
 <p>T J Booth Associates. Consulting Engineers 20A Eastgate St, Rochdale OL16 1DH</p>	Project				Job Ref.	
	Springcare / Hinton Hall, Tarporley Road, Whitchurch,				rep-tjba-springcare-hinton hall-FW DSR-150124	
	Section				Sheet no./rev.	
Foul Water Drainage Strategy				1 / 0		
Calc. by	Date	Chk'd by	Date	App'd by	Date	
DS	15/01/2024					

History.

Revision	Date	Reason
0	Jan 2024	Original to support planning application.

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Introduction.

Background:

Reference document & policy requiring drainage strategy report.

The Application Site currently comprises a large former residential dwelling built c1850s.

It is currently subject to a planning application by Springcare (Hinton) Ltd, to renovate & redevelop the property for use as a care home for the elderly.

As part of the recent planning application, the local planning authority have requested further details on foul water proposals, as follows:

4. You have indicated on the application form that the means of disposal of foul sewage is to a septic tank;. The utilisation of non-mains drainage as part of your planning proposal will only be allowed in exceptional circumstances and you must provide evidence that connection to the sewer is not practicable. You must also complete the attached Foul Drainage Assessment form to detail how the foul sewage can be disposed of safely. Please also include within the red edging of the application site on the block plan the siting of the proposed septic tank; and disposal mechanisms.

T J Booth Associates were subsequently employed to undertake an assessment of foul water proposals.

Reference & Purpose of Report.

The purpose of the report is to assess the validity of connection to the public sewer network, and where this is not feasible, to instead propose alternative means of foul water disposal.

Environment Agency general binding rules or environmental permit may be required for discharge.

British Water Flows & Loads 4 indicates the basis for assessment.

Discharge to within or close to Sites of Special Scientific Interest (SSSI), Ramsar Sites, special areas of conservation, or special protection areas influence the effluent discharge decision process.

Plans.

Location Plan.

The Site is located to the north of Whitchurch in a rural area, located off Tarporley Road (A49).

It is situated on a small hill overlooking the local area, especially to the north side where there is a wooded area behind and on a slope down to a small valley with an unnamed brook/stream (approximately 100m north). It is understood that this watercourse flows into Shropshire Union Canal nominally 400m northwest.


The Site is not within 50m of a SSSI, Ramsar Site, special areas of conservation, or special protection areas.

Refer to Location Plan in the Appendix showing the local area feature.

Site Plans.

The existing Site comprises a large residential dwelling with outbuildings and a large walled garden to the north side.

It is understood that the dwelling already utilises a FW septic tank or similar off-grid system, which is likely to have an overflow into the unnamed brook to the north of the Site. Although the existing dwelling is large, the septic system will be old and not in accordance with current guidelines on FW treatment for rural areas.

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The proposed Site plan indicates renovation of the Site including the main dwelling and ancillary buildings, and the creation of a new extension within the walled garden. It will comprise approximately 80+ bedrooms, lounges, offices etc, and will serve a much larger population than its previous use.

A new foul water treatment system will need to be designed to serve the new proposals, which is in accordance with current environmental guidance.

Local Drainage/Sewage Plans.

The Site is just within the Shropshire boundary and close to the boundary with Cheshire to the north. United Utilities (UU), Welsh Water (WW) & Severn Trent (ST) all have networks in the wider area.

A search on the ST website indicated the area local to the Site was not covered by the ST service provider, and suggested that UU was the waste provider.

Welsh Water also indicated their network did not cover the local area, and that UU was the waste provider.

UU were contacted by phone, who indicated they didn't have any sewers in the local area.

T J Booth Associates also contact Rochdale LLFA for guidance (our local office), who also indicated that there were no UU network sewers close to the Hinton Hall Site.

Refer to Appendix for evidence base.

Environment Agency Guidelines.

New sewage discharges are ones that started or changed significantly since 2 October 2023, or one that has not yet started (for example, if you're still in the planning stage of building a house or business).

The Environment Agency Binding Rules indicate that only domestic sewage doesn't require a permit. All commercial discharges will need a permit to discharge.

Foul Water System Design.

Foul System Flows & Loads.

Foul water arisings from the proposed were estimated using the current British Water Code of Practice Flows & Loads No.4.


The code of practice uses a population equivalent system based upon typical uses from types of commercial activity expected at maximum capacity.

The Site will serve as a nursing home for the elderly. Although it will have a single use, it will have multiple users (occupants, staff, and visitors), which will put different loads on the system. The numbers of each at full capacity are considered below:

- 85 residents
- 20 staff
- 20 visitors (varies & not expected to contribute significant load).

Laundry has not been included, but can be updated in future detailed design. Refer to table below for load summary:

Element	Population	Flow (l/day)		BOD (g/d)		Ammonia N g/d	
		Per Head	Total	Per Head	Total	Per Head	Total
Residential old peoples home	90	350	31500	110	9900	13	1170
Staff	20	90	1800	38	760	5	100
Total	110	440	33300	148	10660	18	1270

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Proposed Treatment Plant.

