

HME Civil Engineering Limited
Hebden Bridge

HME
CIVIL ENGINEERING
CONSULTANTS

0794 832 0906

Henry.emsley@hmecivilengineering.com

DRAINAGE STRATAGEY REPORT

Proposed Residential Development of 10 Dwellings

Land off Netherley Drive, Marsden, Huddersfield, HD7 6HL

HME
CIVIL ENGINEERING
CONSULTANTS

STRUCTURAL | ENVIRONMENTAL | GEOTECHNICAL



HME Civil Engineering Limited. Registered in England: **15684044**

Drainage Strategy Report - Land off Netherley Drive

Project:

Proposed Residential Development of 10 Dwellings

Client:

Ross Thornton

Prepared by:

HME Civil Engineering Consultants

Purpose:

Planning Application and Yorkshire Water Pre-Planning Sewerage Enquiry

Planning history reference:

2018/62/92216/W

Date:

June 2026

Site visit date and time:

11th June 2026

Revision:

00 First Revision

Document Compiled by:

Henry Emsley BSc (Hons) CEng MICE

Chartered Member of the Institute of Civil Engineers

Membership Number: 74046405



Contents

1.	Introduction	4
2.	Site Description	5
3.	Planning and Drainage Background	6
4.	Existing Drainage Conditions.....	7
5.	Drainage Hierarchy Assessment.....	9
5.1.	Rainwater Re-use	9
5.2.	Infiltration	9
5.3.	Discharge to Watercourse	11
5.4.	Discharge to Surface Water Sewer	11
5.5.	Discharge to Combined Sewer.....	12
7.	Foul Water Drainage Strategy	13
8.	Surface Water Drainage Strategy	14
9.	Existing Drainage Investigation and Survey Requirements	16
10.	Attenuation and Hydraulic Design Criteria.....	17
11.	Exceedance and Overland Flow Management	18
12.	Water Quality.....	18
13.	Maintenance and Management	19
14.	Consents and Approvals.....	20
14.1.	Yorkshire Water PPSE.....	20
14.2.	Section 106 Sewer Connection	20
14.3.	Land Drainage Consent.....	20
14.4.	Planning Approval.....	20
14.5.	Response to Previous LLFA and Planning Concerns.....	20
14.6.	Avoidance of Surface Water Pumping	20
14.7.	Investigation of Existing Drainage.....	20
14.8.	Mimicking Existing Drainage Behaviour	21
14.9.	Reduction in Flood Risk	21
14.10.	Long-Term Maintenance	21
15.	Conclusions	22
16.	Appendix A: Site Location Plan and Sections	23
17.	Appendix B: Topographical Survey and YW Asset Plan	24
18.	Appendix C: Historic Mapping Extracts Showing Former Outbuildings Present on Site up to 1999	25

1. Introduction

This Drainage Strategy Report has been prepared in support of a proposed residential development comprising 10 dwellings on land off Netherley Drive, Marsden, Huddersfield, HD7 6HL.

The report is intended to support both a planning application to Kirklees Council and a Yorkshire Water Pre-Planning Sewerage Enquiry. It sets out the proposed foul and surface water drainage strategy for the development, with particular regard to previous planning and Lead Local Flood Authority comments relating to surface water disposal, the avoidance of surface water pumping, the presence of existing land drainage or watercourse features within or adjacent to the site, and the requirement to demonstrate a robust gravity-led drainage solution.

The proposed drainage strategy is based on the following principles:

1. Foul and surface water will be managed on separate drainage systems within the development site.
2. Foul water will discharge by gravity to the existing public combined sewer in Mount Road, subject to Yorkshire Water approval under Section 106 of the Water Industry Act 1991.
3. Surface water disposal has been assessed in accordance with the drainage hierarchy.
4. Infiltration has been tested and found to be unsuitable.
5. A pumped surface water solution is not proposed, as this would introduce avoidable operational and flood risk.
6. Existing drainage features discovered within the site have been investigated to determine their likely origin, alignment and outfall.
7. Historic mapping software indicates that a dwelling (Named Spout Ing) and outbuilding were formerly located within the site boundary with outbuildings still being present on site as late as 1999. The existing drainage encountered during the trial pitting exercise is therefore considered to comprise historic foul, surface water and land drainage associated with the former buildings on the land, which have since been demolished.
8. A 4-inch / 100mm diameter clay pipe has been traced and verified as connecting to the existing 225mm diameter public combined sewer in Mount Road. The proposed development therefore seeks to utilise the same verified gravity drainage outfall, subject to Yorkshire Water approval and detailed design.
9. Surface water from the proposed development will be attenuated on site and restricted to a proposed discharge rate of 3.0 litres per second, subject to agreement with Yorkshire Water and the LLFA.
10. Where existing drainage infrastructure is found to be unsuitable, damaged, undersized or not acceptable for re-use, a new gravity connection to the existing 225mm diameter combined sewer in Mount Road is proposed, potentially combined with the foul water connection, subject to Yorkshire Water technical approval.

This strategy seeks to address the drainage matters raised during previous applications by avoiding pumping, providing a gravity-based drainage solution, demonstrating that an existing historic drainage outfall from the site connects to the public combined sewer in Mount Road, and ensuring that proposed surface water discharge is attenuated and controlled. The proposal therefore rationalises and formalises an existing drainage arrangement rather than introducing a new pumped discharge to an alternative catchment.

2. Site Description

The site comprises undeveloped grassed land located off Netherley Drive, Marsden, Huddersfield. The land is situated close to the junction of Netherley Drive and Mount Road and lies to the west of existing residential properties fronting Mount Road.

Historic mapping software indicates that a dwelling (Named Spout Ing) and outbuilding were formerly located within the site boundary with outbuildings still being present on site as late as 1999. These structures have since been demolished and the site now appears as undeveloped grassed land. The former presence of buildings on the site is relevant to the drainage strategy, as existing clay drainage infrastructure has been encountered during trial pitting and is considered likely to have historically served the former buildings, associated yard areas and land drainage requirements.

The site is sloping, with local topography influencing both existing surface water movement and the feasibility of drainage options. The land generally falls in a manner that makes gravity drainage towards Mount Road achievable, whereas discharge towards the watercourse or surface water sewer to the south on Netherley Drive would require pumping because of the site levels.

The proposed development comprises 10 dwellings, associated access road, parking, private gardens, landscaped areas, habitat/woodland areas and drainage infrastructure. The current site layout indicates a surface water attenuation area within the lower part of the site, together with boundary drainage measures including a bund and French drain to assist with interception and management of existing overland and shallow groundwater flows.

The site has a known history of drainage sensitivity. Previous consultations identified boggy ground, potential springs, possible existing land drainage and reports of water affecting properties to the south and east. It is therefore important that the development drainage strategy manages both new development runoff and existing water movement across the site in a manner that does not increase flood risk to the development or to neighbouring land and property. During trial pitting, a 150mm surface water pipe that appeared to be blocked and damaged was located, given the flow of ground water surrounding the pipe, this damaged pipe appears to be contributing to the surface water overland flows and boggy areas on the site.

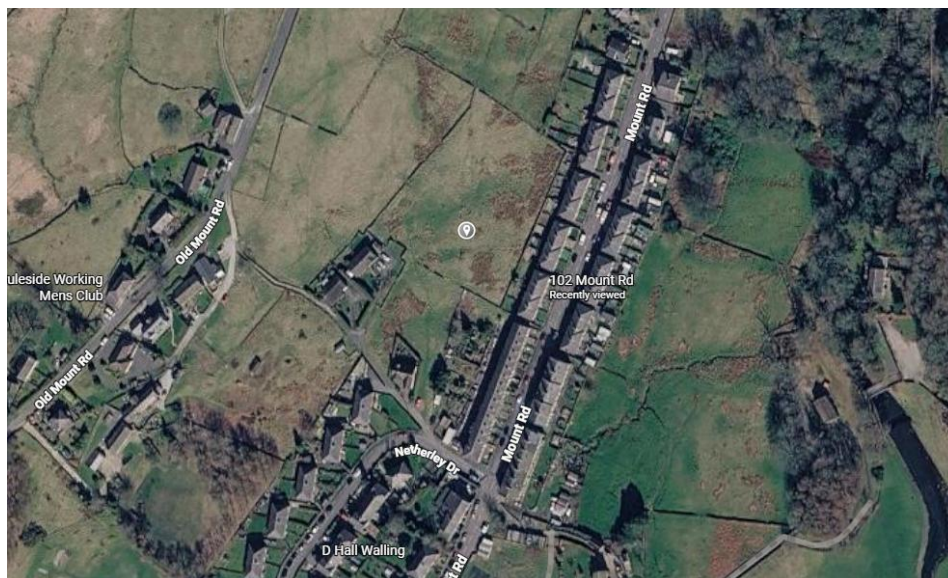


Figure 1 Site Location

3. Planning and Drainage Background

Previous planning application reference 2018/62/92216/W for residential development on this site was refused. One of the reasons for refusal related specifically to drainage and stated that the proposed development sought pumping of surface water, with insufficient justification that alternative drainage methods had been explored and discounted.

Earlier Lead Local Flood Authority comments also identified that the site displays surface water issues, that local springs and boggy areas are present, and that existing land drainage or a small piped watercourse may be associated with the site. The LLFA also commented that surface water pumping would introduce risk not currently present and should be avoided.

