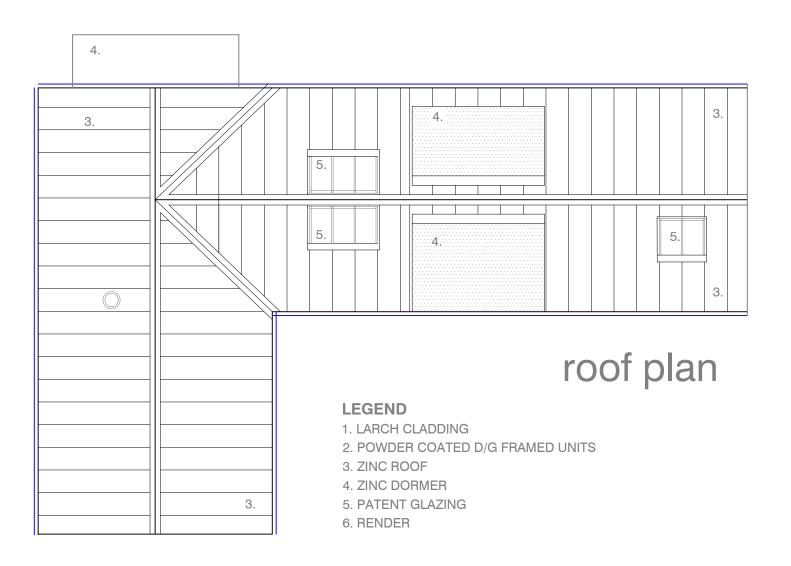
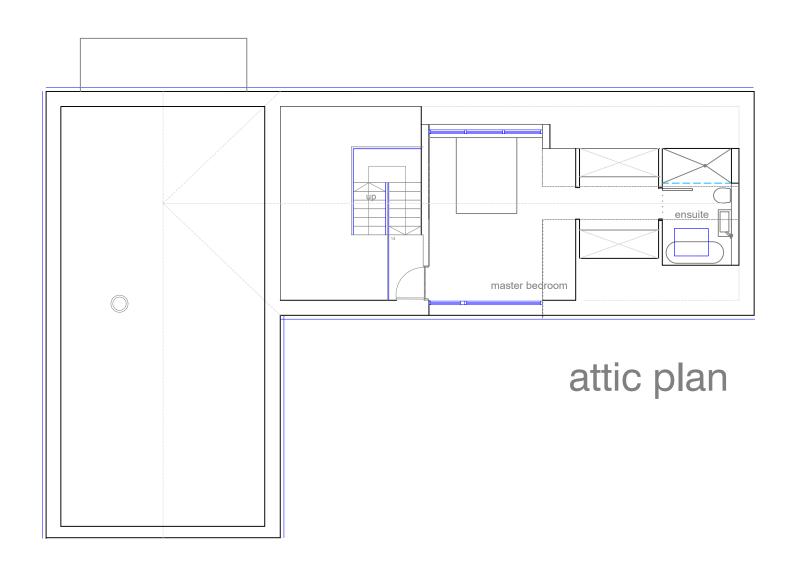
#### **AGENDA ITEM 6**

APPENDIX IB

2021/0407/DET

**PLANS** 





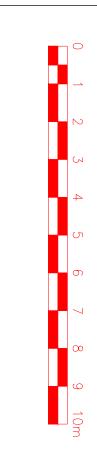
### **PLANNING** proposed plan - house 1

farmhouse 1 -balavil

unit5architects	
the matrix, 114cowcaddens road, g4 ohl t 0141 331 0202 e info@unit5architects.com	jc

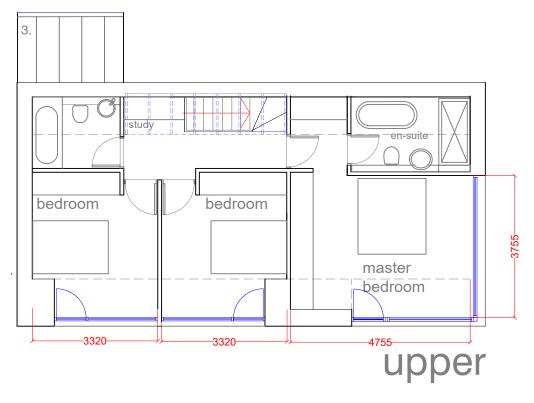
new farm cottages BALAVIL		PLANS house	
no.	dwg no.	scale	date

