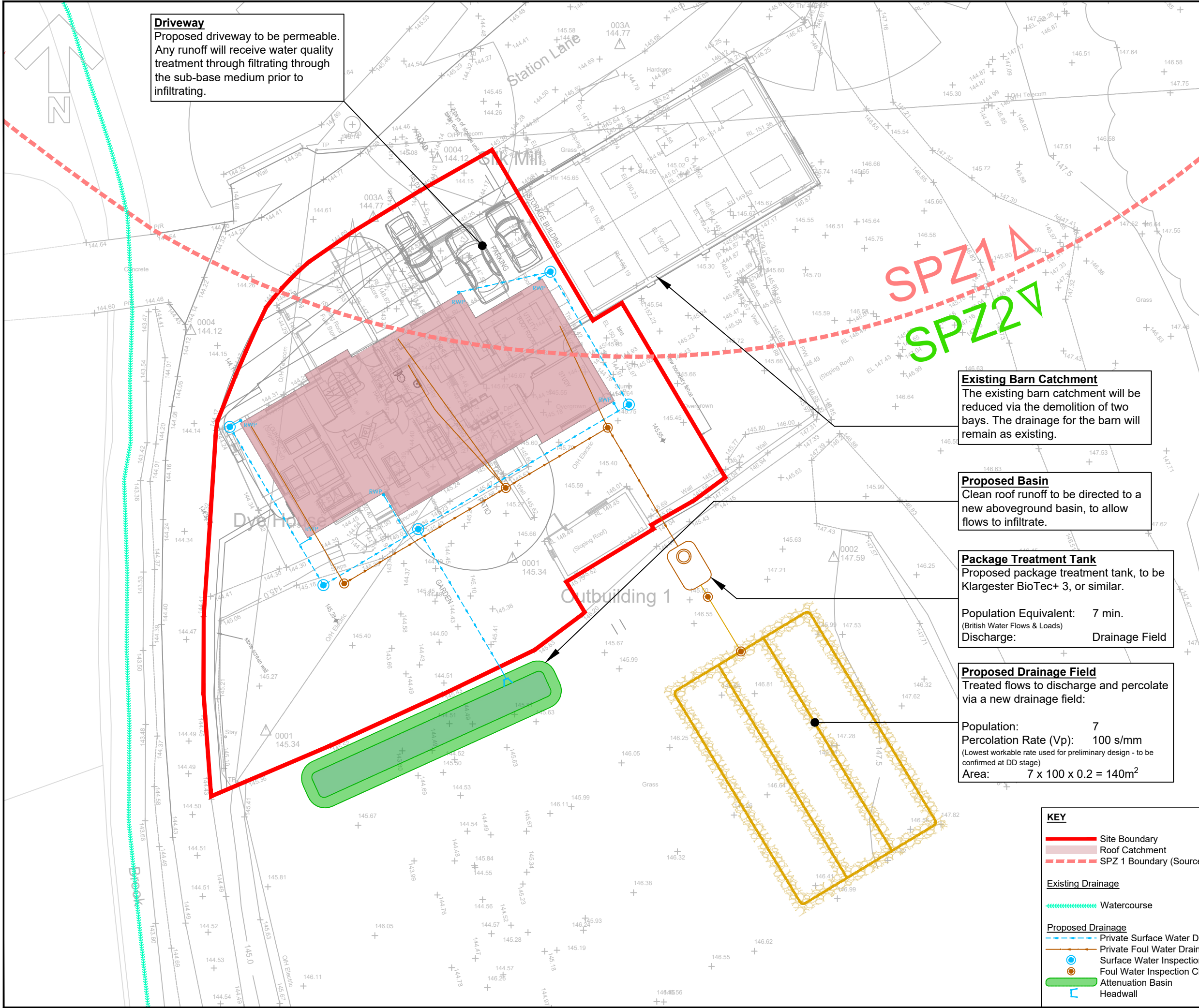




Driveway
Proposed driveway to be permeable. Any runoff will receive water quality treatment through filtering through the sub-base medium prior to infiltrating.

SPZ1
SPZ2

Existing Barn Catchment
The existing barn catchment will be reduced via the demolition of two bays. The drainage for the barn will remain as existing.

Proposed Basin
Clean roof runoff to be directed to a new aboveground basin, to allow flows to infiltrate.

Package Treatment Tank
Proposed package treatment tank, to be Klargestar BioTec+ 3, or similar.

