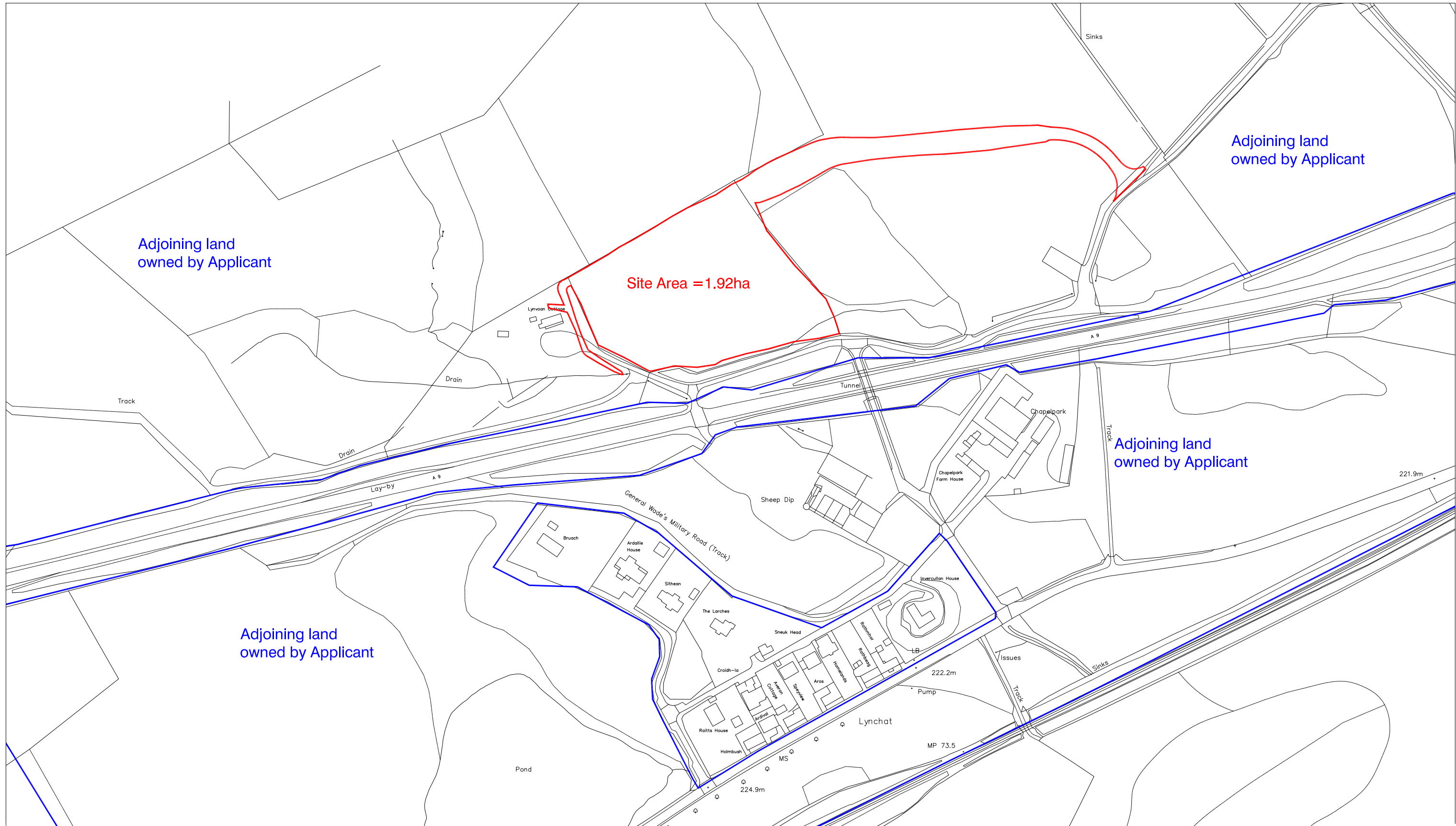


AGENDA ITEM 9

APPENDIX I

2018/0354/PPP

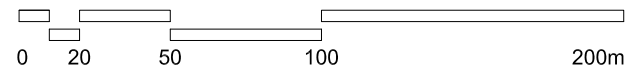
PLANS



Key

- Application Boundary
- Adjoining land owned by Applicant

Land to the North of the A9, Kingussie, PH21 1LT,
 NH 78348 02070,
 278348E, 802070N



