

**FLOOD RISK ASSESSMENT
AND
DRAINAGE STRATEGY**
At
**WINDSOR ROAD
TROWBRIDGE,
BA14 0FY**

Client	LNT Construction Limited
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1.0 Introduction

Noonan Engineering Limited has been appointed by the Client, LNT Construction Limited, to undertake a Flood Risk Assessment (FRA) and Drainage Strategy (DS) for a proposed care home development at Windsor Road, Trowbridge.

This report is written on behalf of the Client, LNT Construction Limited, and is not to be relied upon by any other parties without the written approval of Noonan Engineering Limited.

This report draws upon available information to review the sources of flood risk to the site and assess the suitability for the proposed development in line with the latest government guidance relating to flood risk and drainage. This report also presents the existing drainage regime and provides a drainage strategy for the development proposals.

A review of all available desktop sources has been used to produce this report, including the British Geological Survey (BGS) website, the DEFRA Magic map website, and the Environment Agency's Flood Map for Planning to assess the sites in terms of flood risk, topography, ground conditions, and locality to any watercourses.

This assessment has been undertaken in accordance with national requirements for Flood Risk Assessments and sustainable drainage. The following list of guidance and best practice has been referenced where applicable:

- National Planning Policy Framework (NPPF).
- Planning Practice Guidance (PPG): Flood Risk and Coastal Change.
- Flood Risk Assessments: Climate Change Allowances.
- National Standards for Sustainable Drainage Systems (DEFRA, 2025).
- The SUDS Manual (CIRIA C753).
- Building Regulations 2010 Part H3.
- Rainfall Ruoff Management for Developments Report – SC030219.
- Development and Flood Risk (CIRIA C624).
- DEFRA R&D Technical Report W5-074/A/TR/1.

This report forms part of a planning pack for the site which will be submitted with the full planning application. Wiltshire Council is the Local Planning Authority (LPA) for the site and is also the designated Lead Local Flood Authority (LLFA).

2.0 Background Information

2.1 Site Context

The site extends to an area of approximately 0.75 hectares (ha) and is located on land off Windsor Road in south Trowbridge, centred on Ordnance Survey National Grid Reference ST 85960 55794. The site mainly comprises a tarmac carpark, with grassed areas along the western and eastern boundaries of the site. Access to the site is afforded from Windsor Road via Towcester Road. A pond is present approximately 17 m north of the site.

The site is located on the edge of White Horse Business Park, to the south of the A363. A residential apartment complex with associated car parking bounds the site to the east. A raised bank of trees forms the western and southern boundary of the site, with agricultural fields beyond.

Figure 2.1 indicates the location of the site, whilst Figure 2.2 provides an aerial view of the site.

The nearest watercourses to the site are the River Biss, located approximately 765 m to the east, and an unnamed tributary of the River Biss located approximately 315 m north of the site.