The sizing of a FW treatment plant capable of the above loads is given below, with the following specifications (NOTE, THIS IS A PRELIMINARY SIZING DESIGN ONLY):

Type	Length (m)	Diameter (m)	Dry Weather Flow (l/day)	BOD (g/d)	Ammonia (N – g/d)
Rewatec SAF 250 N20	12.7	2.5	37500	15000	2000

The Rewatec SAF is designed & tested in accord with BS EN EN12255& is CE marked.

The standard configuration gives final effluent treatment better than 20mg/L BOD, 30mg/L SS, and up to 5mg/L NH4-N. Further configurations or treatment can improve these figures if required.

Discharge Proposals.

Effluent will be suitable for discharge to watercourse via an existing connection if suitable, otherwise a new connection will be required,

An Environment Agency permit to discharge will be required.


Additional Recommendations.

The proposals in this report are preliminary only, and will require further detailed design in due course.

The existing sewage system should be fully surveyed as well as any outfalls to watercourse.

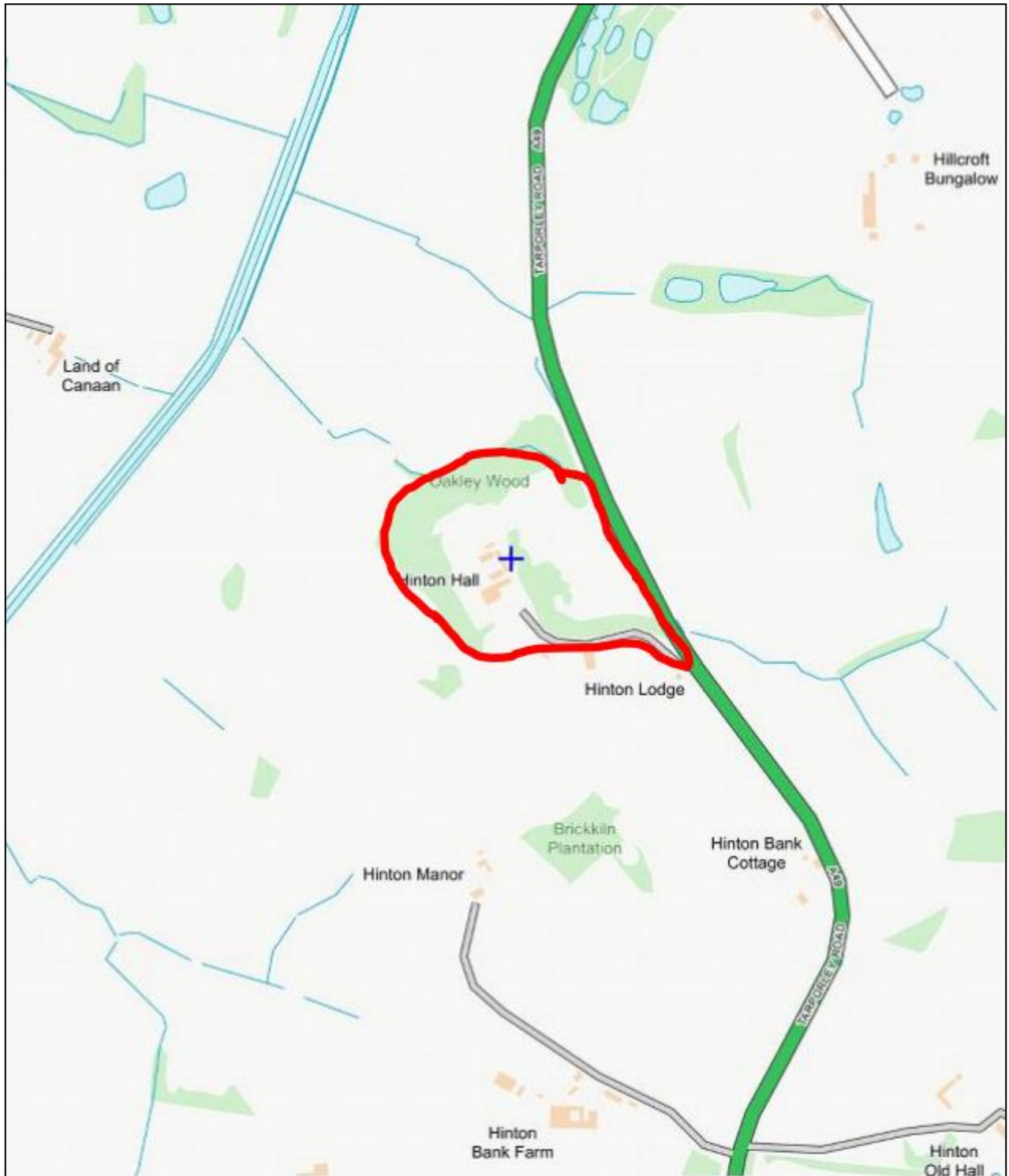
An environmental permit to discharge effluent will be required, and can be obtained in due course once planning permission has been granted, and detailed drainage design is undertaken.

This report should be issued to planning to validate the current application.

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Appendix.