Drawn
 BA
 Checked by

Date
 05.09.18
 Scale
 1:2,500

Original Size
A3

Project
 Relocation of Balavil Estate
 (Chapelpark) Home Farm

Client
 Balavil Estate Ltd

Title
 Location Plan

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Quality Assurance
 UKAS 005
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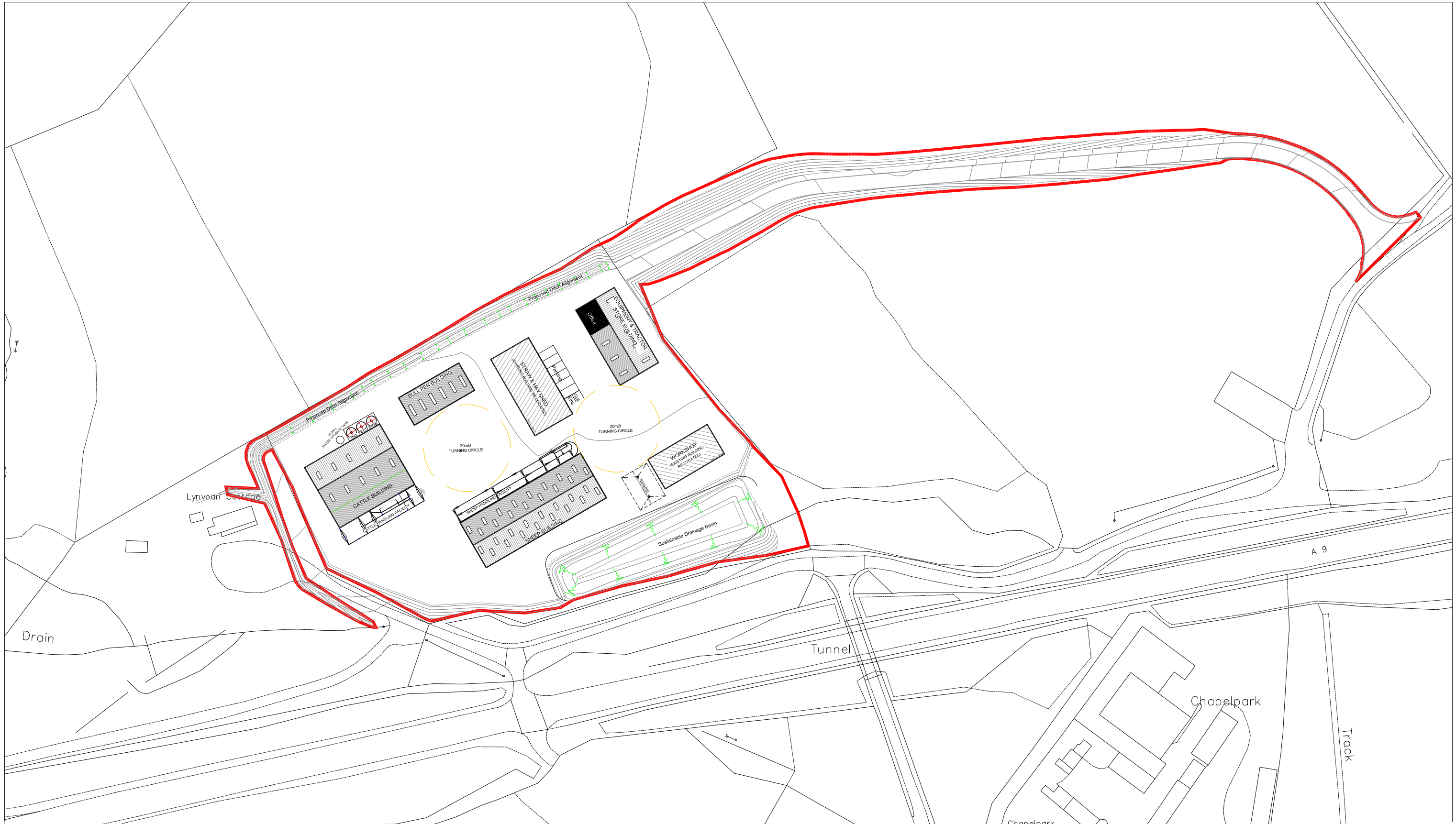
IronsideFarrar
 Environmental Consultants