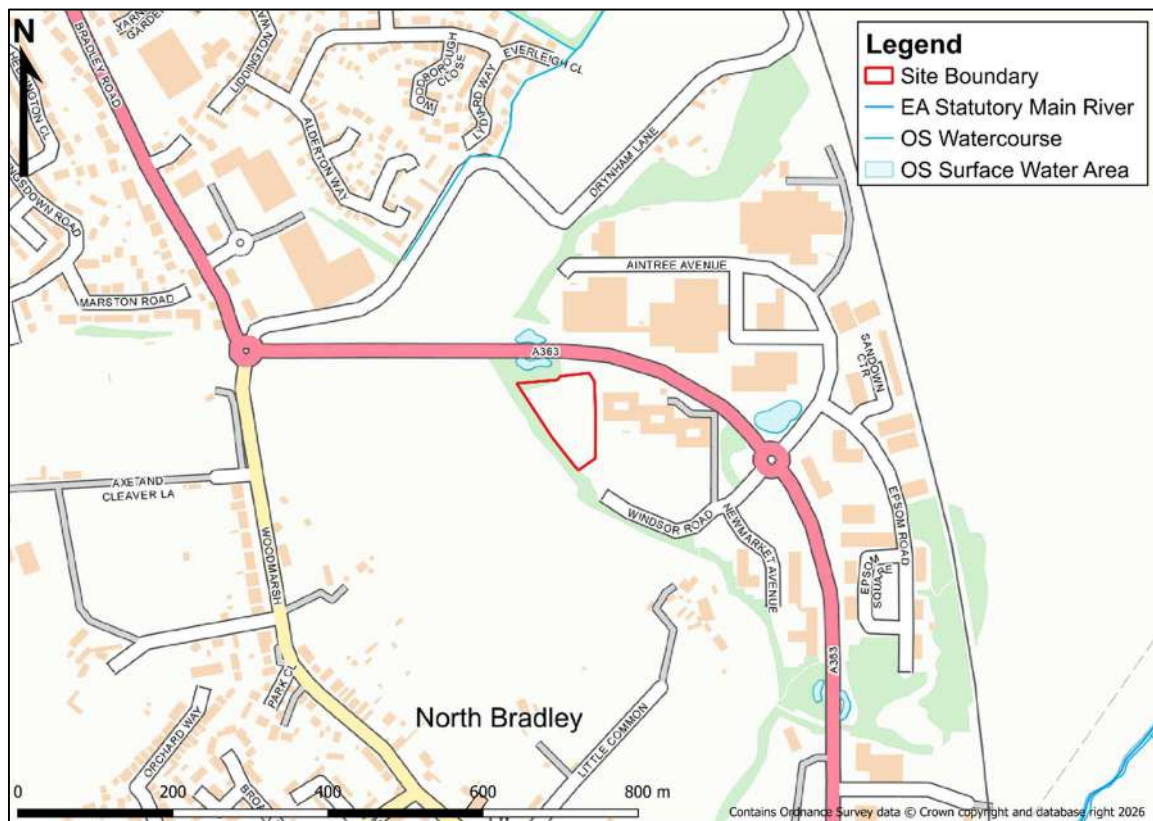


Figure 2.1 Windsor Road, Trowbridge
Site Location Plan

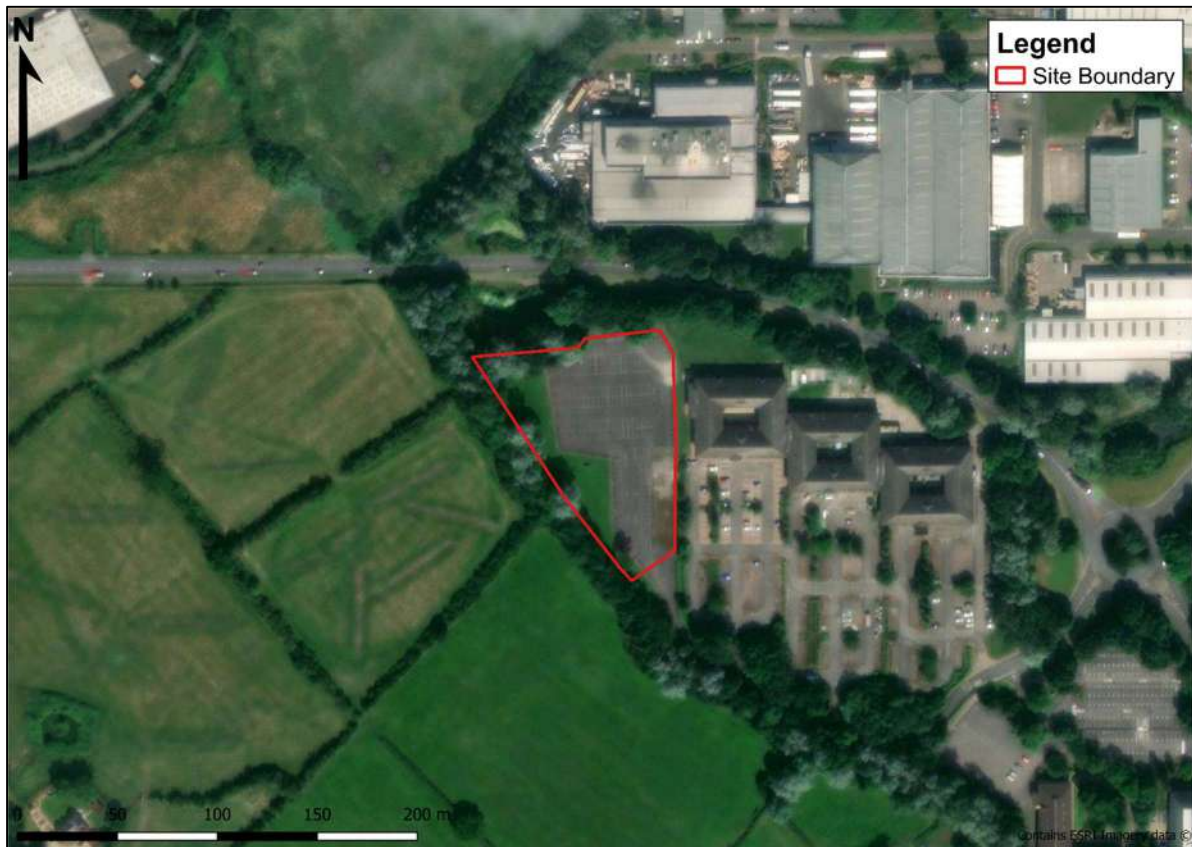


Figure 2.2 Windsor Road, Trowbridge
Satellite View of Site

2.2 Proposed Development

The proposed development comprises a new care home development with secure garden and a car parking area, with a retained vehicular access off Windsor Road.

The feasibility layout plan for the proposed development can be found in **Appendix A**.

2.3 Topography

Topographic data gathered using Light Detection and Ranging (LiDAR) aerial photogrammetric techniques has been downloaded from the Environment Agency (EA) open data website to better understand the local topography. The mapping is based on a 1 m Digital Terrain Model which provides a representation of the elevation of the bare Earth (Figure 2.3). A topographical survey for the site was completed by Quickdraw Surveys Ltd in February 2026 and is included in **Appendix B**. The LiDAR data and topographical survey correspond well.

Locally, ground levels fall from higher land in the southwest towards the River Biss and its unnamed tributary to the north/northeast. Ground levels across the site follow the local topography, with the southwestern areas of the site higher than the northern area of the site. Ground levels across the existing car park generally fall in a northerly direction from 45.91 m AOD to a lowest level of 44.19 m AOD in the northwest. The bank along the western boundary of the site has a top of bank level of 47.70 m AOD in the southwest, falling to 45.00 m AOD in the northwest. The bank continues along the northern boundary of the site, whereby top of bank levels are recorded to rise from 45.02 m AOD in the northwest to 45.69 m AOD in the northeast. The grassed areas around the carpark are recorded to be at similar levels to the carpark but separated by a raised kerb.