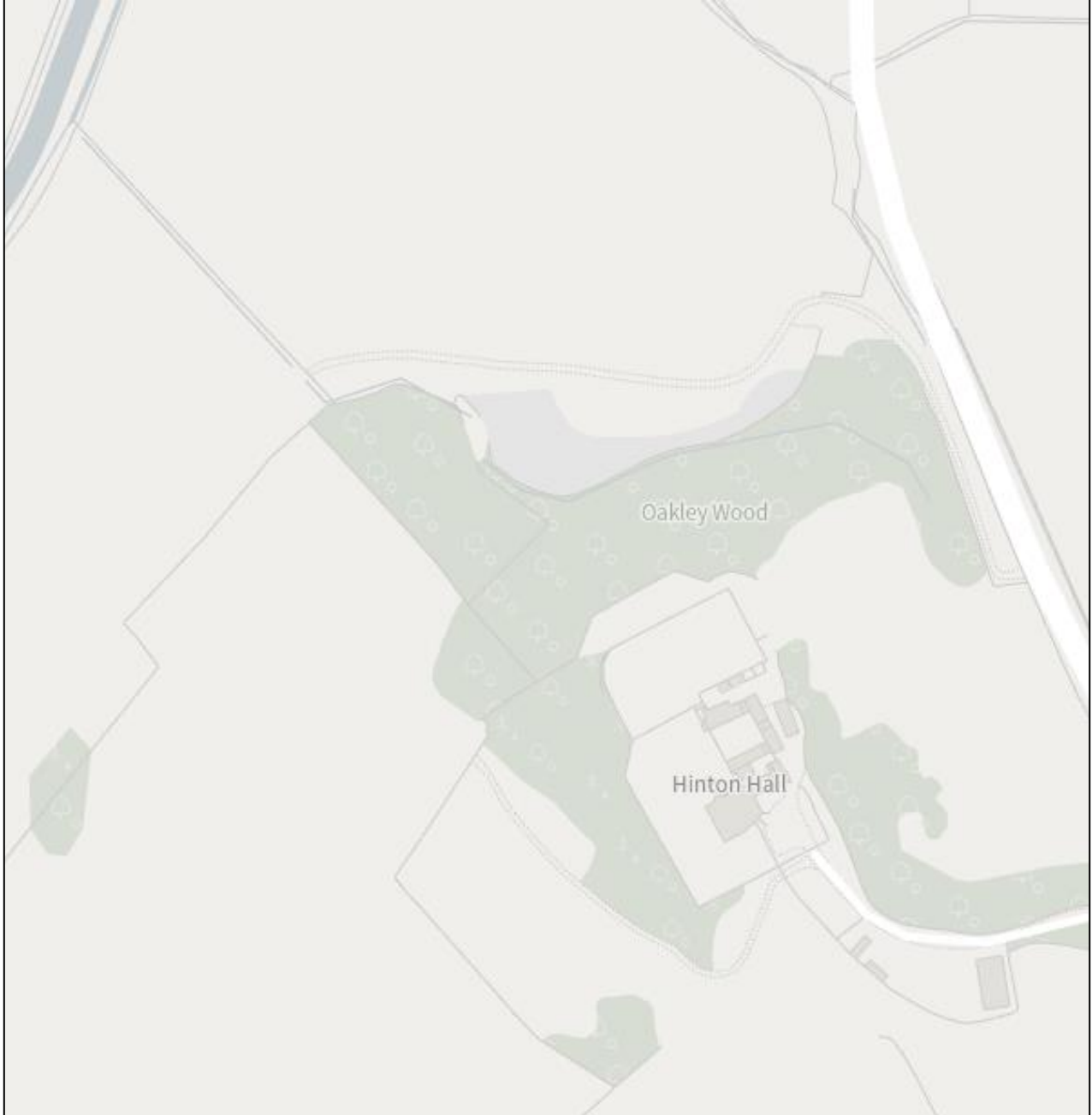
Location Plan.





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Existing Site Plan.