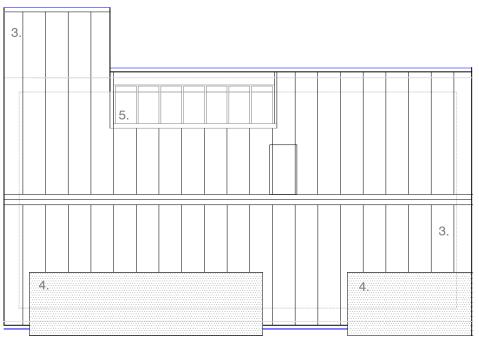




# entrance porch cloaks +boots shower/wo utility ground

## **PLANNING**





#### **LEGEND**

- 1. LARCH CLADDING
- 2. D/G FRAMED UNITS
- 3. ZINC ROOF
- 4. ZINC DORMER
- 5. PATENT GLAZING
- 6. RENDER

roof

## proposed plan - house 2

farmhouse 2 -balavil

the matrix, 114cowcaddens road, g4 ohl t 0141 331 0202 e info@unit5architects.com

new farm cottages BALAVIL

PLANS house 2 as proposed

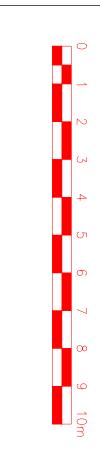
19 290 dwg no. / P04

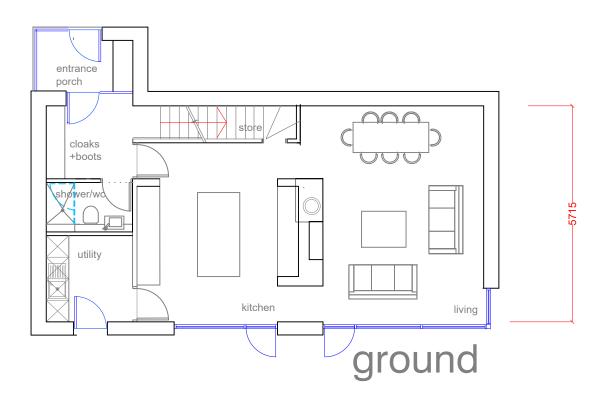
1:100@A3 | date | OCT 21

### O 1 2 3 4 5 6 7 8 9 10m PLANNING **LEGEND** 1.LARCH CLADDING 2. POWDER COATED D/G FRAMED UNITS 3. ZINC ROOF 4. ZINC DORMER 5. PATENT GLAZING 6. RENDER south elevation east elevation north elevation west elevation proposed elevations - house 3

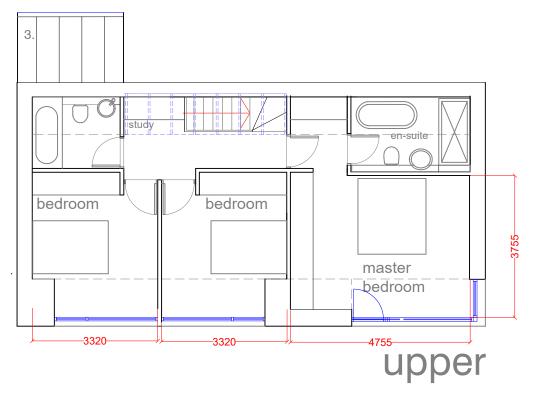
farmhouse 3 - balavil

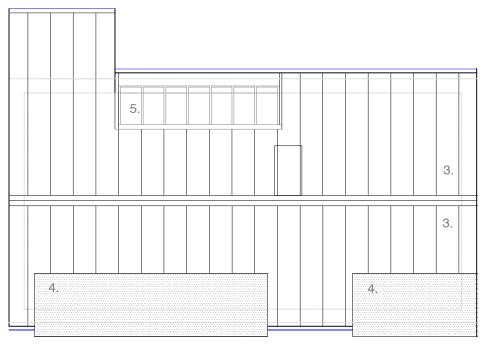
unit5architects
the matrix, 114cowcaddens road, g4 ohl
t 0141 331 0202 e info@unit5architects.com