The current drainage strategy has therefore been developed to directly address those concerns. The key difference between the current proposal and the previously refused drainage approach is that the proposed strategy does not rely on pumping surface water. Instead, it seeks to provide a gravity-led solution using existing drainage pathways where these can be verified by survey, or alternatively a new gravity connection to the existing public combined sewer in Mount Road, subject to Yorkshire Water agreement.

This approach is considered to better reflect the existing drainage behaviour of the land, reduce operational risk, avoid reliance on mechanical pumping, and provide a more robust long-term solution.



Figure 2 Proposed Site Plan

4. Existing Drainage Conditions

The site had a dwelling (Named Spout Ing) and outbuilding which were formerly located within the site boundary and an active formal drainage system associated with the previous use of the site has been located. Therefore, this indicates that the land has an established drainage history for both foul and surface water.

Historic mapping software indicates that a dwelling and outbuildings were present within the site as late as 1999. These buildings have since been demolished. The presence of the former buildings provides a likely explanation for the existing drainage infrastructure encountered during trial pitting, which is considered likely to comprise historic foul drainage, surface water drainage and land drainage associated with the former use of the site.

Trial pitting undertaken on 11 June 2026 identified two existing clay pipes crossing the site in a west-to-east direction. These pipes were observed to be conveying flows at the time of investigation. Their presence confirms that drainage infrastructure is already present within the site and that water from the land is currently being collected and conveyed eastwards.



Figure 3 Two existing clay pipes

A 4-inch / 100mm diameter clay pipe has now been traced and verified as connecting to the existing 225mm diameter public combined sewer in Mount Road. This confirms that the site has an existing gravity drainage pathway to the public combined sewer. The existing pipe is considered likely to have historically served the former outbuildings on the land, together with associated surface water and/or land drainage flows.

Drainage Strategy Report - Land off Netherley Drive

The existing drainage arrangement is therefore not considered to be a newly introduced outfall. It represents an established drainage route from the site to the combined sewer in Mount Road. The proposed development seeks to rationalise, formalise and control this drainage arrangement by providing separate foul and surface water systems within the site, with surface water attenuated and restricted prior to discharge.

The existing drainage features should be further assessed at detailed design stage to confirm:

- Pipe diameter, material and condition.
- Alignment and depth.
- Flow direction.
- Connectivity to downstream infrastructure.
- Outfall location and connection details.
- Whether any elements are suitable for retention, diversion, replacement or abandonment.
- Whether the existing connection can be utilised for the proposed development, subject to Yorkshire Water approval.
- Any maintenance, easement or legal consent requirements.

Where existing drainage infrastructure is found to be in poor condition or unsuitable for re-use, it should be replaced or abandoned as appropriate. In that scenario, a new gravity connection to the existing 225mm diameter combined sewer in Mount Road would be provided, subject to Yorkshire Water approval under Section 106 of the Water Industry Act 1991.

The final drainage design will ensure that existing land drainage flows are not severed, displaced or redirected in a manner that increases flood risk to neighbouring land or property.

5. Drainage Hierarchy Assessment

Surface water disposal has been considered in accordance with the recognised drainage hierarchy. The hierarchy prioritises discharge in the following order:

1. Re-use of rainwater where practicable.
2. Infiltration to ground.
3. Discharge to a watercourse or surface water body.
4. Discharge to a surface water sewer.
5. Discharge to a combined sewer as a last resort, where no preferable option is reasonably practicable.

5.1. Rainwater Re-use

Rainwater re-use measures, such as water butts, may be incorporated into individual dwellings as a supplementary sustainability measure. However, rainwater re-use cannot be relied upon as the primary means of surface water disposal because storage availability depends on occupant behaviour, seasonal demand and antecedent rainfall conditions.

Rainwater butts are therefore recommended as source-control measures but are not considered a complete drainage outfall solution.

5.2. Infiltration

Infiltration testing was undertaken at suitable soakaway locations on the site on 11 June 2026. Two trial pits were excavated to approximately 2.0m deep, 2.0m long and 0.3m wide. Testing was undertaken in general accordance with BRE Digest 365.

Both test pit locations failed. The ground conditions are therefore not suitable for soakaway drainage.

This conclusion is also consistent with previous observations on and around the site, including boggy ground, springs, shallow water movement and the anticipated poor suitability of the ground for infiltration drainage. Infiltration is therefore discounted as a viable surface water disposal method.

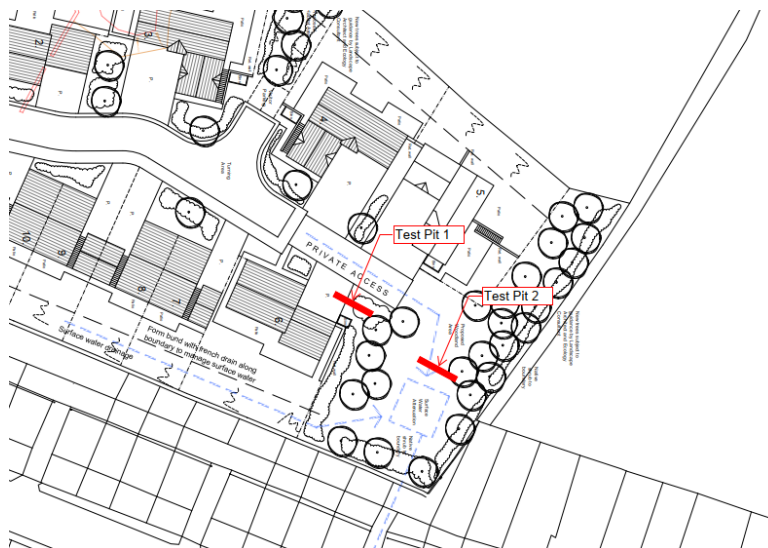


Figure 4 Test Pit Locations (photos on following page)

Drainage Strategy Report - Land off Netherley Drive



5.3. Discharge to Watercourse

A watercourse and/or surface water sewer is understood to be present to the south of the site, in the vicinity of Netherley Drive. In principle, discharge to a watercourse would normally sit above discharge to a combined sewer in the drainage hierarchy.

However, due to site topography, discharge from the proposed development to the southern watercourse or surface water sewer would require pumping of surface water. A pumped solution is not proposed because:

- It introduces mechanical and electrical reliance into a system that should be capable of operating by gravity.
- Pump failure could result in flooding of the development or surrounding land.
- Pumping surface water would introduce a maintenance burden and long-term operational risk.
- Pumping was a key concern in the previous planning refusal.
- The LLFA has previously advised that pumping surface water from this site would introduce risk not currently present.
- A gravity option appears available towards Mount Road, subject to survey and Yorkshire Water approval.
- Pumping surface water would not represent the lowest-risk or most sustainable solution for this site.

For these reasons, discharge to the southern watercourse or surface water sewer is discounted as the preferred strategy where it would require pumping.

5.4. Discharge to Surface Water Sewer

No suitable gravity surface water sewer connection has currently been confirmed as available to serve the whole development. The watercourse or surface water sewer to the south of the site, in the vicinity of Netherley Drive, cannot be reached by gravity from the proposed development area without introducing surface water pumping.

Surface water pumping is not proposed as part of this drainage strategy, as it would introduce a mechanical and operational risk that can be avoided through use of the verified gravity drainage route towards Mount Road.

The existing clay drainage infrastructure encountered within the site has been traced, and a 4-inch / 100mm diameter clay pipe has been verified as connecting to the existing 225mm diameter public combined sewer in Mount Road. This confirms that an existing gravity drainage outfall from the site is already present.

On this basis, discharge to a separate surface water sewer is not considered to be the preferred or most appropriate solution for the development. The proposed strategy is instead to use the verified gravity drainage pathway to Mount Road, with surface water attenuated on site and restricted to a proposed discharge rate of 3.0 litres per second, subject to Yorkshire Water and LLFA agreement.

Drainage Strategy Report - Land off Netherley Drive

5.5. Discharge to Combined Sewer

Where the above hierarchy options are not reasonably practicable, a controlled discharge to the existing public combined sewer in Mount Road is proposed.

This is considered appropriate for this site because:

- Historic mapping software indicates that outbuildings were present within the site as late as 1999.
- The existing clay drainage infrastructure encountered during trial pitting is considered likely to have historically served the former buildings, associated surface water runoff and/or land drainage from the site.
- A 4-inch / 100mm diameter clay pipe has been traced and verified as connecting to the existing 225mm diameter public combined sewer in Mount Road.
- The proposal would therefore utilise an existing verified gravity drainage outfall from the site rather than introduce a new pumped discharge to a different catchment.
- Surface water discharge will be attenuated on site and restricted to a proposed rate of 3.0 litres per second, subject to Yorkshire Water and LLFA agreement.
- The strategy avoids surface water pumping.
- The development will provide a formal, maintainable drainage system where the existing system is historic, uncharted and potentially in variable condition.
- Any retained or new connection will be subject to Yorkshire Water approval via the Section 106 sewer connection process.

The proposed discharge to the combined sewer is therefore considered to be justified and appropriate. The strategy reflects the existing drainage behaviour of the site, makes use of a verified gravity outfall, avoids pumping, and provides betterment by attenuating and controlling surface water discharge from the proposed development.