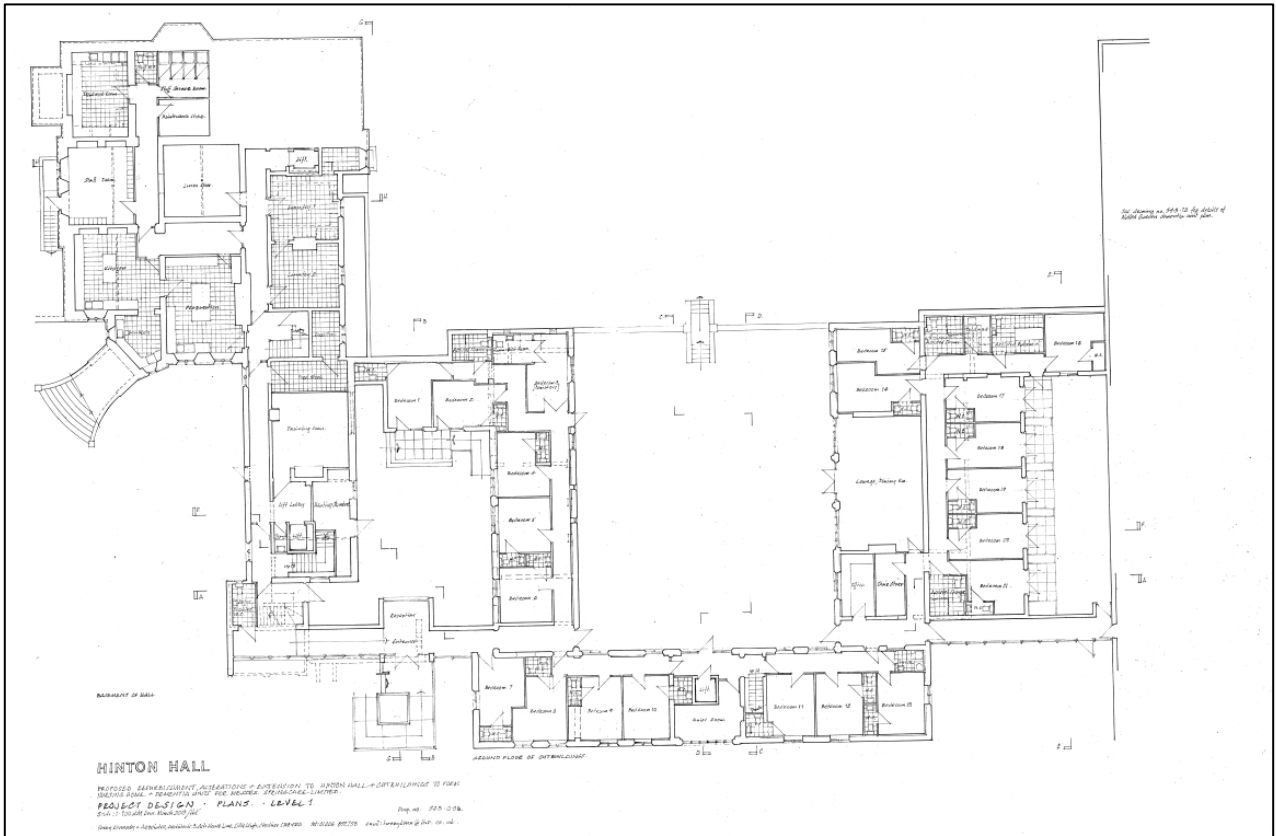
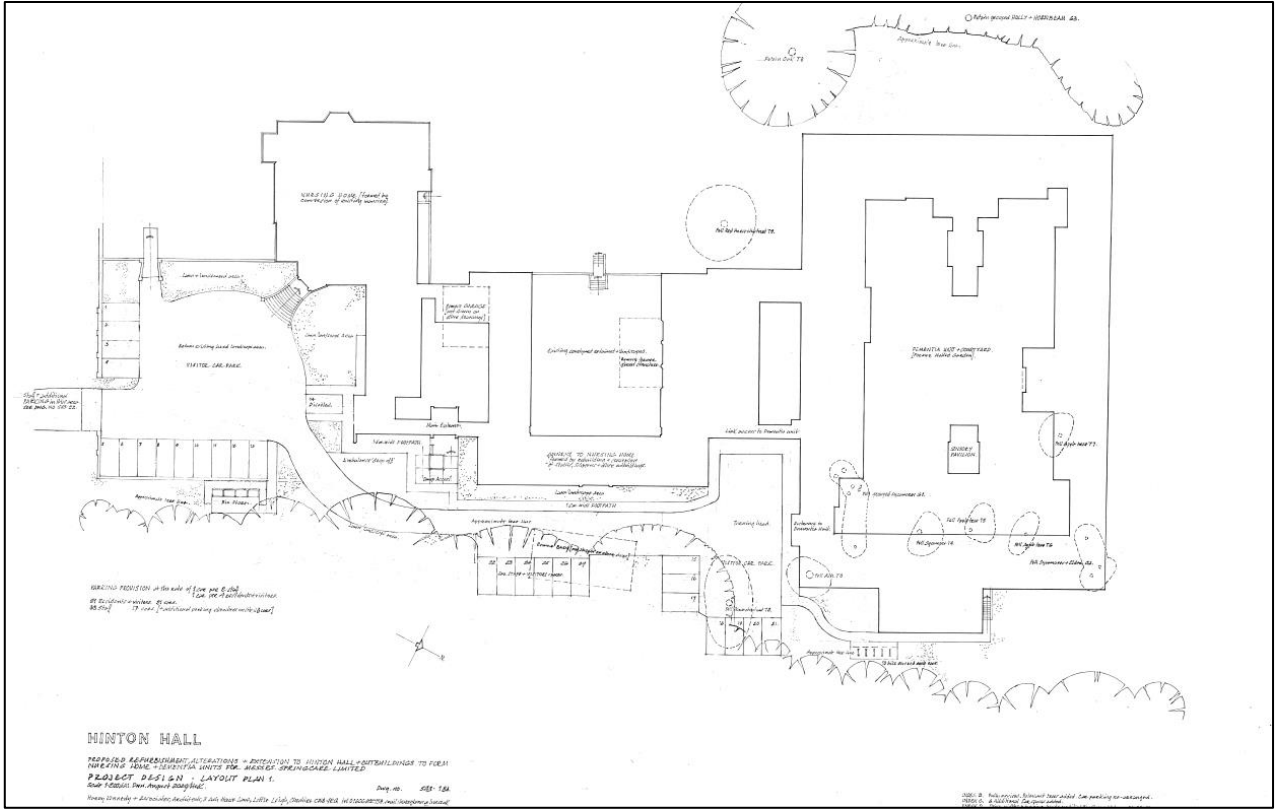




