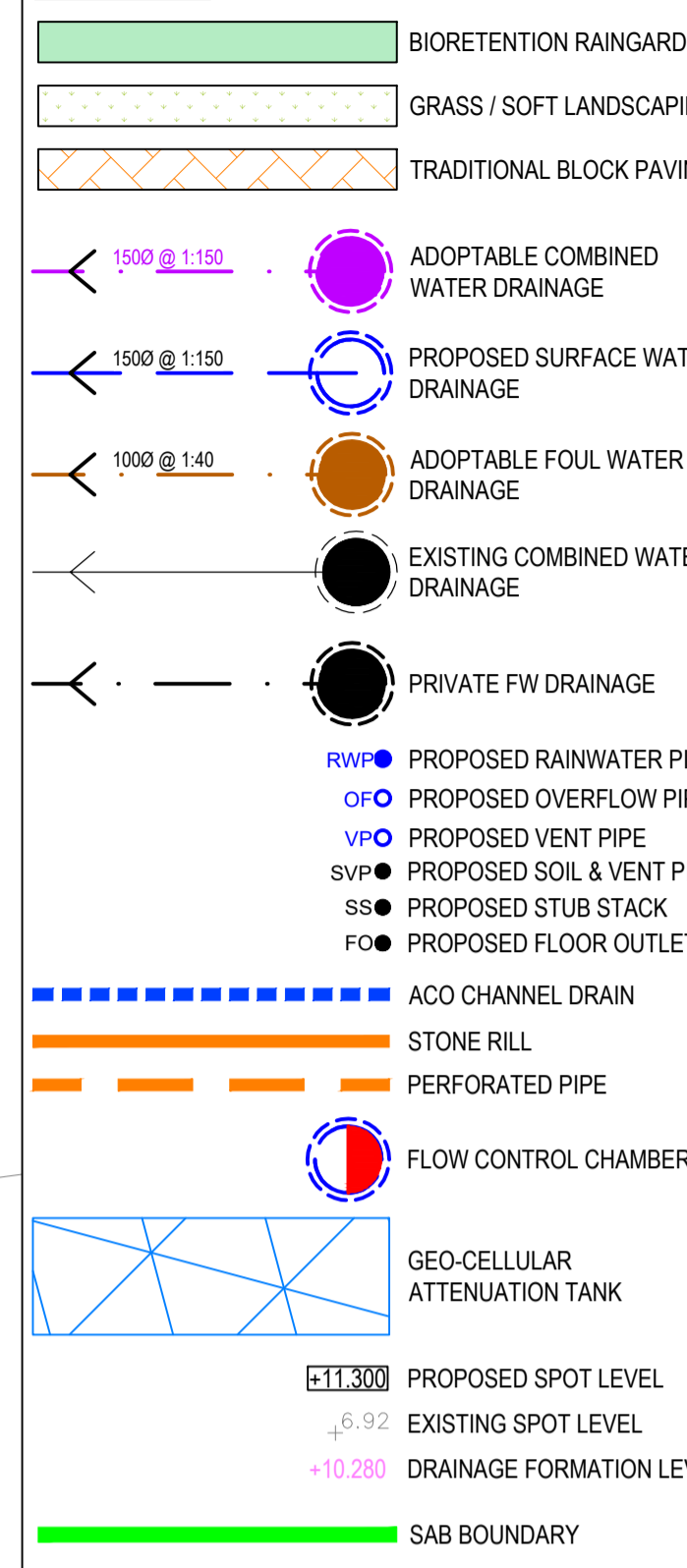


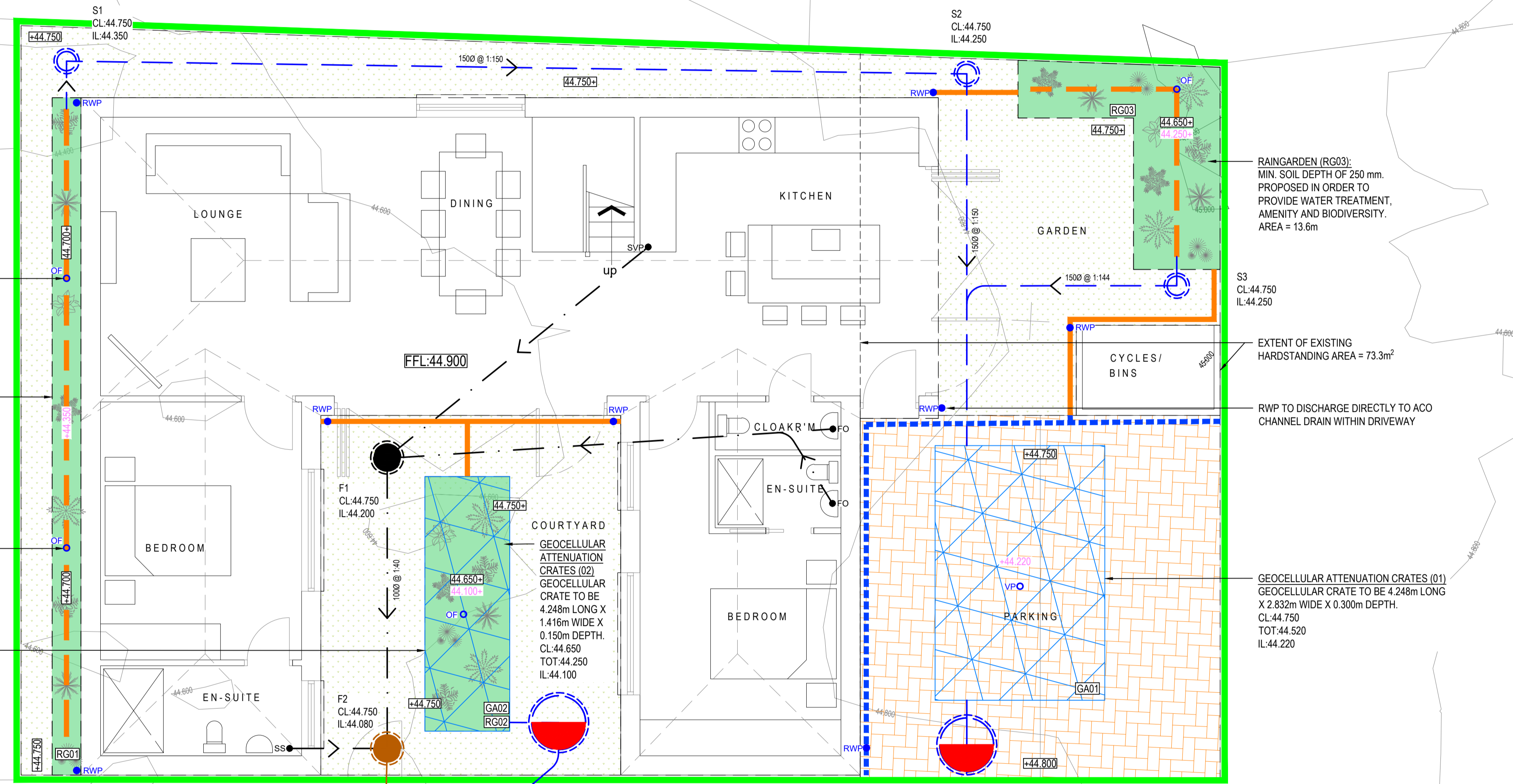
- PLANTING SCHEDULE - BIORETENTION AREAS (RAINGARDENS)**
- PLANTS WITHIN BIORETENTION AREAS (RAINGARDENS) SHOULD BE PLANTED WITH THE FOLLOWING SPECIES AT A DENSITY OF 4NO PLANTS/M<sup>2</sup>:
- PURPLE LOOSESTRIFE (LYTHRUM SALICARIA)
  - WATER MINT (MENTHA AQUATICA)
  - HEMP AGRIMONY (EUPATORIUM CANNABINUM)
  - RAGGED ROBIN (LYCHNIS FLOS-CUCULI)
  - MARSH WOUNDWORT (STACHYS PALUSTRIS)
  - SOFT RUSH (JUNCUS EFFUSUS)
  - ROYAL FERN (OSMUNDA REGALIS)
  - BUGLE (AJUGA REPTANS)
  - CHIVES (ALLIUM SCHOENOPRASUM)
  - CHOISYA DEWITTEANA WHITE DAZZLER
  - CORNUS STOLONIFERA 'KELSEY'
  - CORNUS SANGUINEA 'MIDWINTER FIRE'

**LEGEND**



FOR DRAINAGE DETAILS PLEASE SEE DRG. 18252\_502.