## **PLANNING**





#### LEGEND

- 1. LARCH CLADDING
- 2. D/G FRAMED UNITS
- 3. ZINC ROOF
- 4. ZINC DORMER
- 5. PATENT GLAZING
- 6. RENDER

roof

## proposed plan - house 3

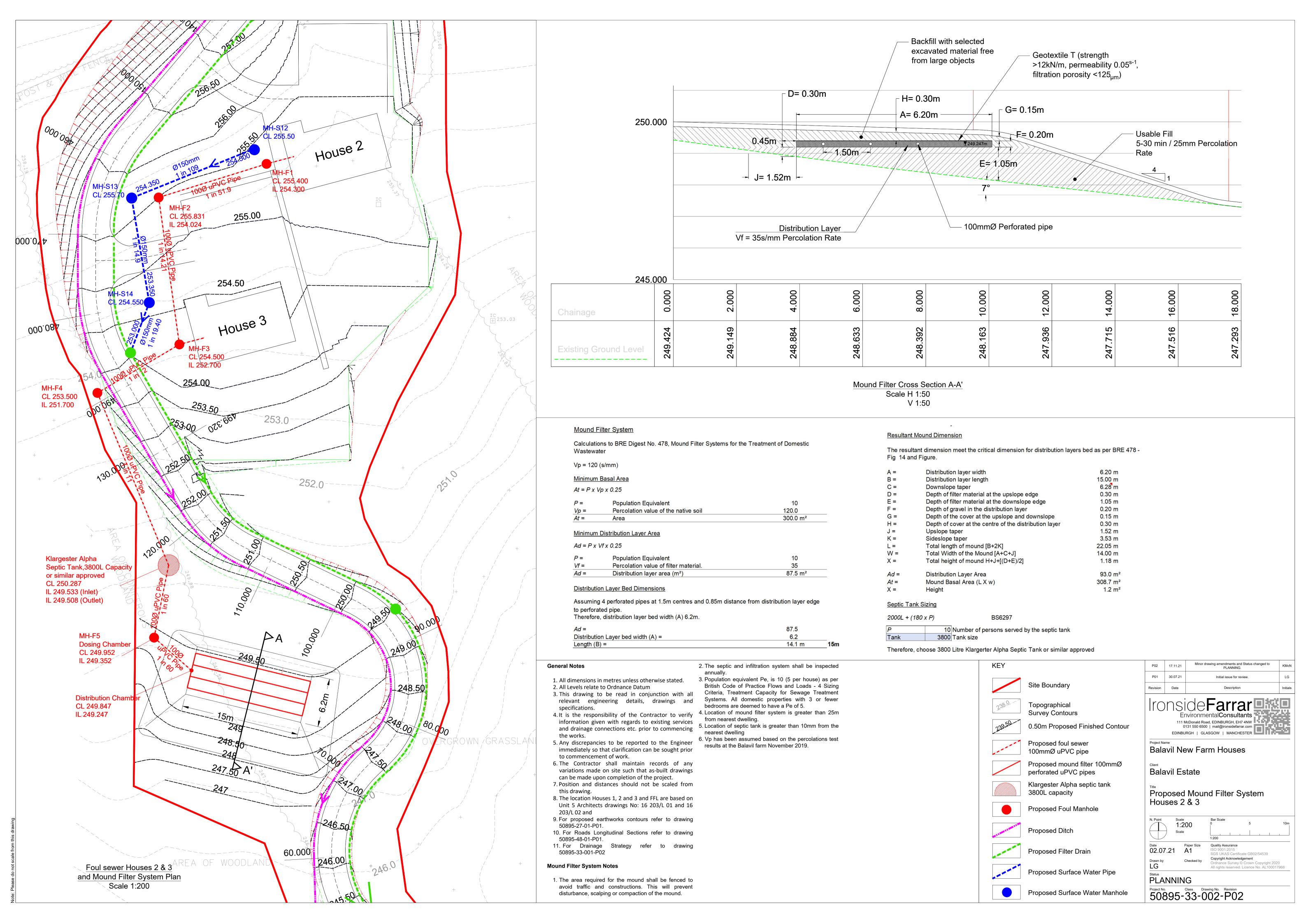
farmhouse 3 -balavil

the matrix, 114cowcaddens road, g4 ohl to 141 331 0202 e info@unit5architects.com