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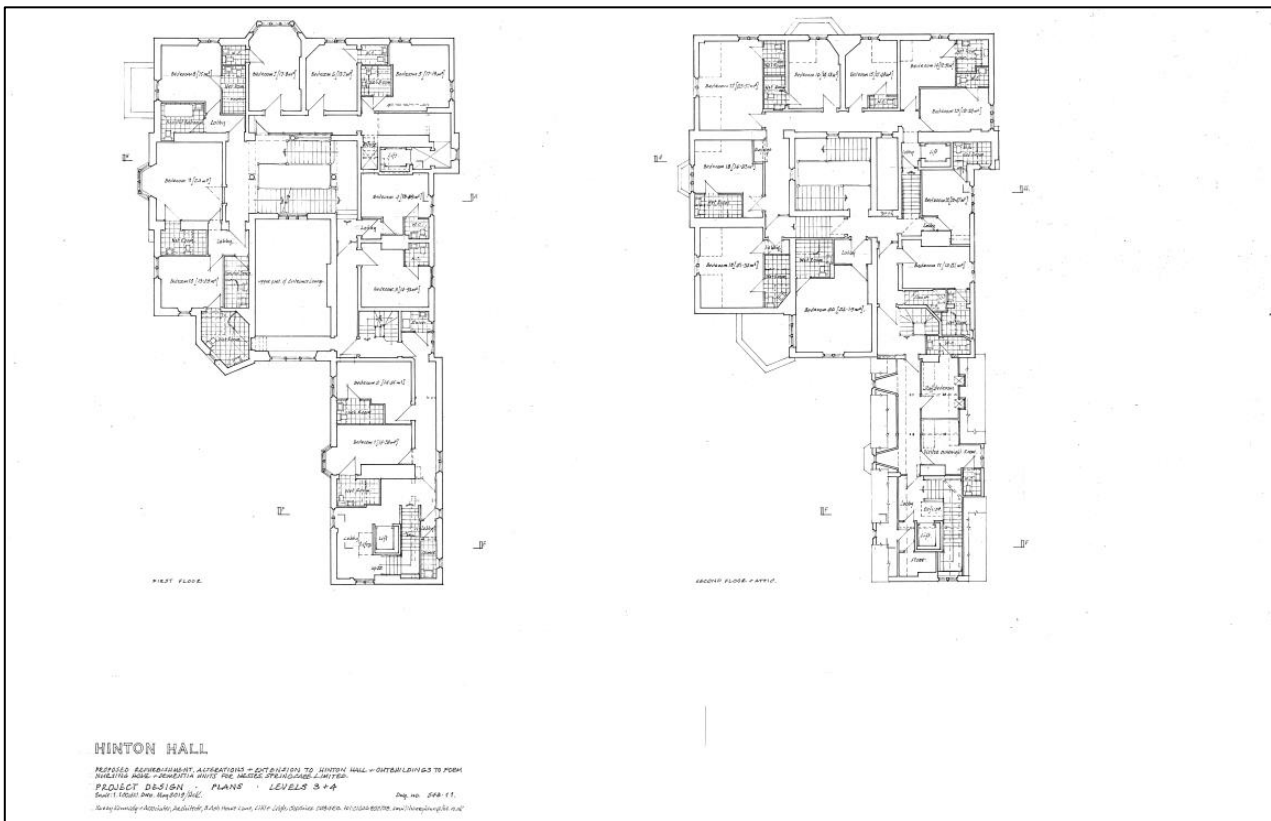
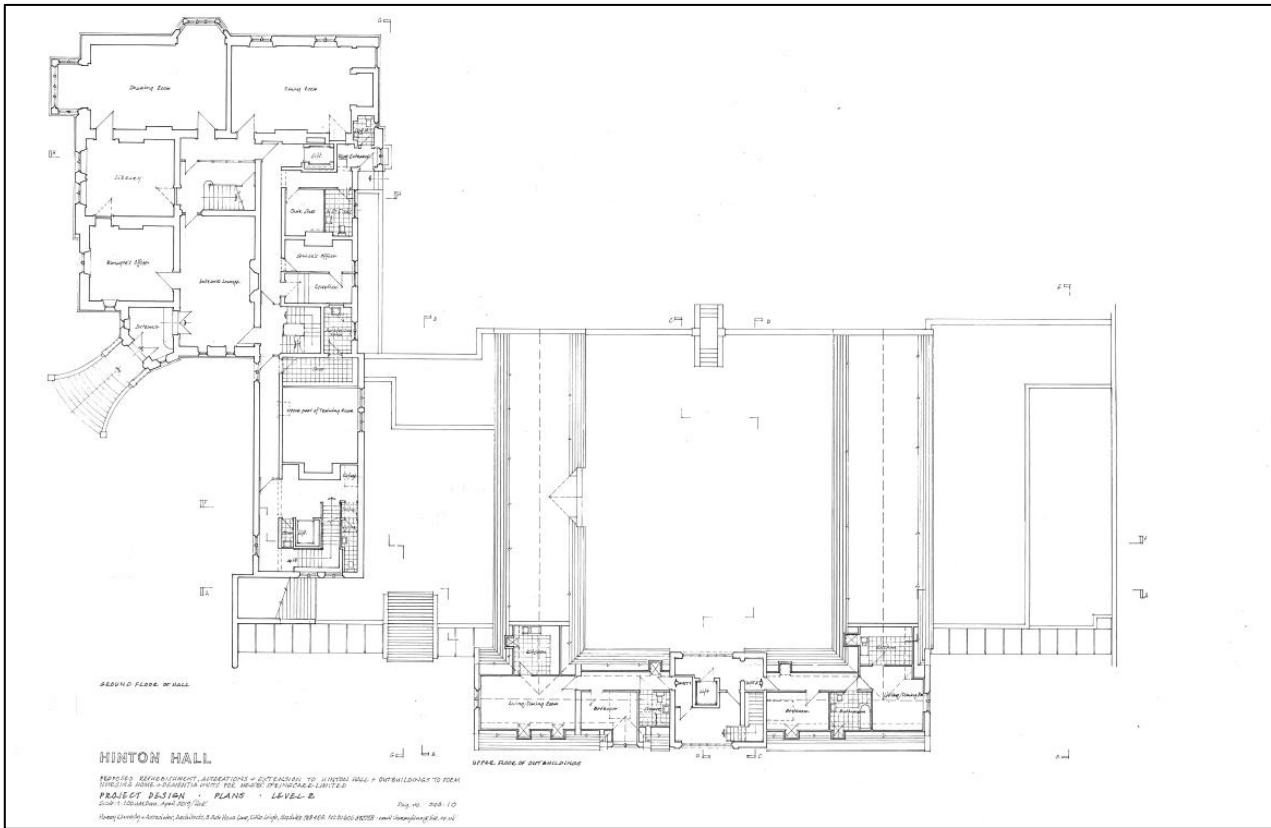
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Proposed Site Plans.