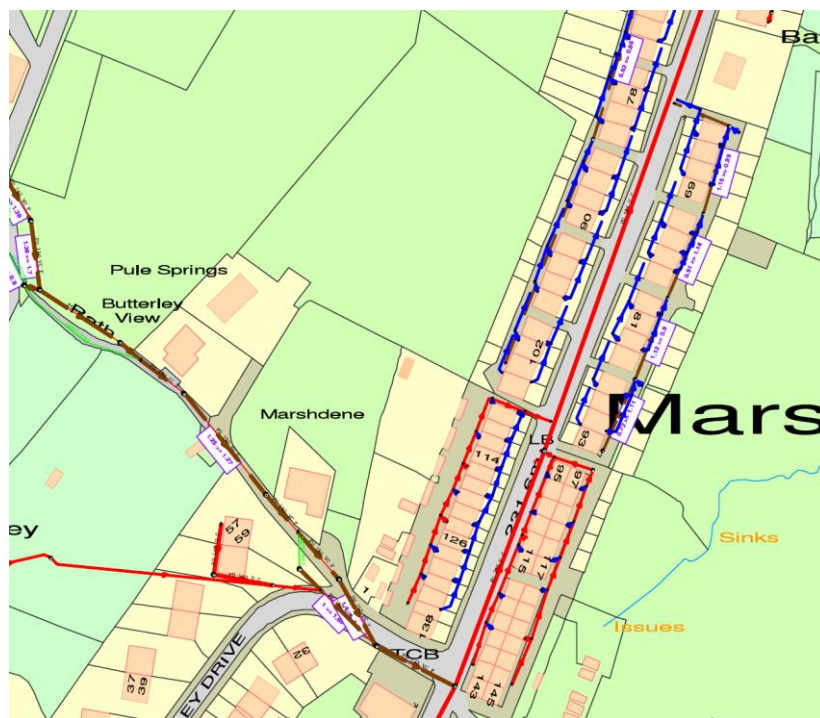


Figure 5 YW Asset Map

7. Foul Water Drainage Strategy

Foul water from the 10 proposed dwellings will be collected in a separate foul drainage system within the site.

The foul drainage network will be designed as a gravity system, with flows directed towards the existing 225mm diameter public combined sewer located in Mount Road. The final connection arrangement will be agreed with Yorkshire Water through a Section 106 sewer connection application.

Historic mapping software indicates that outbuildings were present on the site as late as 1999. Existing clay drainage infrastructure encountered during the trial pitting exercise is considered likely to have historically served the foul, surface water and/or land drainage requirements of these former buildings. A 4-inch / 100mm diameter clay pipe has now been traced and verified as connecting to the existing 225mm diameter public combined sewer in Mount Road.

The proposed foul drainage strategy therefore seeks to use a gravity connection to the same public combined sewer in Mount Road. The connection may comprise either:

- Re-use of a suitable existing connection, where acceptable to Yorkshire Water and confirmed suitable by survey; or
- A new saddle connection to the existing 225mm diameter combined sewer; or
- A new manhole connection constructed on the existing sewer, where required by Yorkshire Water or where technically preferable.

The proposed foul drainage system will be designed in accordance with current Building Regulations, Sewerage Sector Guidance and Yorkshire Water requirements. Pipe gradients, pipe diameters, manhole spacing, access points and easements will be confirmed at detailed design stage.

No foul water pumping is proposed. The use of gravity foul drainage is preferred because it reduces long-term operational risk and avoids the need for private pumping infrastructure.

The final foul water discharge rate will be confirmed through domestic flow calculations and submitted to Yorkshire Water as part of the PPSE and subsequent Section 106 application.

8. Surface Water Drainage Strategy

Surface water from roofs, private drives, access roads and other impermeable areas will be collected in a separate surface water drainage system within the development.

The surface water strategy comprises:

- Collection of runoff from impermeable development areas.
- Interception and management of existing overland and shallow groundwater flows, where necessary.
- Conveyance to an on-site attenuation system.
- Controlled discharge at a proposed maximum rate of 3.0 litres per second.
- Gravity outfall to verified existing drainage infrastructure or a new approved connection to the public combined sewer in Mount Road.

The exact attenuation form will be developed at detailed design stage. Potential options include below-ground cellular storage, oversized pipes, attenuation tanks, an open basin or a combination of these, subject to levels, layout, adoption requirements, maintenance arrangements and landscape constraints.

The drainage layout should be designed to incorporate SuDS principles where practicable. Given the site constraints and failed infiltration testing, the SuDS approach is likely to focus on source control, flow control, attenuation, treatment and exceedance management rather than infiltration.

Potential SuDS and treatment measures may include:

- Water butts to dwellings.
- Permeable paving to private driveways, where gradients and ground conditions permit, with underdrained construction rather than infiltration.
- Filter drains or French drains along selected boundaries to intercept shallow flows.
- Trapped gullies and catchpits for road drainage.
- Silt traps upstream of attenuation and flow control devices.
- A hydrobrake or similar flow control device limiting discharge to 3.0 litres per second.
- An attenuation basin or tank with safe access for maintenance.
- Exceedance routing through the access road and landscaped areas away from dwellings.

The proposed surface water discharge rate of 3.0 litres per second is subject to Yorkshire Water and LLFA agreement. It is considered appropriate as a conservative restricted discharge rate for a small residential development and is consistent with the requirement to ensure that post-development flows are controlled and do not increase flood risk.

Historic mapping software indicates that outbuildings were present within the site as late as 1999. The existing clay drainage infrastructure encountered during trial pitting is therefore considered likely to represent historic foul, surface water and/or land drainage associated with the former buildings and

Drainage Strategy Report - Land off Netherley Drive

land use. A 4-inch / 100mm diameter clay pipe has been traced and verified as connecting to the existing 225mm diameter public combined sewer in Mount Road.

The proposed development will formalise and improve this existing drainage arrangement by providing a designed surface water drainage system, on-site attenuation and flow control prior to discharge. This will provide a betterment over the existing unmanaged or poorly maintained historic drainage arrangement and will avoid the need to pump surface water to the southern watercourse or surface water sewer.

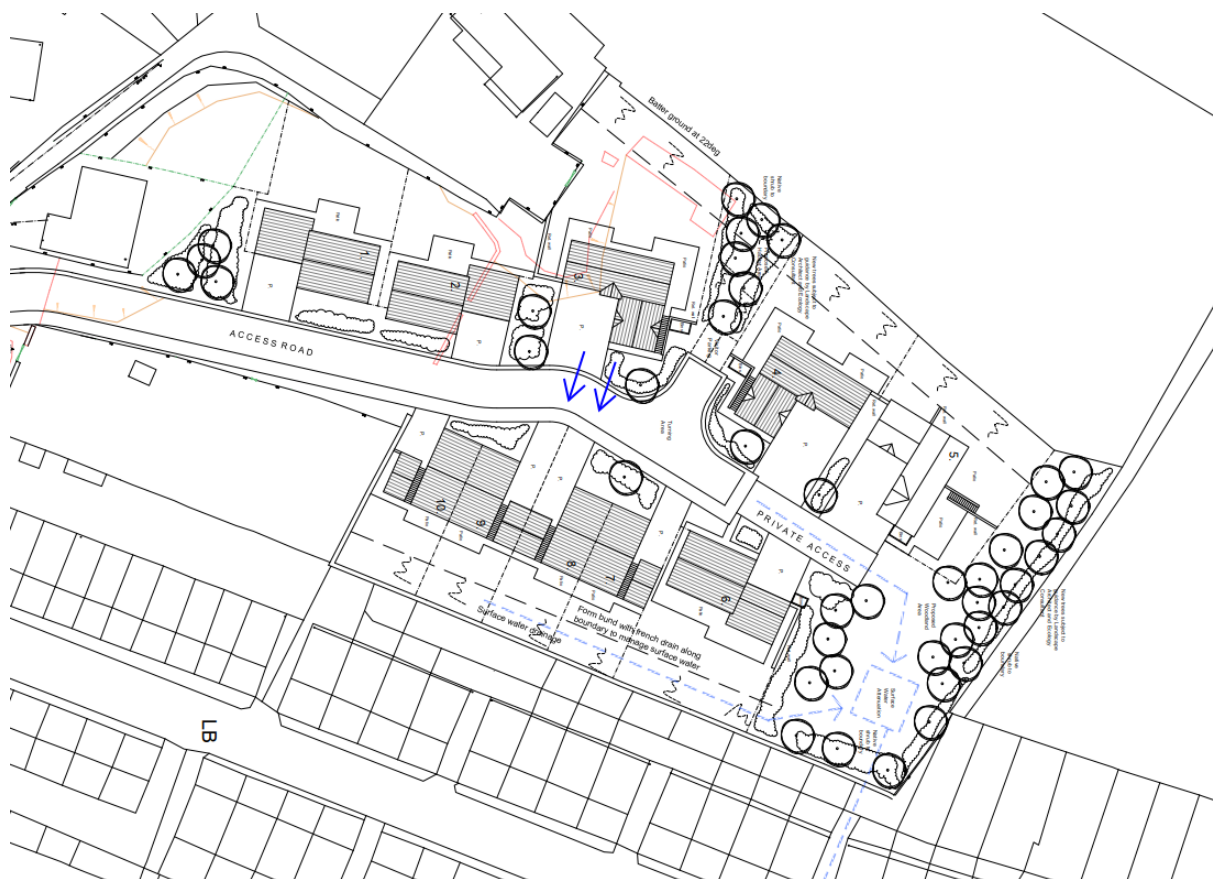


Figure 6 Existing Clay Surface Water Pipes Found 11/06/26 (Blue arrows)

9. Existing Drainage Investigation and Survey Requirements

The discovery of existing clay drainage pipes flowing west to east across the site is a significant factor in the proposed drainage strategy.

