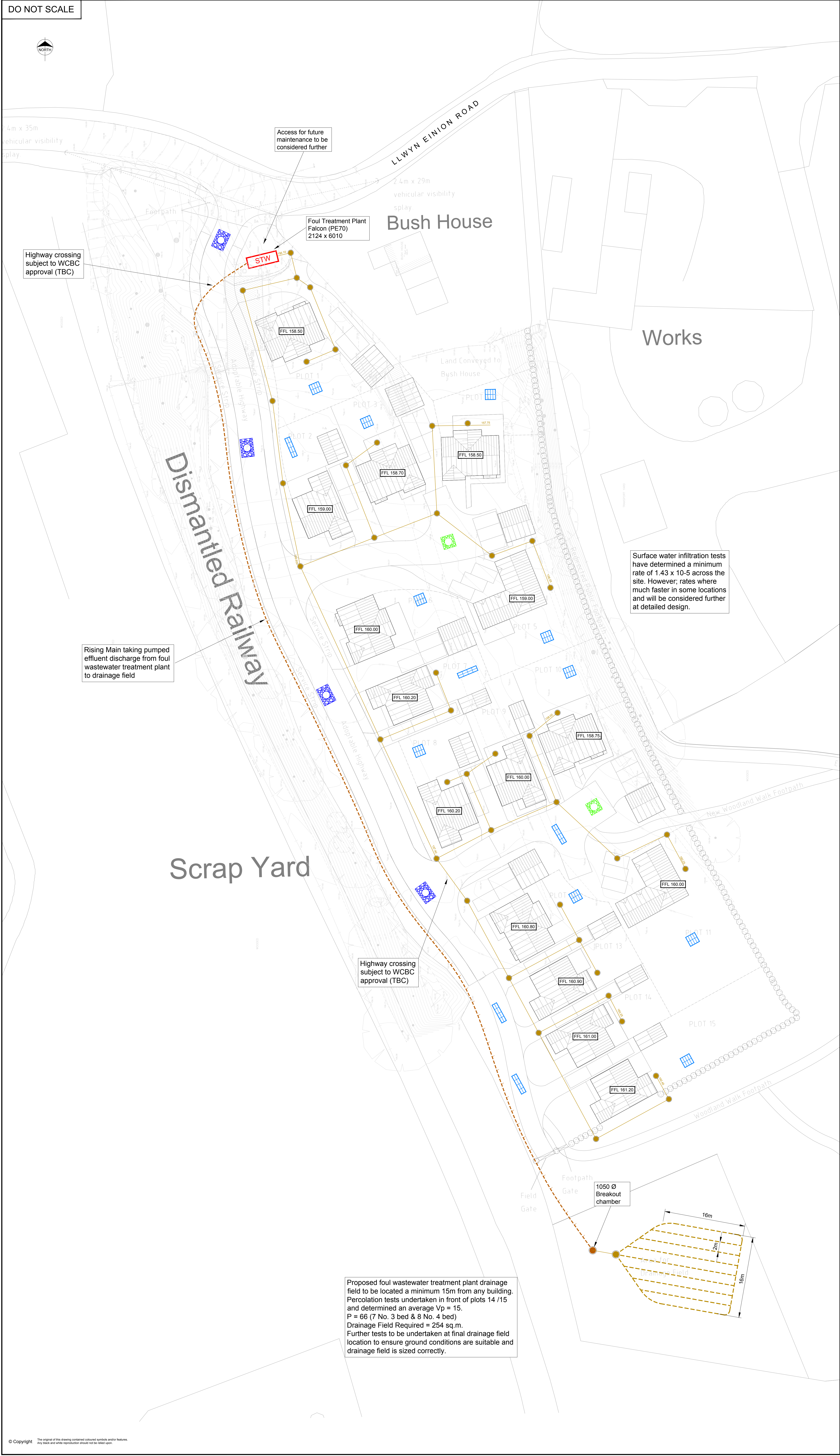


DO NOT SCALE



Note

- This is a preliminary drainage design demonstrating a drainage solution is achievable to discharge flows from the proposed development. Additional topographical survey and a full site investigation is required prior to undertaking full design.
- Existing slopes and trees along the eastern and western boundary will need to be considered further at detailed design stage. Soakaway locations and foundations may be affected.
- The specification in all respects shall be in accordance with the current Wrexham CBC Specification and Construction publication in force in the county at the time of construction.