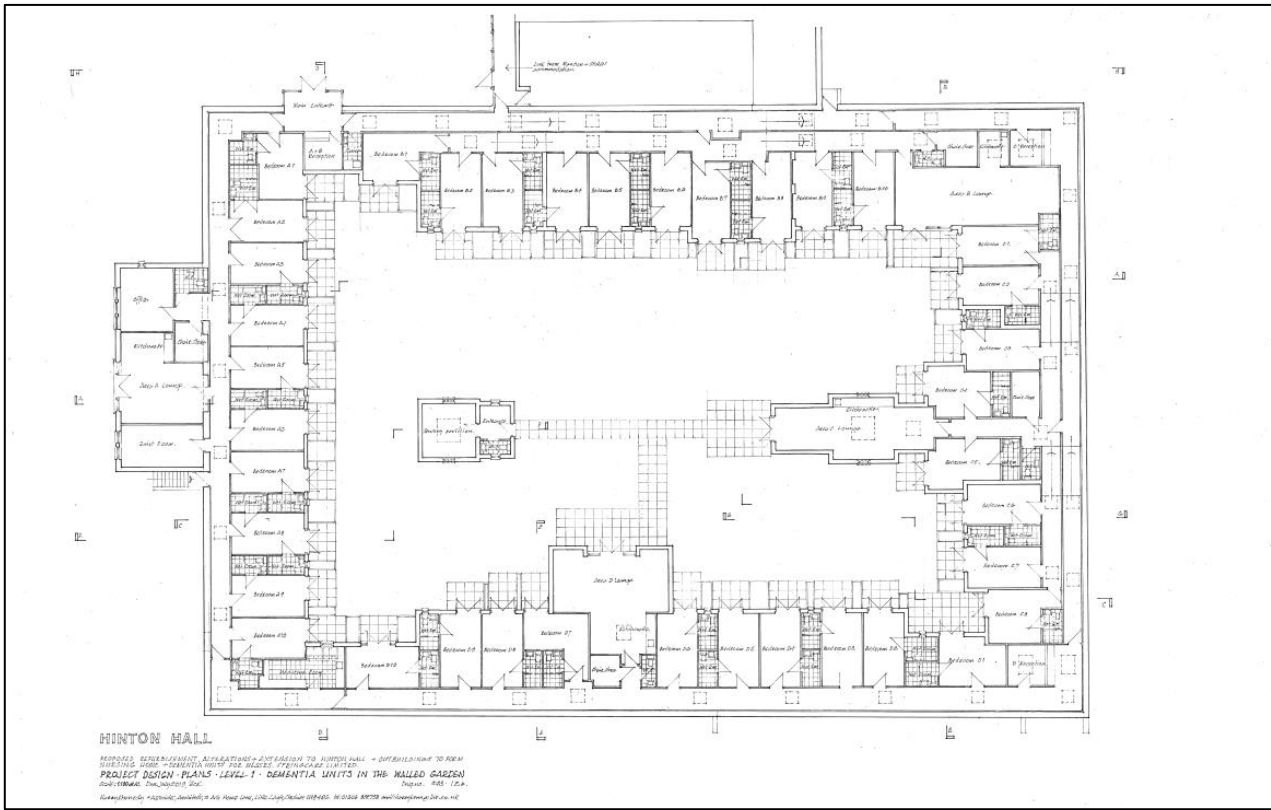
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