Population Equivalent: 7 min.
(British Water Flows & Loads)

Discharge: Drainage Field

Proposed Drainage Field
Treated flows to discharge and percolate via a new drainage field:

Population: 7
Percolation Rate (Vp): 100 s/mm
(Lowest workable rate used for preliminary design - to be confirmed at DD stage)

Area: 7 x 100 x 0.2 = 140m²

KEY

Site Boundary
Roof Catchment
SPZ 1 Boundary (Source: MAGIC Map)

Existing Drainage

Watercourse

Proposed Drainage

Private Surface Water Drain
Private Foul Water Drain
Surface Water Inspection Chamber
Foul Water Inspection Chamber
Attenuation Basin
Headwall

- DRAINAGE STRATEGY**
- Site Details:**
- Site Area: 0.060 ha
- Equivalent Greenfield Runoff:
- | | |
|----------------|---------|
| 1 in 2 year: | 0.4 l/s |
| QBar: | 0.4 l/s |
| 1 in 30 year: | 0.6 l/s |
| 1 in 100 year: | 0.9 l/s |
- Development Details:**
- Proposed Impermeable Catchment (Roof): 0.015 ha
- Attenuation Summary:**
- Attenuation Type: Basin
Porosity: 100%
1 in 100yr + 40%CC Volume required: 18.2m³
Attenuation Dimensions: 0.6m deep with 21m² base area
Between 1:1 and 1:3 side slopes
Infiltration Rate (Assumed): 1x10⁻⁵ m/s
- The proposed scheme consists of the demolition of an existing property and part demolition of an existing barn, with the construction of a new residential dwelling and associated works on the brownfield land.
 - Online Soilscape mapping identifies the site is expected to sit within an area of freely draining slightly acid sandy soils.
 - As a result, soakaways are expected to be a viable option to discharge surface water at the site in accordance with the discharge hierarchy.
 - The site sits within a Zone 2 Source Protection Zone (SPZ) therefore discharged water will be carefully managed to not interfere with local abstractions.
 - Clean surface water flows from the impermeable roof area will be safely managed and conveyed to a shallow aboveground basin, providing water treatment alongside biodiversity and ecological benefits. This will promote evapotranspiration and infiltration.
 - Runoff from the existing barn will continue to drain as existing, with a reduced catchment area given the partial demolition.
 - The basin will have sloped sides and a natural form, to incorporate it within the land south of the main garden, within land under the applicants control.
 - The driveway and patio areas are proposed to be permeable, offering a level of treatment through the sub-base prior to allowing flows to infiltrate.
 - There is no local piped sewerage in the area therefore foul flows will discharge to a new package treatment tank a minimum of 7m from the proposed new dwelling.
 - Treated flows will then discharge to a new drainage field a minimum of 15m from the dwelling, designed and installed in accordance with Building Regulations Part H. The system will adhere to the Environment Agencies General Binding Rules for small sewage discharges below the limit of 2m³/day. However, given the location within the SPZ 2, an Environmental Permit will be obtained to support this discharge.
 - At the detailed design stage, infiltration and percolation testing will be completed to quantify the specific rates. At this stage, the worst-case workable rates have been used to provide overly cautious and robust rates for preliminary design:
1x10⁻⁵ m/s for the main soakaway
A Vp of 100 s/mm for the drainage field
 - At the detailed design stage, the drainage scheme will meet these identified principles, to provide the required attenuation volume. SuDS will further enhance water treatment and will provide additional environmental and biodiversity benefits.
 - All new drainage will remain private, and will be maintained and managed by the house owner as required to ensure the long-term functionality of the proposed system. Any proprietary systems will be maintained in accordance with the manufacturers recommendations.
 - Any exceedance flows will follow the natural topography as per existing conditions, sitting within the land/garden area allowing flows to infiltrate. Beyond this, flows will build and flow overland to the southwest towards the existing watercourse.
 - All drainage to be installed in accordance with Building Regulations Part H and to the satisfaction of the building control officer. New drainage to be pressure tested and sealed as required.

A	INITIAL ISSUE	AH	RH	RH	08/10/2025
REV:	DESCRIPTION:	BY:	CHK:	APR:	DATE:
STATUS: FOR PLANNING					
FPS Environmental Ltd Unit 36 Criffin Enterprise Centre Oxton Road Epperstone Nottingham NG14 6AT Phone: 020 8050 3194 www.FPSEnvironmental.co.uk					
CLIENT: Ian Ankers Architecture					
SITE: DYE HOUSE RUSHTON SPENCER					
TITLE: DRAINAGE STRATEGY					
SCALE AT A3: 1:200	DATE: 08/10/2025	DRAWN: AH	CHECKED: RH		
PROJECT NO:	DRAWING NO: DH-01			REVISION: A	