Historic mapping software indicates that outbuildings were present on the site as late as 1999. These buildings have since been demolished. The existing drainage encountered during trial pitting is therefore considered likely to comprise historic foul drainage, surface water drainage and/or land drainage associated with the former buildings and land use.

A 4-inch / 100mm diameter clay pipe has been traced and verified as connecting to the existing 225mm diameter public combined sewer in Mount Road. This confirms that an existing gravity outfall from the site to the public combined sewer is present.

Prior to finalising the drainage design, the following investigations and checks should be completed where required:

- CCTV survey of the existing clay pipes where access permits.
- Location tracing and topographical pick-up of pipe alignments.
- Confirmation of pipe sizes, materials and invert levels.
- Confirmation of the condition and hydraulic suitability of the existing pipes.
- Confirmation of the connection point into the 225mm diameter combined sewer in Mount Road.
- Inspection of downstream manholes in Mount Road.
- Confirmation of whether any existing connection can be retained or whether a new connection is required.
- Assessment of any redundant drainage requiring abandonment or grouting.
- Consultation with Yorkshire Water and Kirklees LLFA once survey information is available.

If the existing pipes are found to be in good condition, correctly connected and hydraulically suitable, they may be retained, protected and incorporated into the development drainage strategy, subject to Yorkshire Water approval.

If the existing pipes are found to be damaged, undersized, misaligned, unsuitable or not acceptable for adoption/re-use, they should be replaced, diverted or abandoned as appropriate. In that case, the development drainage should connect by gravity to the existing 225mm diameter combined sewer in Mount Road via a new approved connection.

The final design should ensure that existing land drainage flows are not severed or displaced in a way that increases flood risk to neighbouring land or properties.

10. Attenuation and Hydraulic Design Criteria

The surface water drainage system will be hydraulically modelled at detailed design stage using industry-standard drainage design software.

The drainage system should be designed to accommodate:

- The 1 in 1 year rainfall event without surcharge where practicable.
- The 1 in 30 year rainfall event without flooding of the drainage system.
- The 1 in 100 year rainfall event plus climate change allowance without flooding of dwellings.
- Safe exceedance routing for events exceeding the design standard.
- Urban creep allowance where required by the LLFA or adopting authority.
- A restricted discharge rate of 3.0 litres per second, subject to agreement.

The attenuation volume will be calculated once the final impermeable area, finished levels and outfall invert levels are confirmed.

For the purposes of the PPSE, the proposed surface water discharge rate should be stated as 3.0 litres per second, with attenuation to be provided on site for all events up to and including the 1 in 100 year event plus climate change.

A preliminary drainage drawing should identify:

- Impermeable areas.
- Surface water pipe routes.
- Attenuation location.
- Flow control chamber.
- Proposed outfall.
- Existing drainage features.
- Existing and proposed levels.
- Exceedance flow routes.

11. Exceedance and Overland Flow Management

Given the steep topography and history of surface water issues, exceedance flow management is a key part of the strategy.

The proposed layout should be designed so that, in the event of drainage exceedance or blockage:

- Flows are directed along roads, paths and landscaped corridors.
- Flows are kept away from dwelling thresholds.
- Finished floor levels are set above adjacent external levels.
- External ground levels fall away from buildings where practicable.
- Boundary drainage intercepts existing upslope flows.
- Surface water is not directed towards existing neighbouring dwellings, gardens, garages or retaining walls.
- Low points are avoided unless specifically designed as storage features.
- The attenuation area has a defined overflow route.

Finished floor levels should be set with an appropriate freeboard above adjacent drainage and external levels. Where local depressions or low points cannot be avoided, additional drainage, overflow routes or local raising should be considered.

The proposed bund and French drain shown along the boundary should be developed as part of the surface water management strategy. This feature should intercept shallow overland flow and direct it safely into the site drainage system or landscaped exceedance route, subject to levels and detailed design.

12. Water Quality

The development will comprise residential dwellings, private drives and an access road. Surface water runoff from roofs is generally low risk, while runoff from roads and parking areas may contain silts, hydrocarbons and other contaminants.

The drainage design should include appropriate water quality treatment prior to discharge. This may include:

- Trapped gullies for road runoff.
- Catchpit manholes at strategic locations.
- Permeable paving with underdrains where suitable.
- Filter drains or swales where levels permit.
- Silt removal upstream of flow controls and attenuation storage.
- Petrol/oil interception only where required by the approving authority; full retention interceptors are not usually necessary for low-risk residential parking but should be reviewed at detailed design stage.

The treatment train should be proportionate to the residential nature of the development and consistent with the Simple Index Approach in the CIRIA SuDS Manual.

13. Maintenance and Management

All private drainage infrastructure must be maintained for the lifetime of the development.

A maintenance and management plan should be prepared and submitted with the planning application or reserved by planning condition. The plan should identify:

- The party responsible for each drainage asset.
- Inspection frequency.
- Maintenance frequency.
- Access arrangements.
- Silt removal requirements.
- Flow control maintenance.
- Attenuation storage inspection.
- Permeable paving maintenance, if used.
- Filter drain maintenance, if used.
- Emergency procedures for blockage or flooding.
- Long-term funding arrangements.

Drainage serving the adoptable highway or adoptable sewers may be offered for adoption where designed to the relevant standards and accepted by the relevant authority. Any private drainage, attenuation or SuDS features not adopted by Yorkshire Water or the highway authority should be maintained by a private management company.

The management company should be established before occupation and should have responsibility for routine inspection, maintenance, repair and replacement of private drainage assets.

14. Consents and Approvals

The following consents and approvals are expected to be required:

14.1. Yorkshire Water PPSE

A Yorkshire Water Pre-Planning Sewerage Enquiry will be submitted to confirm the acceptability of the proposed foul and surface water discharge strategy.

14.2. Section 106 Sewer Connection

A Section 106 application will be required for the proposed connection to the public sewer. The final connection arrangement will be subject to Yorkshire Water approval.

The connection may be via saddle connection or new manhole connection, depending on Yorkshire Water requirements, sewer depth, condition, diameter and access constraints.

14.3. Land Drainage Consent

If any of the existing drainage features are confirmed to be an ordinary watercourse or culverted watercourse, land drainage consent may be required for any works affecting the channel, culvert or flow regime.

This should be confirmed with Kirklees Council as Lead Local Flood Authority once the survey results are available.

14.4. Planning Approval

The drainage strategy will be submitted as part of the planning application to demonstrate that a feasible, sustainable and maintainable drainage solution is available. Detailed hydraulic calculations and final technical drawings may be secured by planning condition, subject to agreement with the planning authority and LLFA.

14.5. Response to Previous LLFA and Planning Concerns

The current strategy has been developed to address the previous drainage-related reasons for refusal and LLFA consultation comments.

14.6. Avoidance of Surface Water Pumping

The previous application was criticised because it relied on pumping surface water. The current strategy avoids pumping surface water. This removes the key operational risk associated with pump failure, power failure and long-term maintenance.

14.7. Investigation of Existing Drainage

Previous LLFA comments identified likely land drainage, possible watercourses and existing water issues affecting the site. The current site investigation has identified existing clay drainage infrastructure crossing the site.

Historic mapping software indicates that outbuildings remained present on the site as late as 1999. The existing drainage is therefore considered likely to have served the former buildings, together with associated surface water and/or land drainage. A 4-inch / 100mm diameter clay pipe has been traced and verified as connecting to the existing 225mm diameter public combined sewer in Mount Road.

This confirms that the site has an existing gravity drainage outfall to Mount Road. The proposed strategy is to rationalise this existing arrangement through a designed, maintainable system with attenuation and flow control, subject to Yorkshire Water approval.

14.8. Mimicking Existing Drainage Behaviour

The proposed strategy seeks to mimic and formalise the existing drainage behaviour of the site. The existing clay drainage infrastructure has been found to convey flows eastwards, and a 4-inch / 100mm diameter clay pipe has been traced and verified as connecting to the existing 225mm diameter combined sewer in Mount Road.

The proposed development will therefore use the same general gravity drainage pathway as the historic site drainage, rather than diverting surface water to a new pumped outfall. The key improvement is that the proposed surface water system will include attenuation and a restricted discharge rate of 3.0 litres per second, subject to agreement, thereby reducing the risk of uncontrolled discharge from the site.

14.9. Reduction in Flood Risk

The proposed development will provide a controlled drainage system where the existing site appears to rely on uncharted land drainage and natural overland flow. By attenuating runoff to 3.0 litres per second, providing exceedance routing, and avoiding pumped discharge to a different catchment, the proposed strategy will reduce the risk of uncontrolled runoff from the site.

14.10. Long-Term Maintenance

A maintenance and management plan will be provided. Private drainage and SuDS features will be maintained by a management company unless adopted by Yorkshire Water or the highway authority.

15. Conclusions

The proposed drainage strategy for the 10-dwelling development at land off Netherley Drive, Marsden, is based on separate foul and surface water drainage systems within the site.

Historic mapping software indicates that outbuildings were present within the site as late as 1999. These buildings have since been demolished. Existing clay drainage infrastructure encountered during trial pitting is therefore considered likely to comprise historic foul drainage, surface water drainage and/or land drainage associated with the former buildings and land use.

Foul water from the proposed development will discharge by gravity to the existing 225mm diameter public combined sewer in Mount Road, subject to Yorkshire Water approval through a Section 106 sewer connection application.