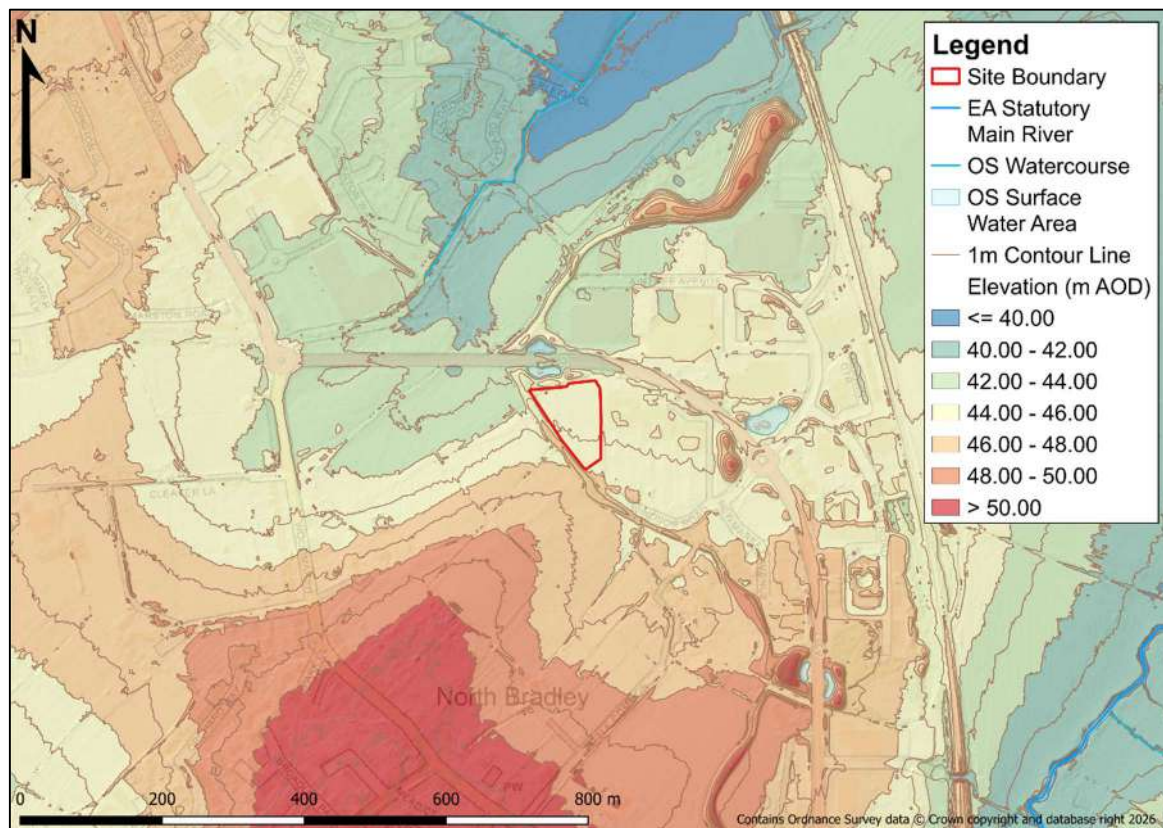


Figure 2.3 Windsor Road, Trowbridge
Digital Terrain Model and Contour Plan

2.4 Ground Conditions

British Geological Survey (BGS) mapping indicates that natural geology beneath the site comprises mudstone bedrock of the Oxford Clay Formation. There are no superficial deposits recorded at the site. The Cranfield University Soilscape viewer indicates that the natural soils beneath the site would have comprised slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils with impeded drainage.

A Geoenvironmental Investigation has been prepared for the site by Groundtech Consulting Limited and is included in **Appendix C**. During the intrusive site works completed in February 2026, 12 boreholes were drilled across the site, along with six trial pits and four soil percolation test pits. Made Ground was recorded on the entire central and eastern zones of site, to a maximum depth of 1.40 m below ground level (m bgl). Grass over dark brown slightly sandy locally clayey topsoil with fine to medium sand surfaced the remainder of the site, existing from ground level to maximum depths of 0.20 m bgl. Superficial deposits were encountered during the site works and comprised clay from depths of between 0.15 m bgl and 0.25 m bgl to a maximum depth of 4.00 m bgl. Bedrock was encountered across most of the exploratory holes during the investigation. The strata comprised mudstone, residually weathered, and recovered as stiff slightly sandy gravelly clay with occasional fossils. Groundwater was generally encountered within the majority of exploratory holes, between 0.35 m bgl and 5.00 m bgl, with a common trend of shallower groundwater being observed in the western area of the site underlying the soft landscaping.

2.5 Planning Context and Flood Zone Classification

The EA Flood Map for Planning indicates that the site is located on land designated as Flood Zone 1 (Figure 2.4). The local area benefits from a Strategic Flood Risk Assessment (SFRA). This assessment is the Wiltshire Council Level 1 SFRA (2024). Mapping contained within the SFRA confirms that the site is situated within Flood Zone 1. Statutory