- GENERAL NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  2. ALL LEVELS ARE SHOWN IN METRES UNLESS NOTED OTHERWISE.
  3. DO NOT SCALE FROM THE DRAWING. USE FIGURED DIMENSIONS ONLY.
  4. ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO THE ENGINEER.
  5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS, SUBCONTRACTORS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
  6. EXISTING SERVICES HAVE NOT BEEN SHOWN BUT ARE PRESENT - THE CONTRACTOR IS TO LIAISE WITH ALL STATUTORY AUTHORITIES PRIOR TO THE COMMENCEMENT OF ANY WORKS.
- ADDITIONAL NOTES:**
1. MH COVERS AND FRAMES TO CONFORM TO BS EN 124: -HIGHWAYS AND FOOTWAYS TO FRONT OF BUILDINGS (D400) -FOOTWAYS TO REAR OF BUILDINGS (C250)
  2. TYPE S BEDDING AND SURROUND TO ALL PIPES EXCEPT IN THE FOLLOWING CIRCUMSTANCES, IN WHICH TYPE Z BEDDING AND SURROUND ARE TO BE USED: -DOMESTIC GARDENS AND PATHWAYS WITHOUT ANY POSSIBILITY OF VEHICULAR ACCESS, 0.35m; -DOMESTIC DRIVEWAYS, PARKING AREAS AND YARDS WITH HEIGHT RESTRICTIONS TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES, 0.5m; -DOMESTIC DRIVEWAYS, PARKING AREAS AND NARROW STREETS WITHOUT FOOTWAYS (E.G. NEWS DEVELOPMENT) WITH LIMITED ACCESS FOR VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES, 0.9m; -AGRICULTURAL LAND AND PUBLIC OPEN SPACE, 0.9m; -HIGHWAYS AND PARKING AREAS WITH UNRESTRICTED ACCESS TO VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES, 1.2m.
  3. ALL EXISTING MANHOLE INVERTS TO BE CHECKED AND REPORTED TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF DRAINAGE WORKS. EXISTING PIPE CONNECTIONS ARE TO BE CCTV SURVEYED AND INSPECTED BY THE ENGINEER AND LOCAL AUTHORITY. IF THE PIPE CONNECTION IS FOUND TO BE DAMAGED OR IN DISTRESS, THE CONTRACTOR IS TO CARRY OUT REMEDIAL WORKS OR PROVIDE A NEW CONNECTION TO THE EXISTING SEWER (PIPE SIZE AND GRADIENT TO BE DETERMINED BY THE ENGINEER).
  4. THE GRADIENTS INDICATED AGAINST THE DRAIN RUNS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL INSTALL DRAINS TO THE INVERT LEVELS SHOWN FOR EACH MANHOLE OR OTHER INDICATED POSITION.
  5. ALL PLOT FOUL DRAINAGE TO BE MINIMUM 100mm DIAMETER UNLESS OTHERWISE NOTED.
  6. ALL ADOPTABLE THERMOPLASTIC STRUCTURED WALL SEWER PIPE SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 13476-1 AND BS EN 13476-2 OR BS EN 13476-3. PIPES SHALL BE BSI KITEMARKED OR HAVE EQUIVALENT THIRD PARTY CERTIFICATION. PIPES LESS THAN OR EQUAL TO 500mm DIA. SHALL HAVE A SHORT-TERM RING STIFFNESS OF NOT LESS THAN 8kN/m<sup>2</sup> (SN8).
  7. ALL JOINTING IN ACCORDANCE WITH MANUFACTURERS TECHNICAL ADVICE & SPECIFICATION.
  8. ALL NON ADOPTABLE DRAINAGE TO BE THE STANDARD UPVC 110mm, 160mm DRAINAGE AND MANUFACTURED TO BS-EN 1401 AND BS 4660 UNLESS NOTED OTHERWISE.
  9. ALL PERMEABLE PAVING CELLS TO HOUSE LATERAL FIN DRAIN ALONG LOWER EDGE WITH 1500 CONNECTION PIPE.
  10. ALL STORM WATER DRAINAGE TO BE A MINIMUM OF 150mm DIAMETER UNLESS OTHERWISE NOTED.
  11. SOIL & VENT PIPE LOCATION AND NUMBER TO BE CONFIRMED WITH ARCHITECT.
  12. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS DRAWINGS, TOGETHER WITH THEIR LATEST SPECIFICATIONS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER (VALE CONSULTANCY) AS SOON AS POSSIBLE.
  13. FIGURED DIMENSIONS ONLY TO BE USED. ANY QUERIES OR DISCREPANCIES TO BE REFERRED TO THE ENGINEER (VALE CONSULTANCY) IMMEDIATELY.
  14. PRIOR TO ORDERING ANY MATERIALS THE CONTRACTOR IS TO CONFIRM MANUFACTURER/PIPE MATERIAL AND GRADE PROPOSED WITH WATER AUTHORITY.
  15. TEMPORARY WORKS DESIGN BY OTHERS.
  16. DESIGN RISK ASSESSMENTS AND METHOD STATEMENTS ARE TO BE PROVIDED TO THE PRINCIPLE CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY WORKS.