new farm cottages BALAVIL

PLANS house 3 as proposed

g no. | scale | 1:100@A3 | OCT21



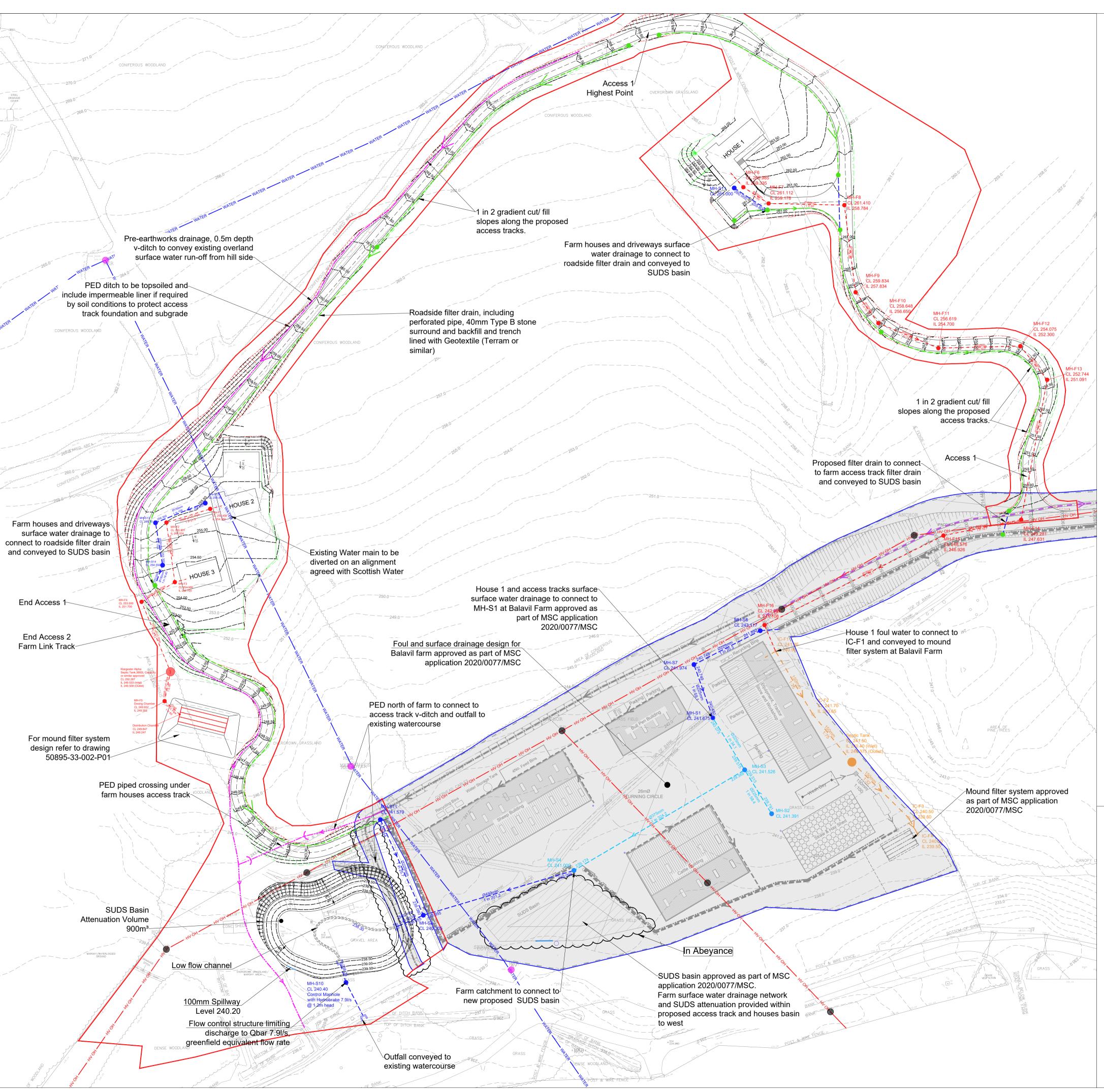


Table 1. SUDS Pollution Hazard and Mitigation Indices

Type of Contribution Area	Treatment Component	Hazard & Mitigation Index	Total Suspended Solids	Metals	Hydro- carbons
Individual Dranarty		Hazard	0.5	0.4	0.4
Individual Property driveways, Roads	Filter Drain	Mitigation Index 1	0.4	0.4	0.4
(Low Traffic Roads)	Basin	Mitigation Index 2 (Note 3)	0.5	0.5	0.6
(LOW Hame Noads)	Total Mitiga	ition Provided (Note 3)	0.65	0.65	0.7
		Hazard	0.2	0.2	0.05
Residential Roof	Basin	Mitigation Index 1	0.5	0.5	0.6
	Total Mitiga	ation Provided (Note 3)	0.5	0.5	0.6
					•

#### Pollution Hazard and Mitigation Indexes Notes:

- 1. Table 1 shows the total Mitigation provided is greater than the Hazard
- 2. In accordance with the SUDS Manual C753 the entire runoff area has been assessed, the SUDS Manual states that where land use varies across the runoff area, the highest pollution hazard within the area shall be used. In this instance the highest pollution hazard is taken as "Low Traffic Roads".
- 3. A reduction factor of 0.5 is used to account for the reduced performance of secondary or tertiary components associated with already reduced inflow concentrations.