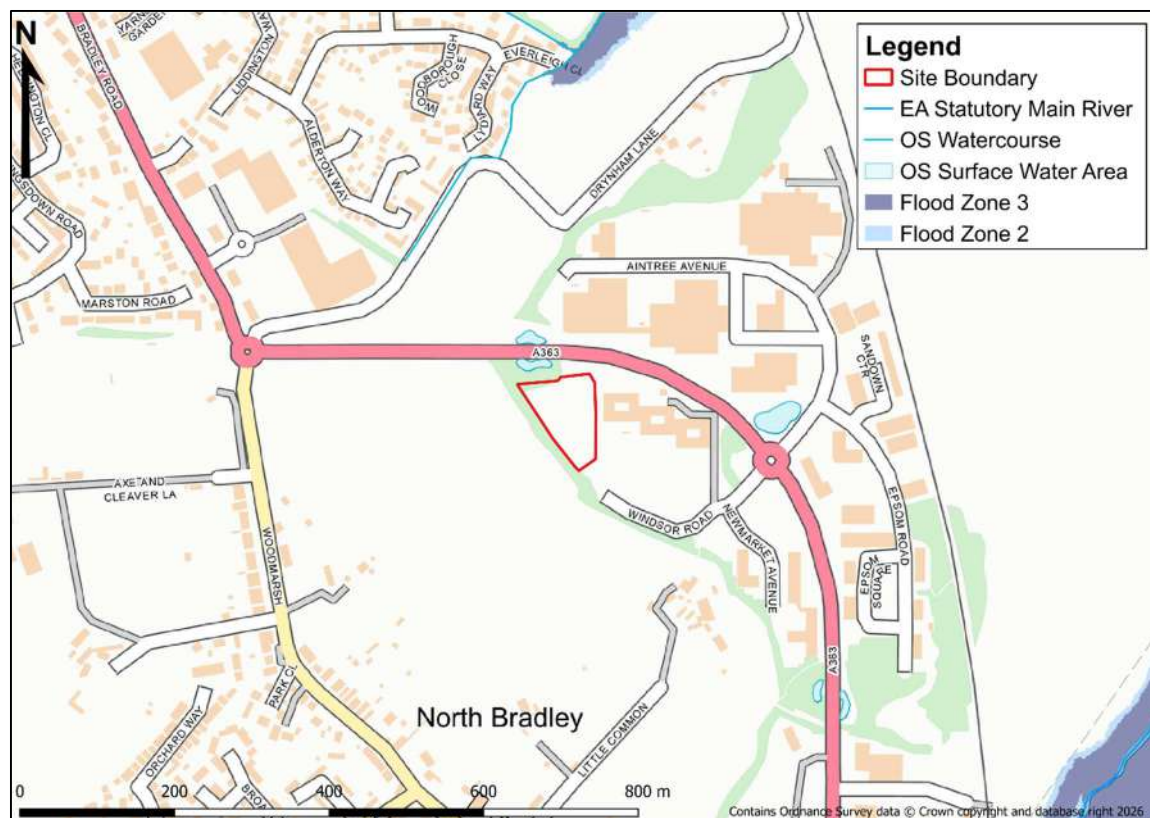


Figure 2.4 Windsor Road, Trowbridge
Flood Map for Planning (Source: EA)

In accordance with the NPPF, the proposed development falls under the more vulnerable category in terms of flood risk. In line with PPG Table 2: Flood Risk Vulnerability and Flood Zone 'Incompatibility' (reproduced as Table 2.1), the proposed development is considered appropriate in Flood Zone 1 and does not require the exception test to be applied.

Table 2.1 – Flood Zone and Flood Risk Vulnerability

Flood Risk Vulnerability Classification		Essential Infrastructure	Highly Vulnerable	More Vulnerable	Less Vulnerable	Water Compatible
Flood Zone	Zone 1	✓	✓	✓	✓	✓
	Zone 2	✓	Exception Test Required	✓	✓	✓
	Zone 3a	Exception Test Required	X	Exception Test Required	✓	✓
	Zone 3b Functional Floodplain	Exception Test Required	X	X	X	✓

2.6 Climate Change

In February 2016 the Environment Agency (EA) issued guidance on the impacts of climate change on flood risk in the UK to support the NPPF (last major update in December 2024). This advice sets out that peak rainfall intensity, sea level rise, peak river flow, offshore wind speed and extreme wave heights are all expected to increase in the future as a result of climate change. The PPG recommends that considerations for future climate change are included in Flood Risk Assessments. As the site is located in Flood Zone 1, changes in sea level, peak river flow, offshore wind speed, and extreme wave heights do not need to be considered.

The site lies within the Avon Bristol and North Somerset Streams Management Catchment and has potential to be impacted by increases in peak rainfall intensity as a result of climate change. Residential development is considered to have a minimum lifetime of 100 years.

Peak Rainfall Intensity

Guidance states that flood risk assessments should assess the 'Upper End' allowance to understand the range of impact for both the 3.3% and 1% Annual Exceedance Probability (AEP) events for the 2070s epoch (2061 to 2125) for a 100-year development lifetime. In some locations the allowance for the 2050s epoch is higher than that for the 2070s epoch. If so, and development has a lifetime beyond 2061, the EA advise the use of the higher of the two allowances.

As such, an uplift in peak rainfall intensity of 40% and 45% for the 3.3% AEP and 1% AEP, respectively, should be applied for the site.

3.0 Flood Risk Sources

3.1 Historic Flooding

The EA Historic Flood Map indicates that they hold no records of flooding at the site. The Wiltshire Council Level 1 SFRA includes mapping of LLFA Recorded Flood Incidents. This mapping indicates that the LLFA also don't hold any records of flooding at the site.

3.2 Fluvial and Tidal Flooding

The EA Flood Map for Planning (Figure 2.4) indicates that the site is located within Flood Zone 1, defined as land having a less than 0.1% (1 in 1,000) annual probability of flooding. Therefore, the site is not indicated to be at risk of flooding from rivers or the Sea.

3.3 Surface Water Flooding

The Environment Agency (EA) 'Surface Water Flooding: Yearly Chance of Flooding Between 2040 and 2060' map, shown in Figure 3.1, shows the future chance of flooding from surface water to areas of land if rainwater is not able to drain away through normal drainage systems or soak into the ground. The dataset does not explicitly account for any subsurface drainage infrastructure.