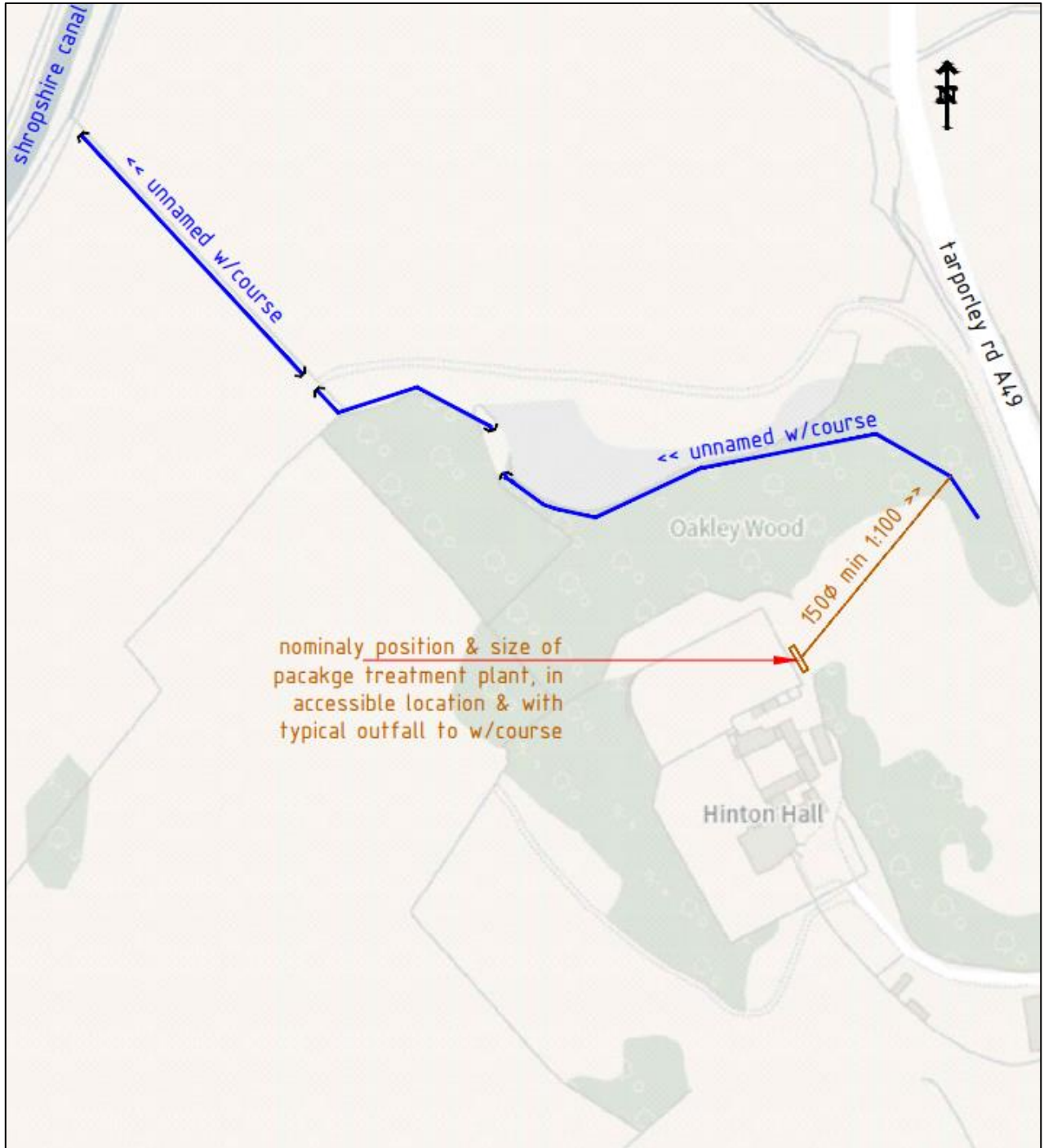
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Typical Proposed FW Drainage Plan.