#### Surface Water Drainage Parameters:

(Farm houses and access tracks) Total hardstanding area:

Houses Roofing =	$480 \text{ m}^2$
Driveways =	680 m <sup>2</sup>
Access Road 1	2,577 m <sup>2</sup>
Farm Link Track	480 m <sup>2</sup>
Total -	4 247 m <sup>2</sup>

Greenfield run-off (Qbar) = 2.52 l/'s (farm houses and access tracks)
Greenfield run-off (Qbar) = 5.38 l/'s (farm development as per drawing 50499/401)
Total SUDS basin discharge = 7.9 l/'s

Attenuation required for farm houses and access tracks
Attenuation required for Balavil Farm (as per drawing 50499/401)

Total attenuation required

298 m<sup>3</sup>
580 m<sup>3</sup>
878 m<sup>3</sup>

#### Attenuation provided:

SUDS Basin = 900m<sup>3</sup>

Total = 900 m<sup>3</sup> > 878 m<sup>3</sup> (sufficient attenuation within proposed basin to serve both farm redevelopment and farm houses and access tracks)

#### Drainage Strategy Notes:

- Surface water drainage system as detailed as part of planning application MSC 2020/0077/MSC on drawing 50499/401 will be connected to the proposed SUDS basin shown on this drawing. Calculated discharge rates and attenuation volumes required as part of the farm development have been included within the proposed SUDS basin and will serve the farm, houses and access tracks.
- 2. The surface water drainage system to be discharge to the existing drainage ditch to the south of the site.
- 3. The houses and access tracks network has been designed to accommodate no flooding up to and including the 200 year event + 30% uplift in peak rainfall intensity to account for Climate Change.
- 4. In accordance with the SUDs manual C753, the Simple Index Approach (SIA) has been used to determine the total potential
- 5. Treatment has been provided as per the mitigation indices from Table 26.3 of the SUDs manual C753. The mitigation provided equals or exceeds the potential pollution index (See Table 1). Treatment detailed on drawing 50499/401 for the farm development should be maintained upstream of the SUDS basin to ensure adequate treatment is provided.
- 6. Mitigation treatment is provided through filter drains and a basin for the access tracks and farm houses (see table 1).
- 7. Attenuation provided to control the discharge from the development to greenfield equivalent runoff rate (QBar) of 9.61 l/'s overall, details of which are given above.
- A HR Wallingford storage estimation assessment of the potential attenuation volume required has been carried out using the IH124 Method. The volume required is assessed as 298 m³ (farm houses and access tracks). The volume required for the farm development is 580m³ therefore the total attenuation required is 878m³.
   A review of the Water Environment (Controlled Activities) (Scotland) Regulations 2011 demonstrates that this development shall
- not require SEPA licence to discharge, as the surface water is installed and maintained in accordance with GBR 18, 19, 20 and 21 of the CAR Regulations.
- 10. House roof and driveway area runoff to be collected and connected to roadside filter drain and SUDS basin prior to outfall to watercourse (attenuation provided within the basin to Qbar equivalent runoff rate).
- 11. Farm development surface water to be collected in filter strips/ filter drains and discharged to the SUDS basin (attenuation provided within the basin to Qbar equivalent runoff rate).

#### Flood Risk Notes:

- 1. Review of SEPA flood maps does not show a flood risk to the farmhouses, access track or SUDS basin from river source or surface water source flooding.
- 2. The Flood Risk Assessment included within the DMRB Stage 3 Environmental Impact Assessment produced by CH2M/ Fairhurst as part of the A9 dualling scheme has been reviewed, with the watercourse to which the proposed SUDS basin will discharge included within the detailed study area (reference drawing A9P09-CJF-EWE-M\_ML522\_ZZ-DR-EN-001). The farmhouses, access track and SUDS basin are not shown to be within the flood envelope during the 1 in 200 year event conditions (reference drawing FEX9 1 in 200 year flood extent pre-development (baseline)).

Basin Relocated to Suit CNPA Comments