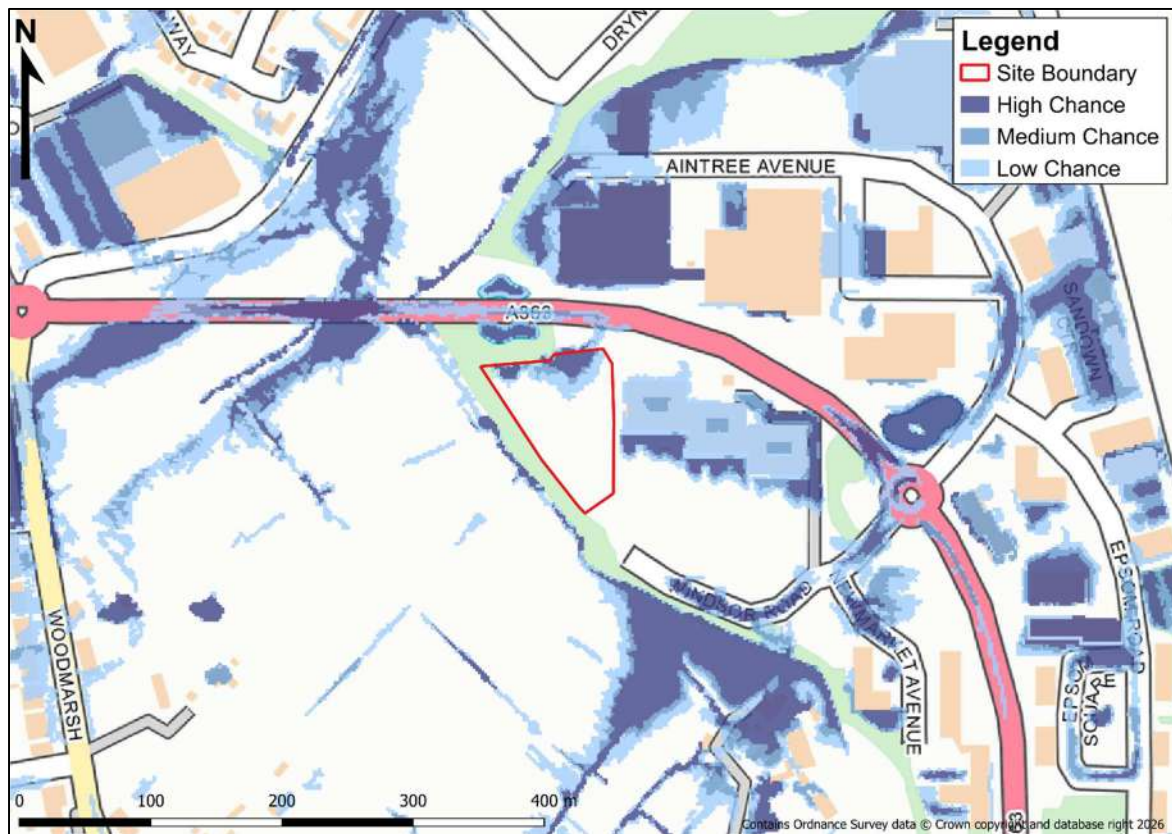


Figure 3.1 Windsor Road, Trowbridge
Future Surface Water Flood Risk (Source: EA)

Generally, the site is not shown to be at risk of surface water flooding. Land to the very north of the site is shown to be at high risk (more than 3.3% chance each year) of surface water flooding, with flood depths up to 20 cm predicted. Flood waters are then shown to spill on to the A363 to the north.

As detailed in Section 2.3, there is a raised bank present along the northern boundary of the site. Therefore, the surface water flood modelling suggests that rainfall landing on the site would drain towards the northern area of the site, in line with the fall across the site, whereby water would collect in front of the bank, before spilling over a lower area of the bank offsite to the northeast. However, the surface water flood map does not account for any drainage infrastructure.

A utility and CCTV survey was undertaken at the site by Murphy Geospatial in February 2026 and is included in **Appendix D**. This survey shows that the site benefits from a private surface water drainage system, with a series of gullies present along the northern edge of the carpark. These gullies drain to a surface water sewer which drains adjacent to the A363, via several petrol interceptors located offsite to the northeast. As such, when this private drainage network is accounted for, it is unlikely that surface water runoff would collect at the northern area of the site.

There is a residual risk that if the drainage system became blocked or was overwhelmed by significant rainfall which exceeds the capacity of the drainage system, the northern area of the site could become flooded. In this instance, surface water flood depths are shown to be relatively shallow; up to 20 cm. Surface water flood risk mitigation measures are outlined in Section 3.6 to ensure the proposed development remains safe from flooding for its lifetime without increasing flood risk elsewhere.

3.4 Ground Water Flooding

The EA Aquifer Designation Map indicates that the mudstone bedrock beneath the site is designated as an Unproductive Aquifer: *“rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow”*.

The Wiltshire Council Level 1 SFRA includes mapping of areas susceptible to groundwater emergence. An extract of this mapping is included as **Appendix E**, which shows that the site is located on land deemed as having a negligible risk from groundwater flooding due to the nature of the local geological deposits.

It is noted that during the site investigation undertaken in February 2026 (Section 2.4 and **Appendix C**), groundwater was generally encountered within the majority of exploratory holes, between 0.35 m bgl and 5.00 m bgl. It was noted that there was a common trend of shallower groundwater being observed in the western area of the site underlying the soft landscaping.

Based on the observed ground conditions, comprising mainly clay underlain by weathered mudstone, it is thought that the groundwater struck is attributable to waterlogged ground rather than a rising water table. Due to the presence of raised kerbs around the large areas of tarmac at the site, coupled with the low permeability of the ground underlying the grassed areas, it is likely that during and following prolonged periods of wet weather, rainfall that lands on soft landscaped areas of the site will be unable to drain away quickly, which may result in saturated ground conditions during extreme weather; as demonstrated by the shallow groundwater encountered in February 2026. This is more likely to be a nuisance as opposed to a flood risk.

Considering the above, the risk of flooding from groundwater is considered to be low.