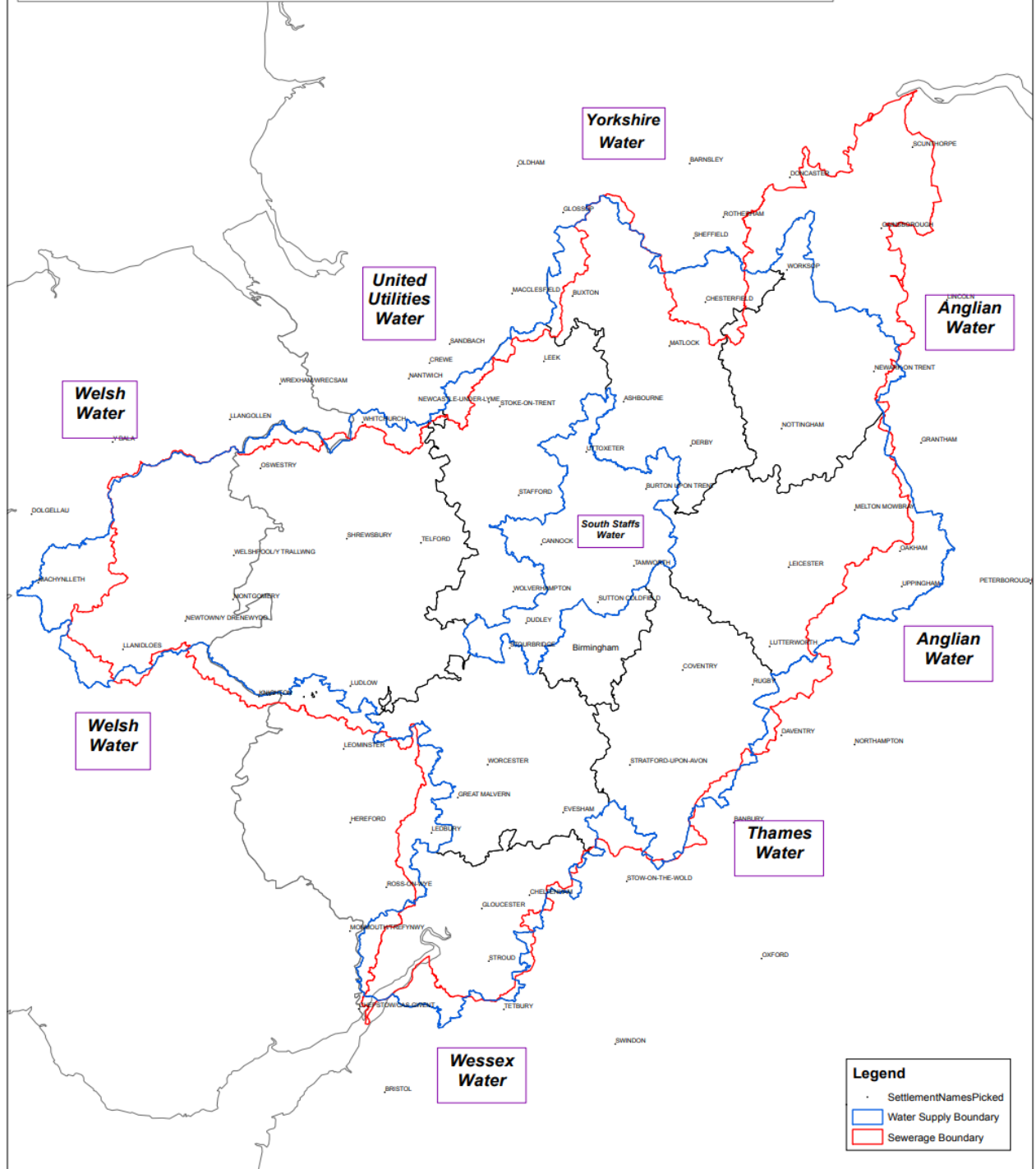



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Evidence Base for Discounting Sewerage Mains Utilities.

Before requesting a copy of the Company's underground asset maps, please check that your site is within the Severn Trent Water boundary

STW Area of Supply - Clean Water and Sewerage



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Who	What	Where
Severn Trent Water Ltd	Clean Water	Operate in your search area
United Utilities Plc	Clean Water	Operate in your search area
Hafren Dyfrdwy	Clean Water	Operate near your search area
Dwr Cymru Cyfyngedig (Welsh Water)	Wastewater	Operate in your search area
United Utilities Plc	Wastewater	Operate in your search area
BT (BT Group Plc)	Telecoms	Operate in your search area

RE: PLS Plans of water main or public sewers submission email - 9815b571

 Searches <searches@dwrwymru.com>
To Dan Slattery

😊 Reply Reply All Forward 📧 ⋮

Tue 16/01/2024 16:11

Good Afternoon

Thank you for the email.


I looked on find your supplier web site and the Water is provided by Severn Trent and Waste is United Utilities. I did double check our asset plans and it does not look like we have an assets in the area.

Hope this helps

Many thanks



Zara Howells
Developer Services Administrator | Developer Services | Dwr Cymru Welsh Water
PO Box 3146 | Linea | Fortran Road | Cardiff | CF30 0EH | 0800 917 2652 | Emails:
Searches@dwrwymru.com

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Stephen McCann <Stephen.McCann@Rochdale.Gov.UK>
To Dan Slattery

Wed 17/01/2024 08:42

i You replied to this message on 17/01/2024 09:05.

 Hinton Hall - no sewer pipes.jpg 202 KB

Hi Dan,

Happy to help. See appended. There is no sewerage in this area, as you'd expect. There are also no UU water pipes for Hinton Hall.

I found this link to a pdf which does seem to indicate that Hinton Hall is within UU area. [District Area of Supply PlanTitle Final March 2011-2.pdf \(stwater.co.uk\)](#)

The other clue to it being within the UU area, is that I can type in the postcode for Hinton Hall and it comes up in the search list.

Stephen McCann
Drainage & Flooding Engineer
Network Improvement & Development



ROCHDALE
BOROUGH COUNCIL