Surface water has been assessed in accordance with the drainage hierarchy. Infiltration testing was undertaken on 11 June 2026 in general accordance with BRE Digest 365 principles. Two trial pits were excavated and both failed, confirming that soakaway drainage is not feasible.

Discharge to the watercourse or surface water sewer to the south on Netherley Drive has been considered but would require pumping due to site topography. Pumping surface water is not proposed because it would introduce avoidable flood risk, operational reliance and long-term maintenance risk. It would also fail to address the concerns raised during the previous planning application.

Further trial pitting undertaken on 11 June 2026 identified existing clay drainage infrastructure crossing the site. A 4-inch / 100mm diameter clay pipe has since been traced and verified as connecting to the existing 225mm diameter public combined sewer in Mount Road. This confirms that an existing gravity drainage outfall from the site to the combined sewer is present.

Subject to Yorkshire Water approval, it is proposed that the development will either utilise this existing verified outfall, where suitable, or provide a new gravity connection to the existing 225mm diameter public combined sewer in Mount Road. Surface water flows will be attenuated on site and restricted to a proposed discharge rate of 3.0 litres per second, subject to agreement.

This strategy provides a gravity-based solution for both foul and surface water, avoids pumping, reflects the historic and verified drainage regime of the site, formalises the existing drainage pathway, provides attenuation and flow control, and reduces the risk of uncontrolled runoff affecting neighbouring land or property.

The proposed drainage strategy is therefore considered suitable to support the planning application and Yorkshire Water PPSE, subject to completion of detailed design, hydraulic calculations and statutory approvals.

16. Appendix A: Site Location Plan and Sections



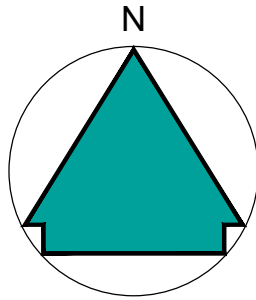
NOTES

This drawing has been prepared specifically for the purpose of obtaining Planning and or Building Regulations Approval. Its suitability for other purposes without additional supplementary details and specifications cannot be guaranteed.

All dimensions are to be checked on site, any discrepancies are to be reported to the designer before work commences. Use only figured dimensions.

All structural components shown are indicative only. Details / calculations of structural members are to be provided by the Structural Engineer.

This drawing is not to be copied or divulged to a third party without written permission.



Key:

- Indicative Retaining Walls
- Removed Features
- Proposed boundary fences
- Tarmac road
- Soft landscaping
- Permeable driveways
- Roof tiles
- Patio & path areas
- Bin Collection / Storage



Revisions		
P01	Preliminary Issue	28.04.26
P02	Work in progress	18.05.26
P03	Design amendments	04.06.26
P04	Client amendments	19.06.26

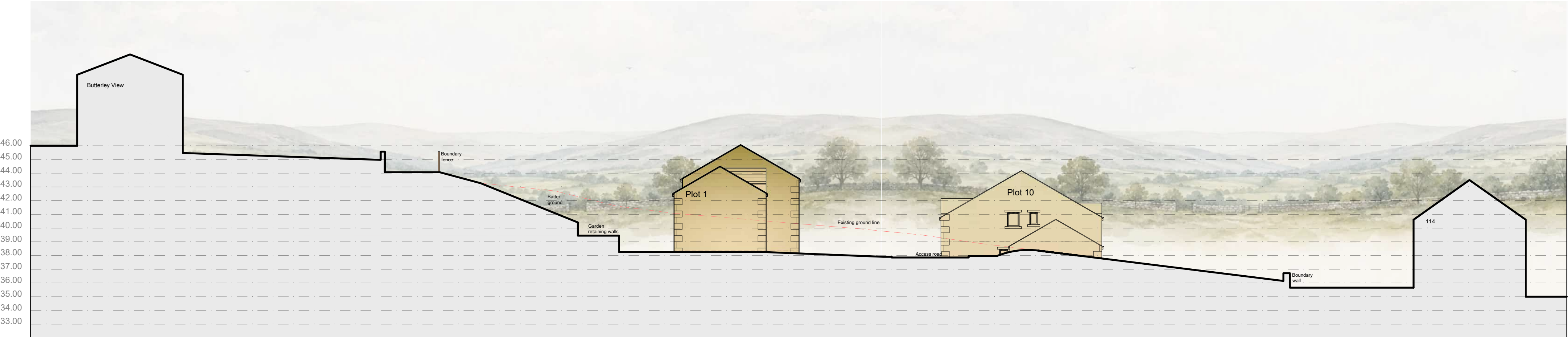
Project:
Residential Development
at Netherley Drive
Marsden
Huddersfield
for Sycamore Homes
Site Layout

Purpose of issue: PLANNING

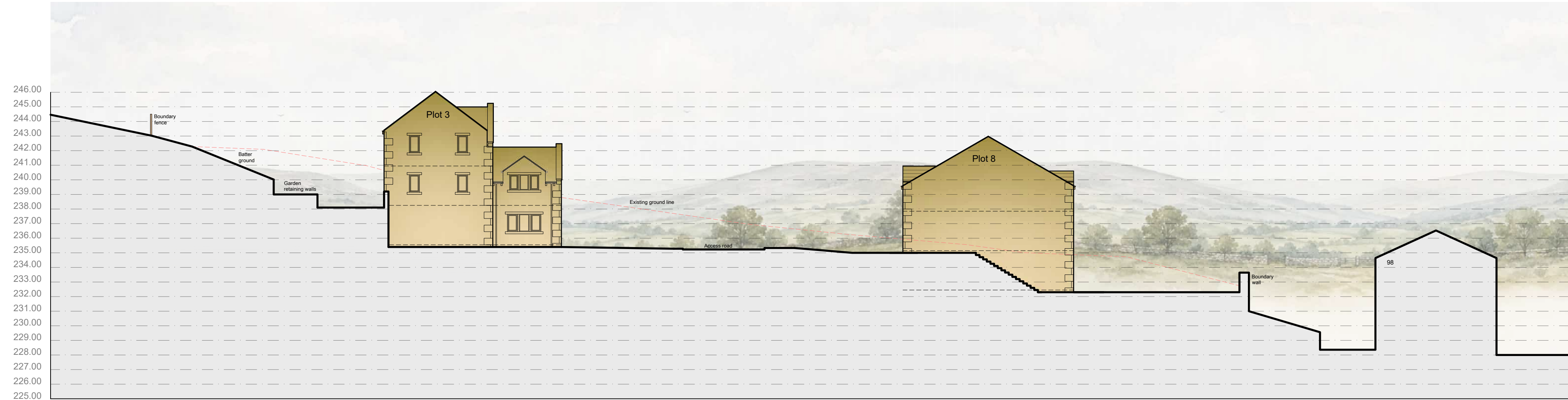
Drawn	DRH
Date	April 2026
Scales	1:500 @ A1
Drawing No.	2620 - 0301 - P04



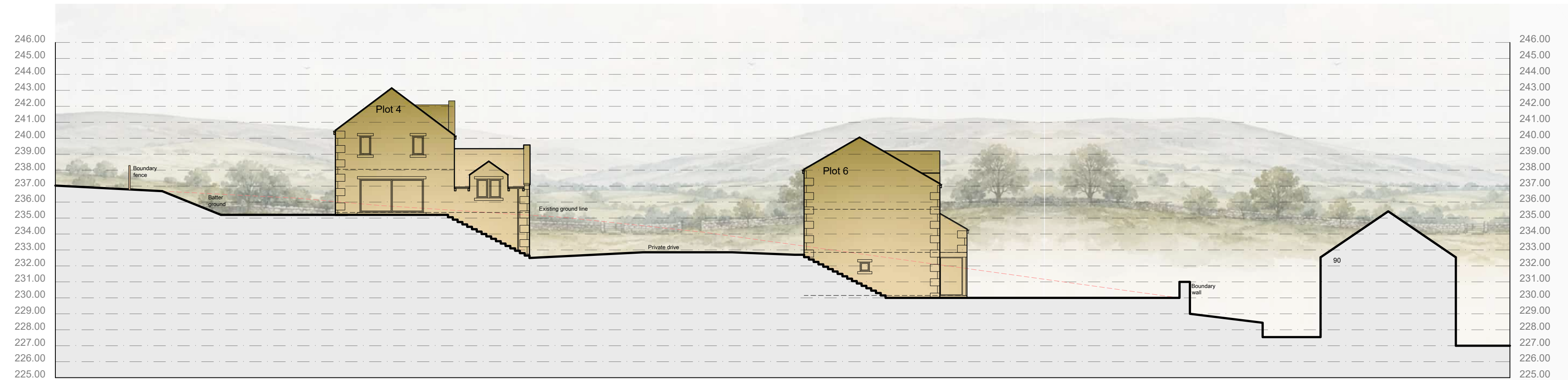
SECTION A-A
PROPOSED



SECTION B-B
PROPOSED



SECTION C-C
PROPOSED



SECTION D-D
PROPOSED



SECTION E-E
PROPOSED



SECTION KEY PLAN - 1:500

NOTES

This drawing has been prepared specifically for the purpose of obtaining Planning and or Building Regulations Approval. Its suitability for other purposes without additional supplementary details and specifications cannot be guaranteed.

All dimensions are to be checked on site, any discrepancies are to be reported to the designer before work commences. Use only figured dimensions.

All structural components shown are indicative only. Details / calculations of structural members are to be provided by the Structural Engineer.

This drawing is not to be copied or divulged to a third party without written permission.