OVERFLOW PIPE PROPOSED TO CONNECT TO PERFORATED PIPE WITHIN TYPE 3 CGA TO LIMIT EXCEEDANCE FLOWS IN THE EVENT OF A FLOOD.

RAINGARDEN (RG01): MIN. SOIL DEPTH OF 200 mm. PROPOSED IN ORDER TO PROVIDE WATER TREATMENT, AMENITY AND BIODIVERSITY. AREA = 5.4m

OVERFLOW PIPE PROPOSED TO CONNECT TO PERFORATED PIPE WITHIN TYPE 3 CGA TO LIMIT EXCEEDANCE FLOWS IN THE EVENT OF A FLOOD.

RAINGARDEN (RG02): MIN. SOIL DEPTH OF 400 mm. PROPOSED IN ORDER TO PROVIDE WATER TREATMENT, AMENITY AND BIODIVERSITY. AREA = 6.0m

COURTYARD  
GEOCELLULAR ATTENUATION CRATES (02)  
GEOCELLULAR CRATE TO BE 4.248m LONG X 1.416m WIDE X 0.150m DEPTH.  
CL:44.650  
TOT:44.250  
IL:44.100

RAINGARDEN (RG03): MIN. SOIL DEPTH OF 250 mm. PROPOSED IN ORDER TO PROVIDE WATER TREATMENT, AMENITY AND BIODIVERSITY. AREA = 13.6m

EXTENT OF EXISTING HARDSTANDING AREA = 73.3m<sup>2</sup>

RWP TO DISCHARGE DIRECTLY TO ACO CHANNEL DRAIN WITHIN DRIVEWAY

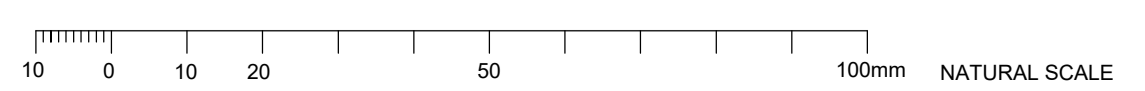
GEOCELLULAR ATTENUATION CRATES (01)  
GEOCELLULAR CRATE TO BE 4.248m LONG X 2.832m WIDE X 0.300m DEPTH.  
CL:44.750  
TOT:44.520  
IL:44.220

FOUL DRAINAGE TO DISCHARGE TO THE EXISTING PUBLIC FOUL SYSTEM WITHIN ACCESS LANE.

S5 HYDROBRAKE FLOW CONTROL  
CL:44.750  
IL:44.075  
2.5 l/s

S4 HYDROBRAKE FLOW CONTROL  
CL:44.800  
IL:44.170  
2.5 l/s

EXF1  
CL:44.800  
IL:44.200



|   |           |             |          |          |  |
|---|-----------|-------------|----------|----------|--|
| 02  | NRC       | FP          | MJ       | 09.10.23 | ISSUED FOR FULL SAB APP                |
| 01  | NRC       | FP          | MJ       | 09.10.23 | ISSUED TO DCWW TO AGREE DISCHARGE RATE |
| rev.  | drawn     | checked     | approved | date     | description                            |
|   |           |             |          |          |  |
| Client  |           |             |          |          |  |
| PENDRAGON PROPERTIES LTD  |           |             |          |          |  |
| Project   |           |             |          |          |  |
| 874, NEWPORT ROAD, CARDIFF, CF3 4LJ   |           |             |          |          |  |
| Title   |           |             |          |          |  |
| PROPOSED DRAINAGE PLAN  |           |             |          |          |  |
|   |           |             |          |          |  |
| 29 Bocam Park, Old Field Road, Pencoed, Bridgend CF35 5LJ.<br>Phone: 01656 863794 Email: enquiries@vale-consultancy.co.uk |           |             |          |          |  |
| date  | drawn     | checked     | approved |          |  |
| 09.10.23  | NRC       | FP          | MJ       | 09.10.23 | 09.10.23                               |
| scale @ A1  |           | project no. |          |          |  |
| 1:50  |           | 18252       |          |          |  |
| status  | drw. no.  |             |          |          | rev.                                   |
| A   | 18252_500 |             |          |          | 02                                     |