3.5 Artificial Sources of Flooding

Canals and Manmade Watercourses

There are no canals or other man-made watercourses within the locality of the site which could pose a risk of flooding.

Reservoirs

The EA reservoir flood maps show where water may go in the unlikely event of a dam or reservoir failure. There are two flooding scenarios shown on the maps: 'dry-day' and 'wet-day' scenarios. The 'dry-day' scenario predicts the flooding that would occur if the dam or reservoir failed when rivers are at normal levels. The 'wet day' scenario predicts how much worse the flooding might be if a river is already experiencing an extreme natural flood.

The EA reservoir flood map indicates that the site is not at risk of flooding from reservoirs in either scenario.

Sewers

Sewers can be a cause of flooding where the drainage network has become overwhelmed, either by blockage or due to significant rainfall beyond the designed capabilities of the drainage system. Wessex Water are responsible for the management of urban drainage (surface water) and sewerage within the district.

The Wiltshire Council Level 1 SFRA includes mapping of sewer flood incidents within Trowbridge. This mapping indicates that between 1 and 10 sewer flooding incidents were recorded across the local area between 2015 and 2019: with only one of these was within the BA14 0 postcode area.

The utility and CCTV survey for the site (**Appendix D**) indicates that there is a private surface water drainage network at the site which drains in an overall northeasterly direction towards a surface water sewer adjacent to the A363. This network only drains water from the site itself and is therefore unlikely to pose a risk of flooding to the site. Residual flood risk associated with a blockage in the system or extreme rainfall which exceeds the design capacity of the network is discussed further in Section 3.3.

The Wessex Water Pre-Development Enquiry Response and sewer record plan is included in **Appendix F**. This mapping indicates that there are no public sewers beneath higher land to the west

and south of the site. The nearest public sewers are located beneath Windsor Road to the east of the site and adjacent to the southern edge of the A363 to the north of the site. In both instances, the site is located at or close to the head of the system. As such, there is limited potential for surcharge of the system to occur. Moreover, in both locations the sewer networks are located beneath ground which is at a lower elevation than the site. Therefore, even if the sewers were to surcharge, flood waters are unlikely to propagate onto the site.

As such, the risk of flooding from sewers is considered to be very low.

Other Artificial Sources

There are no sewage works or wet process industrial works in the vicinity of the site which could be a potential source of flooding.

3.6 Flood Risk Mitigation

It is noted that there is a residual risk of flooding at the site from surface water runoff as a result of the failure of the existing onsite private drainage network. To mitigate residual surface water flood risk, the following mitigation measures are recommended:

- Earthworks at the site to support the proposed development should remove any minor depressions at the site, which in turn will prevent rainwater from collecting at these locations and causing surface water ponding.
- The proposed development should be served by a sustainable surface water drainage system, as outlined in Section 4.0, which will manage surface water runoff from impermeable areas of the site.
- External levels of the site should be designed such that overland flows are directed away from buildings and towards area of soft landscaping.
- In areas where there is an indicated increased risk of surface water flooding, finished floor levels should be lifted by a minimum of 150 mm to prevent internal flooding. External levels should also be designed to avoid creating any depressions where water could accumulate.
- Site management should undertake routine inspection of the proposed onsite and existing downstream private drainage system to identify any issues which will need to be rectified. Remedial actions should be promptly taken to ensure the surface water drainage system continues to operate as designed.

4.0 Surface Water Drainage

This assessment draws upon national guidance including:

- NPPF.
- The SUDS Manual (Cirica C753).
- National Standards for Sustainable Drainage Systems (DEFRA, 2025).
- Building Regulations 2010 Part H3.

The key aim of this assessment is the capture and management of surface water within the site boundary, to reduce the risk of flooding to this development and those surrounding it.

Building Regulations 2010 Part H3 requires surface water runoff to discharge to one of the following, listed in order of hierarchy:

- Discharge to ground via infiltration
- Discharge to a watercourse or other surface water body
- Discharge to a sewer

4.1 Infiltration

British Geological Survey (BGS) mapping indicates that natural geology beneath the site comprises mudstone bedrock of the Oxford Clay Formation. There are no superficial deposits recorded at the site. The Cranfield University Soilscales viewer indicates that the natural soils beneath the site would have comprised slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils with impeded drainage.

A Geoenvironmental Investigation has been prepared for the site by Groundtech Consulting Limited and extracts are included in **Appendix C**. During the intrusive site works completed in February 2026, 12 boreholes were drilled across the site, along with six trial pits and four soil percolation test pits. Made Ground was recorded on the entire central and eastern zones of site, to a maximum depth of 1.40 m below ground level (m bgl). Grass over dark brown slightly sandy locally clayey topsoil with fine to medium sand surfaced the remainder of the site, existing from ground level to maximum depths of 0.20 m bgl. Superficial deposits were encountered during the site works and comprised clay from depths of between 0.15 m bgl and 0.25 m bgl to a maximum depth of 4.00 m bgl. Bedrock was encountered across most of the exploratory holes during the investigation. The strata comprised

mudstone, residually weathered, and recovered as stiff slightly sandy gravelly clay with occasional fossils. Groundwater was generally encountered within the majority of exploratory holes, between 0.35 m bgl and 5.00 m bgl, with a common trend of shallower groundwater being observed in the western area of the site underlying the soft landscaping.

With regards to the infiltration, the infiltration testing was carried out and the results ranged between 0 to 3.12×10^{-8} m/s. These are considered to be very poor and not suitable for soakaways due to the impermeable cohesive deposits present.

Based on the above soakaways will not provide a suitable drainage solution for surface water run-off at the site. Consequently, it will be necessary to consider alternative sustainable drainage systems.