Revisions		
P01	Preliminary Issue	18.06.26

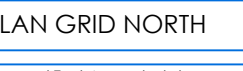
Project:
Residential Development
at Netherley Drive
Marsden
Huddersfield
for Sycamore Homes
Site Sections

Purpose of issue: PLANNING

Drawn DRH
Date June 2026
Scales 1:500 @ A0
Drawing No. 2620 - 0401 - P01

17. [Appendix B: Topographical Survey and YW Asset Plan](#)

PROVISIONAL

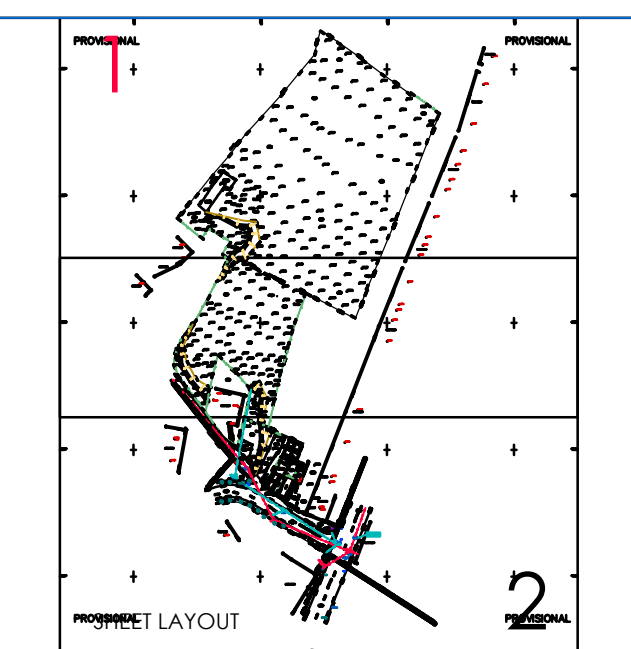


Survey & Engineering Projects Ltd. 2017
Reproduction in whole or in part by any means is prohibited
without the prior permission of Survey & Engineering Projects Ltd.
(01685) 728555 F. (01685) 725566 W. www.sepltd.com E. info@sepltd.com

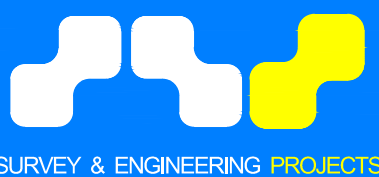
00	ENTER	11	UPPER
01	ALARM	12	SHIELD
02	ALARM	13	SHIELD
03	ALARM	14	WET STOP
04	ALARM	15	WET STOP
05	ALARM	16	WET STOP
06	ALARM	17	WET STOP
07	ALARM	18	WET STOP
08	ALARM	19	WET STOP
09	ALARM	20	WET STOP
10	ALARM	21	WET STOP
11	ALARM	22	WET STOP
12	ALARM	23	WET STOP
13	ALARM	24	WET STOP
14	ALARM	25	WET STOP
15	ALARM	26	WET STOP
16	ALARM	27	WET STOP
17	ALARM	28	WET STOP
18	ALARM	29	WET STOP
19	ALARM	30	WET STOP
20	ALARM	31	WET STOP
21	ALARM	32	WET STOP
22	ALARM	33	WET STOP
23	ALARM	34	WET STOP
24	ALARM	35	WET STOP
25	ALARM	36	WET STOP
26	ALARM	37	WET STOP
27	ALARM	38	WET STOP
28	ALARM	39	WET STOP
29	ALARM	40	WET STOP
30	ALARM	41	WET STOP
31	ALARM	42	WET STOP
32	ALARM	43	WET STOP
33	ALARM	44	WET STOP
34	ALARM	45	WET STOP
35	ALARM	46	WET STOP
36	ALARM	47	WET STOP
37	ALARM	48	WET STOP
38	ALARM	49	WET STOP
39	ALARM	50	WET STOP
40	ALARM	51	WET STOP
41	ALARM	52	WET STOP
42	ALARM	53	WET STOP
43	ALARM	54	WET STOP
44	ALARM	55	WET STOP
45	ALARM	56	WET STOP
46	ALARM	57	WET STOP
47	ALARM	58	WET STOP
48	ALARM	59	WET STOP
49	ALARM	60	WET STOP
50	ALARM	61	WET STOP
51	ALARM	62	WET STOP
52	ALARM	63	WET STOP
53	ALARM	64	WET STOP
54	ALARM	65	WET STOP
55	ALARM	66	WET STOP
56	ALARM	67	WET STOP
57	ALARM	68	WET STOP
58	ALARM	69	WET STOP
59	ALARM	70	WET STOP
60	ALARM	71	WET STOP
61	ALARM	72	WET STOP
62	ALARM	73	WET STOP
63	ALARM	74	WET STOP
64	ALARM	75	WET STOP
65	ALARM	76	WET STOP
66	ALARM	77	WET STOP
67	ALARM	78	WET STOP
68	ALARM	79	WET STOP
69	ALARM	80	WET STOP
70	ALARM	81	WET STOP
71	ALARM	82	WET STOP
72	ALARM	83	WET STOP
73	ALARM	84	WET STOP
74	ALARM	85	WET STOP
75	ALARM	86	WET STOP
76	ALARM	87	WET STOP
77	ALARM	88	WET STOP
78	ALARM	89	WET STOP
79	ALARM	90	WET STOP
80	ALARM	91	WET STOP
81	ALARM	92	WET STOP
82	ALARM	93	WET STOP
83	ALARM	94	WET STOP
84	ALARM	95	WET STOP
85	ALARM	96	WET STOP
86	ALARM	97	WET STOP
87	ALARM	98	WET STOP
88	ALARM	99	WET STOP
89	ALARM	100	WET STOP
90	ALARM	101	WET STOP
91	ALARM	102	WET STOP
92	ALARM	103	WET STOP
93	ALARM	104	WET STOP
94	ALARM	105	WET STOP
95	ALARM	106	WET STOP
96	ALARM	107	WET STOP
97	ALARM	108	WET STOP
98	ALARM	109	WET STOP
99	ALARM	110	WET STOP
100	ALARM	111	WET STOP
101	ALARM	112	WET STOP
102	ALARM	113	WET STOP
103	ALARM	114	WET STOP
104	ALARM	115	WET STOP
105	ALARM	116	WET STOP
106	ALARM	117	WET STOP
107	ALARM	118	WET STOP
108	ALARM	119	WET STOP
109	ALARM	120	WET STOP
110	ALARM	121	WET STOP
111	ALARM	122	WET STOP
112	ALARM	123	WET STOP
113	ALARM	124	WET STOP
114	ALARM	125	WET STOP
115	ALARM	126	

NOTES:
All levels relate to O.S. (Newlyn) Datum, Established using network RTK.
Survey plotted on a plane local grid, orientated to National Grid.

SURVEY STATIONS			
Name	Easting	Northing	Height
SEP1	404523.145	410721.045	240.936
SEP2	404534.301	410754.023	238.012
SEP3	404494.888	410778.350	240.115
SEP3A	404511.733	410777.350	239.130
SEP4	404506.647	410805.185	238.463
SEP5	404506.643	410860.528	238.968



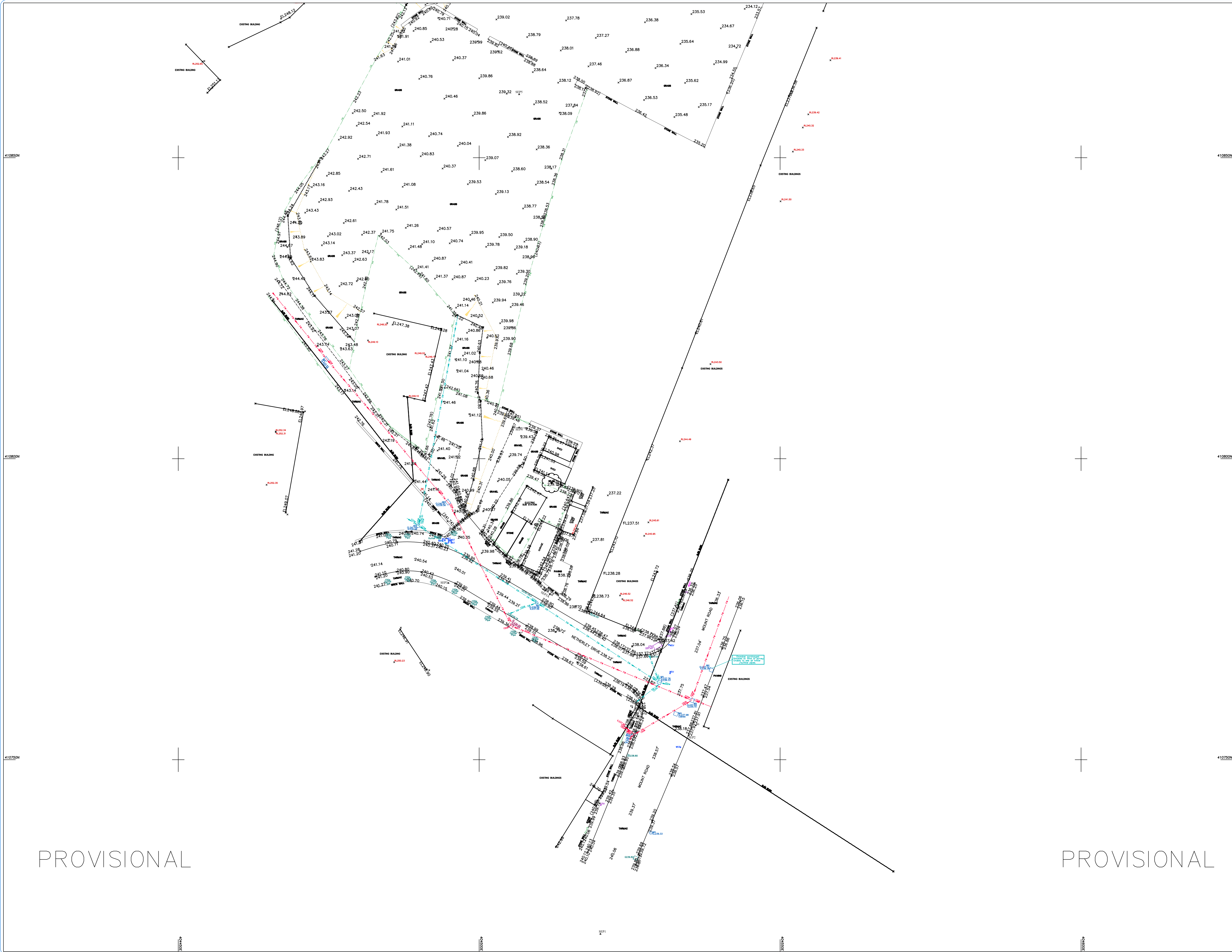
REV	DATE	DESCRIPTION
-----	------	-------------