Environmental Planners
 Civil Engineers
 Landscape Architects
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111 McDonald Road EDINBURGH EH7 4NW
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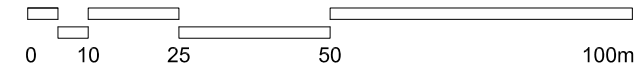
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Drawing No. **50277/102** Revision



Key
 Application Boundary

Land to the North of the A9, Kingussie, PH21 1LT,
 NH 78348 02070,
 278348E, 802070N



North Point

 Drawn
 BA
 Checked by
 Date
 05.09.18
 Scale
 1:1,250
 Original Size
A3

Project
Relocation of Balavil Estate (Chapelpark) Home Farm
 Client
Balavil Estate Ltd
 Title
Indicative Site Layout
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 Drawing No. **50277/101** Revision

Drainage Strategy

- There are no Scottish Water foul, surface water or combined sewers in the vicinity of the proposal
- Office facility WC and associated facilities foul drainage will be discharged to septic tank with outfall to soakaway/drainage field sized in accordance with BS 6297:2007
- Building roof area water will be collected and discharged directly to the SUDs basin and attenuation provided within the basin to Greenfield Run Off equivalent.
- Farm yard area surface water will be collected in filter strips/filter drains and discharged to the SUDs basin and with attenuation provided within the basin to Greenfield Run Off equivalent.
- Access road will be drained with roadside filter strips/filter drains
- Discharge of surface water will be to the existing field drain and field ditch systems

DRAINAGE PROPOSALS CALCULATIONS:

Total hardstanding area:

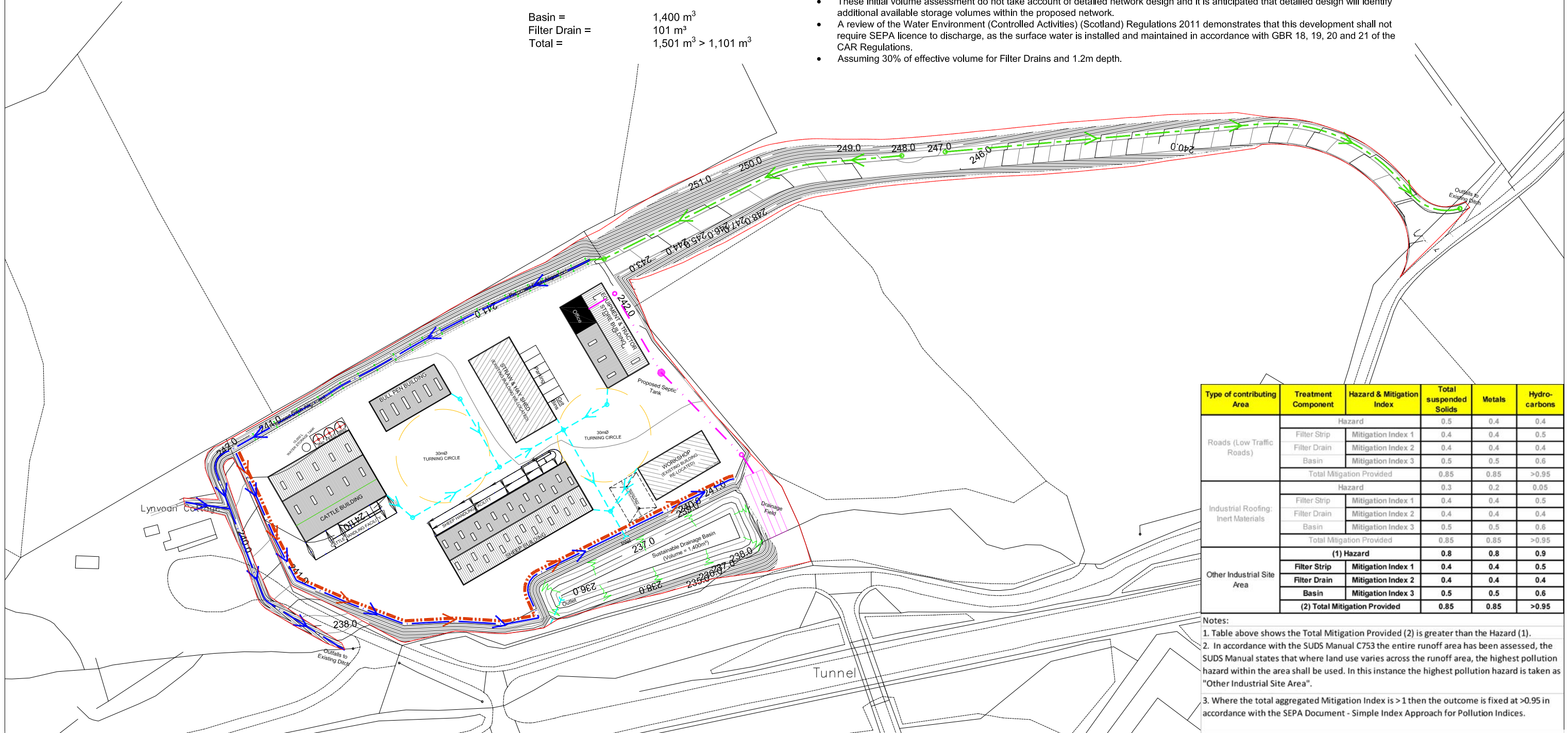
Industrial Roofing = 3,100 m²
 Yard areas = 8,900 m²
 Total = 12,000 m²