Therefore, infiltration will not be promoted as the primary means of surface water disposal from site.

4.2 Watercourse

There are no watercourses in the vicinity of the site. This has been corroborated by the underground utilities and topographical surveys carried out by Murphy's Geospatial, which are located in **Appendices B and D** for reference.

Therefore, discharge to a watercourse cannot be promoted as a means of surface water disposal from site.

4.3 Sewer Infrastructure

A pre-development enquiry was submitted to Wessex Water to ascertain the location of the existing public sewers and the viability of a connection. The response clearly referenced the surface water disposal hierarchy as outlined in Building Regulations Part H.

Rainwater harvesting and greywater recycling have been reviewed as part of the site's water management strategy. However, these systems are not being promoted for the proposed care home development due to a combination of operational, health, and viability constraints.

Care homes accommodate a highly vulnerable population, often with compromised immune systems. The use of non-potable water systems introduces an increased risk profile in relation to water quality, cross-contamination, and the potential for pathogens (e.g. Legionella). Instead, the development will

prioritise water efficiency through low-consumption fixtures and fittings in accordance with Building Regulations Part G and relevant best practice guidance.

To mitigate the risk of flooding, the flow rates need to be restricted to an appropriate level and attenuation provided.

4.4 Greenfield Runoff

Using Causeway FLOW design software, the greenfield runoff rates for the site have been calculated using IH124 method, as shown in Table 5.1 below. The rates are based of the proposed impermeable area.

Table 5.1 – Greenfield Runoff Rates

Return Period (years)	Q (l/s)
1	4.6
QBar	4.9
30	8.9
100	10.9

The total site area is 7,029m² with an existing impermeable area is circa 5,051m². (circa 72% to the total site area). Evidence shows that the site is positively drained and therefore it can be classed as a brownfield site in terms of its runoff response.

Private drainage infrastructure on site currently drains to the Wessex Water sewers located to the north of the site along the verge of the A363 Bradley Road. To facilitate the development, there is a requirement to divert the surface water drains that cross the site so that they are not impacted by the works.

4.5 Brownfield Runoff

Using the Simplified Modified Rational Method to calculate the existing brownfield peak runoff flow rate (Q).

$$Q = 2.78 \times C \times A \times I$$

Where:

- Q : Peak runoff flow rate (l/s)
- C : Runoff coefficient (dimensionless, use 1)
- I : Rainfall intensity (50mm/hr)
- A : Area (0.5051ha)

$$Q = 2.78 \times 1 \times 0.5051 \times 50$$

$$Q = 70.21 \text{ l/s}$$

Wessex Water have stated a 30% reduction on brownfield rates as a minimum is what they expect (*if greenfield is not achievable*). A 30% reduction would be 49.1 l/s. We have reviewed the site, and we can achieve greater than this on the site. Therefore, it is proposed to restrict flows back to 66% of the existing rate for all storms up to and including the 1:100 year + 45% climate change event.

$$Q = 70.21 \times 0.34$$

$$Q = 24.0 \text{ l/s}$$

It is therefore proposed to restrict surface water from the development to a runoff rate of 24 l/s, for all storms up to and including the 1 in 100-year + 45% Climate Change event.

Restricting to greenfield rates would require a significant increase in attenuation and the levels across the northern part of the site limit the achievable depth of attenuation features. To restrict flows further would necessitate deep underground storage or pumped systems, both of which introduce increased cost, maintenance burden, and long-term reliability concerns. This is not considered proportionate for the scale and nature of the development. There are also the tree root protection zones to factor in.

Notwithstanding the above, the proposed discharge rate delivers a significant betterment over the existing situation. This approach aligns with the principles of sustainable drainage promoted by CIRIA guidance (SuDS Manual C753), balancing flood risk reduction with site-specific constraints and viability considerations.

The proposed development will comprise a total impermeable area of approximately 3,113m², consisting of around 1,139m² of roof area and 1,974m² of hardstanding. This represents an approximate 38% reduction in impermeable coverage compared to the existing site.

The current site is entirely hardstanding, whereas the proposed layout introduces a significant proportion of softer landscaping. In addition to reducing runoff volumes, this change will contribute to an improvement in the quality of surface water runoff.

Attenuation is required to manage surface water runoff rates and prevent flooding within the site. Storage will be provided via a below-ground attenuation tank located to the north of the site, where ground levels are at their lowest. The required attenuation volume is 105m³ to balance site flows.

Additional storage is provided within a tanked permeable sub-base beneath the car parking areas, which captures and temporarily stores runoff from the access road. This system reduces peak flow rates and provides an initial level of water quality treatment through filtration and sedimentation.

Runoff from the remaining section of the access road is routed through two small SuDS basins, which convey flows around the eastern part of the site before rejoining the below-ground drainage system. Silt protection measures and catchpit manholes are included within the design to help maintain system performance and ensure the long-term operational lifespan of the network.

The surface water drainage system for the entire network will be a gravity system and remain privately owned on site, the outfall from the proposed drainage is into existing private drainage on site and therefore no new connection into Wessex Water network is required. A copy of the public sewer records can be found in **Appendix F** for reference.

The site is set within densely populated trees with large root protection zones coupled with the end user requirements influence the available space for any additional above ground SUDS features.

The proposed drainage strategy layout has been developed and can be found in **Appendix G**.

Proposed surface water drainage calculations have been produced using Causeway FLOW design software and can be found in **Appendix H**.

Increased native planting and detailed landscaping plan will help improve the biodiversity of the site.

Petrol interceptors are not required for this development.