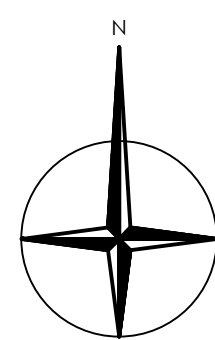
Client
4 Front Limited

Project Title
Topographical Survey of Land at:
Netherley Drive
Marsden
Huddersfield
West Yorkshire
HD7 1JH

Surveyed I Bryning		Drawn R Webb		Checked I Bryning	
Scale 1:200	Date Jan 17	Drawing Ref. S13705-T		No. 1	Size A0



© Survey & Engineering Projects Ltd. 2017
Reproduction in whole or in part by any means is prohibited
without the prior permission of Survey & Engineering Projects Ltd.
T: 01483 72000 F: 01483 72004 W: www.seprojects.co.uk

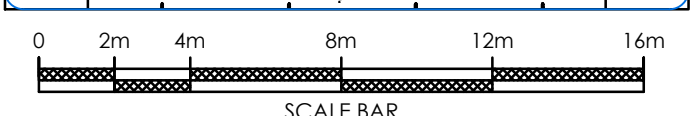
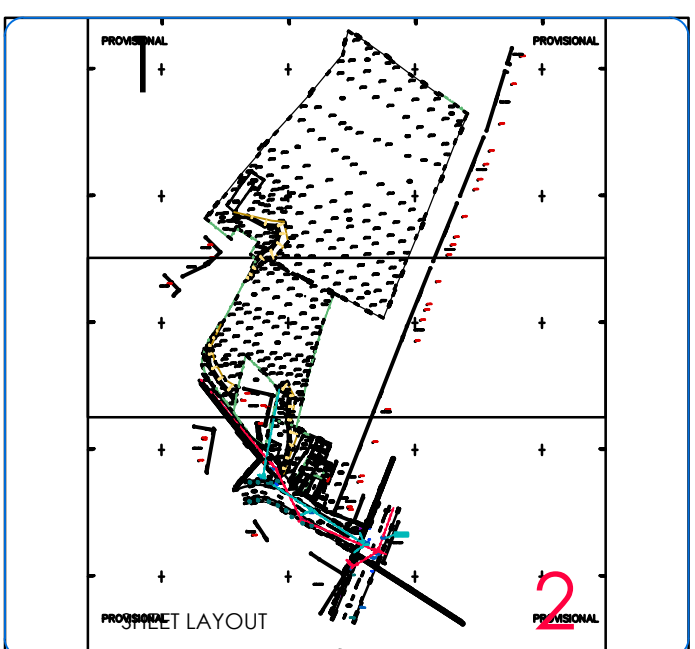


PLAN GRID NORTH

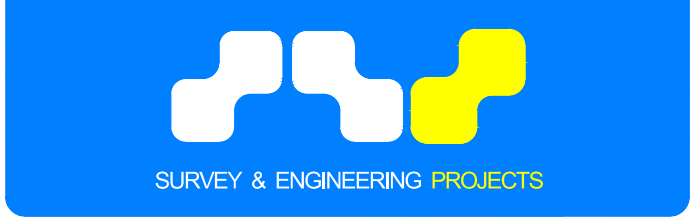
LEGEND	
1	ADJ. BOUNDARY
2	ADJ. BOUNDARY
3	ADJ. BOUNDARY
4	ADJ. BOUNDARY
5	ADJ. BOUNDARY
6	ADJ. BOUNDARY
7	ADJ. BOUNDARY
8	ADJ. BOUNDARY
9	ADJ. BOUNDARY
10	ADJ. BOUNDARY
11	ADJ. BOUNDARY
12	ADJ. BOUNDARY
13	ADJ. BOUNDARY
14	ADJ. BOUNDARY
15	ADJ. BOUNDARY
16	ADJ. BOUNDARY
17	ADJ. BOUNDARY
18	ADJ. BOUNDARY
19	ADJ. BOUNDARY
20	ADJ. BOUNDARY
21	ADJ. BOUNDARY
22	ADJ. BOUNDARY
23	ADJ. BOUNDARY
24	ADJ. BOUNDARY
25	ADJ. BOUNDARY
26	ADJ. BOUNDARY
27	ADJ. BOUNDARY
28	ADJ. BOUNDARY
29	ADJ. BOUNDARY
30	ADJ. BOUNDARY
31	ADJ. BOUNDARY
32	ADJ. BOUNDARY
33	ADJ. BOUNDARY
34	ADJ. BOUNDARY
35	ADJ. BOUNDARY
36	ADJ. BOUNDARY
37	ADJ. BOUNDARY
38	ADJ. BOUNDARY
39	ADJ. BOUNDARY
40	ADJ. BOUNDARY
41	ADJ. BOUNDARY
42	ADJ. BOUNDARY
43	ADJ. BOUNDARY
44	ADJ. BOUNDARY
45	ADJ. BOUNDARY
46	ADJ. BOUNDARY
47	ADJ. BOUNDARY
48	ADJ. BOUNDARY
49	ADJ. BOUNDARY
50	ADJ. BOUNDARY
51	ADJ. BOUNDARY
52	ADJ. BOUNDARY
53	ADJ. BOUNDARY
54	ADJ. BOUNDARY
55	ADJ. BOUNDARY
56	ADJ. BOUNDARY
57	ADJ. BOUNDARY
58	ADJ. BOUNDARY
59	ADJ. BOUNDARY
60	ADJ. BOUNDARY
61	ADJ. BOUNDARY
62	ADJ. BOUNDARY
63	ADJ. BOUNDARY
64	ADJ. BOUNDARY
65	ADJ. BOUNDARY
66	ADJ. BOUNDARY
67	ADJ. BOUNDARY
68	ADJ. BOUNDARY
69	ADJ. BOUNDARY
70	ADJ. BOUNDARY
71	ADJ. BOUNDARY
72	ADJ. BOUNDARY
73	ADJ. BOUNDARY
74	ADJ. BOUNDARY
75	ADJ. BOUNDARY
76	ADJ. BOUNDARY
77	ADJ. BOUNDARY
78	ADJ. BOUNDARY
79	ADJ. BOUNDARY
80	ADJ. BOUNDARY
81	ADJ. BOUNDARY
82	ADJ. BOUNDARY
83	ADJ. BOUNDARY
84	ADJ. BOUNDARY
85	ADJ. BOUNDARY
86	ADJ. BOUNDARY
87	ADJ. BOUNDARY
88	ADJ. BOUNDARY
89	ADJ. BOUNDARY
90	ADJ. BOUNDARY
91	ADJ. BOUNDARY
92	ADJ. BOUNDARY
93	ADJ. BOUNDARY
94	ADJ. BOUNDARY
95	ADJ. BOUNDARY
96	ADJ. BOUNDARY
97	ADJ. BOUNDARY
98	ADJ. BOUNDARY
99	ADJ. BOUNDARY
100	ADJ. BOUNDARY

NOTES:
1. All levels are to G.D. (British Datum). Established using network 99.
2. Survey plotted on a plane local grid, orientated to National Grid.