Greenfield run-off (Qbar) = 7.25 l/s
 Attenuation required = 1,101 m³
 Attenuation provided:

Basin = 1,400 m³
 Filter Drain = 101 m³
 Total = 1,501 m³ > 1,101 m³

Notes:

- The surface water drainage system will discharge to an existing ditch to the south of the site.
- The network will be designed to accommodate no flooding up to and including the 30year event + 30% Climate Change.
- In accordance with best practice the design calculations will be checked for events up to the 200 year storm event to assess the extent of exceedence within the development.
- In accordance with the SUDs manual C753, the simple index approach has been utilised to ascertain the total potential pollution hazard.
- 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.
- Mitigation treatment is provided through filter Strips, filter drains and a basin for the yard area and roof.
- Attenuation will be provided to control the discharge from the development to Greenfield Runoff (QBar) of 7.25 l/s.
- A HR Wallingford Storage estimation assessment of the potential attenuation volume required has been carried out using IH124 Method and the volume required assessed as 1,101 m³.
- These initial volume assessment do not take account of detailed network design and it is anticipated that detailed design will identify additional available storage volumes within the proposed network.
- 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.
- Assuming 30% of effective volume for Filter Drains and 1.2m depth.

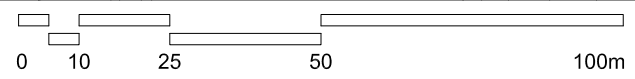


Type of contributing Area	Treatment Component	Hazard & Mitigation Index	Total suspended Solids	Metals	Hydrocarbons
Roads (Low Traffic Roads)		Hazard	0.5	0.4	0.4
	Filter Strip	Mitigation Index 1	0.4	0.4	0.5
	Filter Drain	Mitigation Index 2	0.4	0.4	0.4
	Basin	Mitigation Index 3	0.5	0.5	0.6
	Total Mitigation Provided			0.85	0.85
Industrial Roofing: Inert Materials		Hazard	0.3	0.2	0.05
	Filter Strip	Mitigation Index 1	0.4	0.4	0.5
	Filter Drain	Mitigation Index 2	0.4	0.4	0.4
	Basin	Mitigation Index 3	0.5	0.5	0.6
	Total Mitigation Provided			0.85	0.85
Other Industrial Site Area	(1) Hazard		0.8	0.8	0.9
	Filter Strip	Mitigation Index 1	0.4	0.4	0.5
	Filter Drain	Mitigation Index 2	0.4	0.4	0.4
	Basin	Mitigation Index 3	0.5	0.5	0.6
	(2) Total Mitigation Provided			0.85	0.85

- Notes:**
1. Table above shows the Total Mitigation Provided (2) is greater than the Hazard (1).
 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 "Other Industrial Site Area".
 3. Where the total aggregated Mitigation Index is > 1 then the outcome is fixed at >0.95 in accordance with the SEPA Document - Simple Index Approach for Pollution Indices.

Key

- Application Boundary (1.92ha)
- Proposed Surface Water Sewer (Building Roof Water only)
- Proposed Foul Drainage
- Proposed Septic Tank
- Drainage Field
- Proposed Filter Drain
- Proposed Ditch
- Proposed Filter Strip



North Point

Project: **Relocation of Balavil Estate (Chapelark) Home Farm**

Client: **Balavil Estate Ltd**

Title: **Indicative Drainage Strategy**

Date: 05.09.18
 Scale: 1:1,250
 Original Size: **A3**

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