Foul Strategy

No record of public sewers within vicinity of site. Natural Resources Wales require that there are no public sewers within 30m x (proposed number of dwellings) for a wastewater treatment plant to be considered. This regulation is complied with based on 15 properties and there being no sewers present within 450m of the site.

From British Waterways Code of Practice: Flows and Loads a maximum usage is taken as 66 people (based on 7 No. 3 bed & 8 No. 4 bed)

We are proposing a single Wastewater Treatment Plant to serve all 15 Plots. This will need to be located a minimum 7m from any habitable building and will require access for a tanker to undertake any future maintenance.

Gravity network to be provided upstream of the treatment plant. This will need to be routed within private land as a private asset will not be acceptable within an adopted highway.

The depth of the incoming pipe into the wastewater treatment plant should be limited to 2.5m if possible. Solutions are available if deeper but not as cost effective.

A pumped outfall will be required to take flows from the outlet along a rising main to discharge into the proposed drainage field.

Drainage field to be located a minimum 15m from any habitable building

Preliminary sizing of drainage field = 254 sq.m. based on a $V_p = 15$. This rate has been determined from percolation tests undertaken on site. Further testing will be required at final location to ensure the drainage field is sized correctly.

Surface Water Strategy

Infiltration tests undertaken across the site have determined the site is suitable for disposal of surface water via infiltration techniques.

Typically the tests have been undertaken at depths between 1.0m - 1.4m. Infiltration rates vary but the average of the 3 slowest tests was calculated at 1.43 x 10-5 m/s. It should be noted that some locations observed much faster rates and this is considered a conservative site wide infiltration rate to base a preliminary design on.

Further testing in accordance with BRE365 at depths and locations to suit final design with consideration to layout and depth will be required to ensure suitability of infiltration.

All soakaways to be a minimum 5m from foundations. Permeable paving and shallow infiltration devices that do not result in a point concentration can be considered where this cannot be achieved.

Maintenance / Responsibilities

Adoption and maintenance of all drainage components to be considered further at detailed design stage.

Permanent utility vehicle access to the landscaping / SUDS devices to be provided.

Foul Sewers:

All foul sewers to remain private. These will be maintained by a 'Management Company' set-up by the developer.

Foul Wastewater Treatment Plant

To remain private. These will be maintained by a 'Management Company' set-up by the developer.

Foul Effluent Drainage Field

To remain private. These will be maintained by a 'Management Company' set-up by the developer.

Private Surface Water Soakaways

To be individual homeowners

Shared Surface Water Soakaways

Subject to SABS approval. SUDS Management Plan to be produced to address frequency and type of maintenance activities

Highway Surface Water Soakaways

To be adopted by Wrexham County Borough Council as part of S38 Highway Adoption.

Legend

- Proposed Foul sewer
- Proposed Foul Rising Main
- Proposed Infiltration Field (Perforated Pipe Network)
- Proposed Highway Soakaway (subject to WCBC approval / adoption)
- Proposed Private Road Soakaway
- Proposed Private Plot Soakaway
- Falcon (PE 70) Waste Treatment System

Note:

The developer has undertaken infiltration testing confirming suitable design rates for use of soakaways for both surface water soakaways and foul wastewater treatment plant drainage field. Further testing may be required at detailed design stage with consideration to final location and depths of soakaways to satisfy WCBC Highways and LLFA.

PRELIMINARY

A	18.09.19	Updated to suit revised Layout	AJ	AJ
Rev.	Date	Revision	By	Appd.

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Client	TRAILWALK Ltd
Project	FORMER LEGACY SCRAP YARD, LLWYNEINON
Title	Proposed Drainage Layout
DRAWING NUMBER	7251 / SK01
SCALE at A0	1/250
DATE	23.05.19
DRAWN	LW
CHECKED	AJ
REVISION	A