SURVEY DATA			
DATE	PROJECT	CLIENT	SCALE
17/01/2017	4 Front Limited	4 Front Limited	1:200
17/01/2017	4 Front Limited	4 Front Limited	1:200
17/01/2017	4 Front Limited	4 Front Limited	1:200
17/01/2017	4 Front Limited	4 Front Limited	1:200
17/01/2017	4 Front Limited	4 Front Limited	1:200



REV	DATE	DESCRIPTION
1	17/01/2017	Issue for client



Client:
4 Front Limited
4 Front Limited
4 Front Limited
4 Front Limited
4 Front Limited

Project Title:
Topographical Survey of Land at:
Netherley Drive
Morden
Huddersfield
West Yorkshire
HD7 6HL

Surveyed 1 Brynning	Drawn R Webb	Checked I Brynning
Scale 1:200	Date Jan 17	Drawing Ref. S13705-1
No. 2	Size A0	Rev --



 Apart of Yorkshire Water	404125 : 410601  YorkshireWater	Map Name : SE0410NW Yorkshire Water, PO Box 500, Halifax Road, Bradford BD6 2LZ Contact Name : S Edon Contact Tel :	Title Notes (Ody) COPYRIGHT STATEMENTS: Reproduced by permission of Ordnance Survey on behalf of HMSO © Crown copyright and database 2014. All rights reserved Ordnance Survey Licence number 100022432	Partial Key Foul Sewer = F Combined Sewer = C Surface Water Sewer = SW Trade Sewer = TD Partially Separate = PS Date Req : 15/02/2017, 12:18:21 Source : Sewer Network Enquiry	This plan is furnished as a general guide only and no warranty as to its correctness is given or implied. This plan must not be relied upon in the event of excavations or other works made in the vicinity of public sewers. No house or property connections are shown. Date Gen : 15/02/2017, 12:18:28
--	--	---	--	--	---

18. Appendix C: Historic Mapping Extracts Showing Former
 Outbuildings Present on Site up to 1999

Figure 3 Historical Mapping 1892

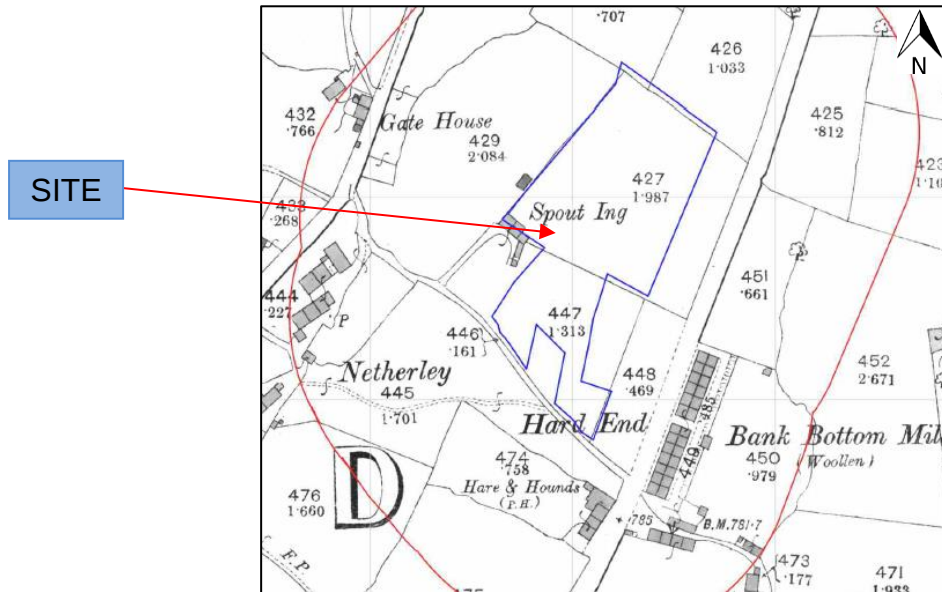


Figure 4 Historical Mapping 1906

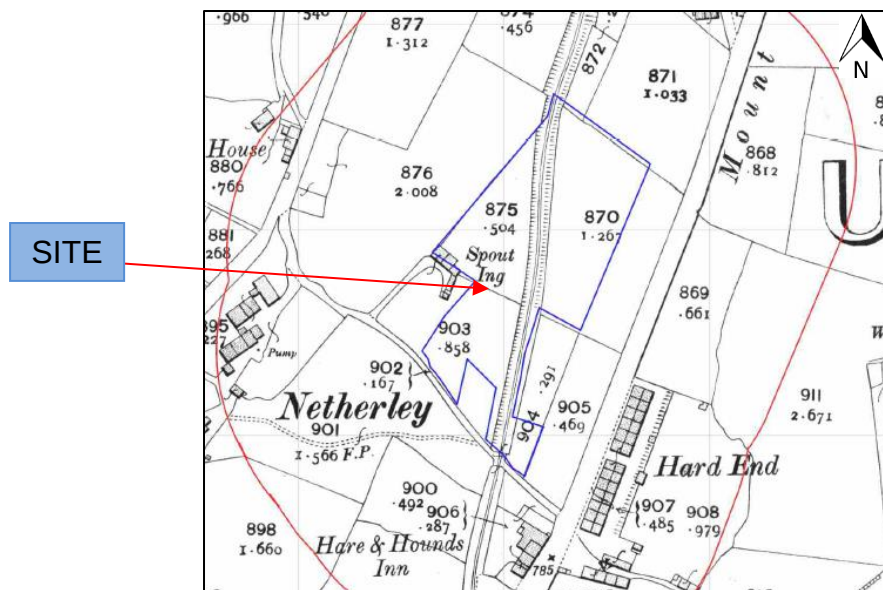


Figure 5 Historical Mapping 1932

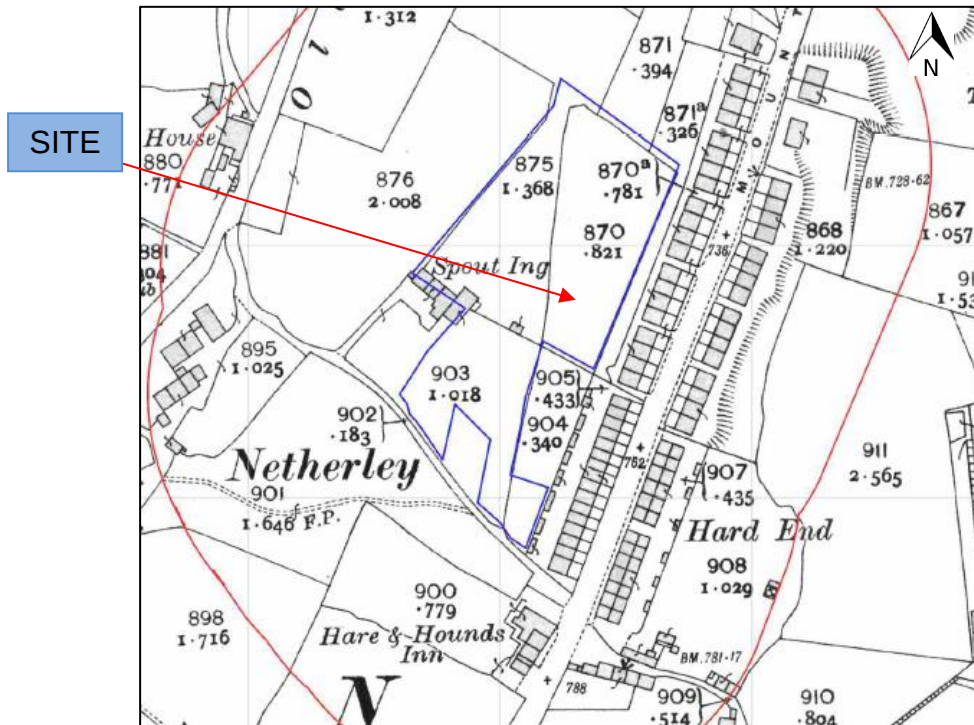


Figure 6 Historical Mapping 1966-67

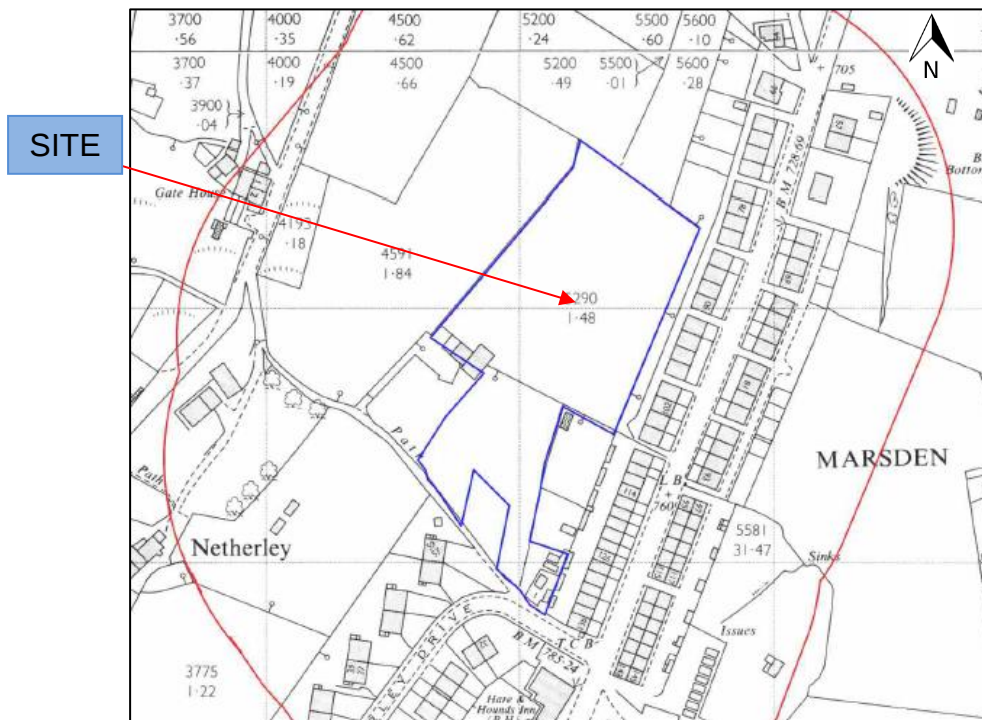


Figure 7 Google Earth 1999 Image



Figure 8 Google Earth 2009 Image