4.6 Water Quality

National Standards for SuDS – Standard 4: Water Quality

The National Standards for Sustainable Drainage Systems (SuDS) Standard 4 requires that a “water quality risk assessment” be undertaken that is appropriate for the pollution hazard and sensitivity of the receiving waters.

SuDS features, where required, should use a management train to reduce diffuse particulate and chemical pollutants.

For runoff from roads / trafficked surfaces, there is recognition that pollutants such as heavy metals, hydrocarbons, particles are key concerns.

Table 5.2 Simplified Water Quality Index Table

(Permeable Paving Treats Access Road Only; Roof Runoff Untreated)

Parameter	Roof Runoff Index*	Access Road Index (Untreated)	Access Road Index (After Permeable Paving Treatment and SUDS Basins)
Clarity / TSS	80 (Good)	35 (Poor)	75 (Good)
Total Nitrogen	75 (Good)	40 (Poor)	65 (Moderate-Good)
Total Phosphorus	80 (Good)	45 (Poor)	70 (Good)
Heavy Metals	85 (Good-Excellent)	30 (Very Poor)	70 (Good)
Pathogens / Bacteria	70 (Moderate-Good)	30 (Very Poor)	65 (Moderate-Good)

* Roof runoff remains untreated, so its index stays as per “roof condition” in table above.

The “Good / Poor” thresholds are mapped to what SuDS Standard 4 expects: untreated runoff from trafficked surfaces (like access roads) is likely to present high pollution hazard, so low indices prior to treatment. After treatment (permeable paving in this case), the aim is to bring pollutant levels to a “Good” or “Moderate-Good” status in water quality terms.

Lower values = worse quality, higher = better.

Index Scale:

- **90–100:** Excellent
- **70–89:** Good
- **50–69:** Moderate
- **30–49:** Poor
- **<30:** Very Poor

5.0 Foul Water Drainage

A pre-development enquiry was submitted to Wessex Water to ascertain the location of the existing public sewers and the viability of a connection. A connection into existing manhole 9804 has been identified as a suitable point to connect the proposed foul.

It is proposed that a new gravity-fed private foul water drainage network is installed for the development which will outfall into Wessex Water foul system at manhole 9804 as identified above.

A new direct connection to the sewer will have to be formed under a Section 106 agreement with Wessex Water.

The proposed foul drainage layout can be seen on the proposed drainage strategy layout in **Appendix G**.

6.0 Residual Risks and Maintenance

The investigations carried out as part of this flood risk assessment and flood risk management measures proposed have demonstrated that the proposed development will be safe, without increasing flood risk elsewhere.

The useful life and effective operation of any drainage/SUDS feature is related to the frequency of maintenance and the risk of sediment being introduced into the system.

Maintenance will usually be carried out manually, although a suction tanker can be used for sediment/debris removal for large systems. If maintenance is not undertaken for long periods, deposits can become hard-packed and require considerable effort to remove.

Effective monitoring will give information on changes in the drainage/SUDS feature and provide a warning of potential failure in the long term.

SUDS basins should be regularly maintained by cutting of grass, removed of litter and silt build up, especially around inlets and outlets.

Roads and/or parking areas draining to ground should be regularly swept to prevent silt being washed off the surface. This will minimize the need for maintenance.

7.0 Conclusions & Recommendations

Flood Risk

The site is indicated to be located on land within Flood Zone 1 and is therefore, not at risk of flooding from rivers or the Sea. The site is also assessed to be at low risk of flooding from all other sources. There is a residual risk of surface water flooding should the onsite surface water drainage system become blocked or overwhelmed by rainfall which exceeds its design capacity. In these instances, surface water flood depths are predicted to be shallow. Nonetheless, flood risk mitigation measures have been recommended to ensure that the proposed development is safe from flooding for its lifetime and does not increase flood risk elsewhere.

Surface Water Drainage

The surface water drainage strategy has been developed in accordance with national guidance, including the NPPF, CIRIA SuDS Manual (C753), DEFRA SuDS Standards (2025), and Building Regulations Part H3. The primary objective is to manage surface water within the site boundary, reducing flood risk to the development and surrounding area.

Infiltration has been ruled out as a viable drainage option due to underlying geology comprising Oxford Clay Formation mudstone, low-permeability soils, shallow groundwater, and the presence of made ground and clay strata confirmed by site investigations. No watercourses are present in the vicinity of the site, as confirmed by survey data, therefore discharge to a watercourse is not feasible.

Discharge to the public sewer has been assessed through a pre-development enquiry with Wessex Water, and while connection hierarchy requirements are acknowledged, the strategy instead focuses on controlled on-site attenuation and discharge to existing private drainage infrastructure.

The site is classified as brownfield due to its high existing impermeable coverage (~72%) and positive drainage characteristics. Existing peak runoff has been calculated at 70.21 l/s, with a proposed controlled discharge rate of 24 l/s (representing a 66% reduction), which exceeds Wessex Water's minimum 30% reduction requirement. This restriction applies up to the 1 in 100-year + 45% climate change event.

Surface water attenuation will be provided through a combination of a 105m³ below-ground storage tank, permeable paving sub-base storage, and two SuDS basins that provide flow routing and water

quality treatment. The system is designed as a gravity-fed private network, discharging into existing on-site drainage, with no new connection required to the public sewer network.

The proposed development reduces impermeable area from the existing site condition, introduces increased soft landscaping, and improves runoff quality and biodiversity. Design constraints, including tree root protection zones and level restrictions, have influenced the SuDS layout, limiting the feasibility of larger above-ground features. Petrol interceptors are not required for the development.

Foul Water Drainage

A pre-development enquiry was undertaken with Wessex Water to confirm the location of existing public sewers and assess connection feasibility. This identified existing manhole 9804 as a suitable discharge point for the proposed foul drainage.

The development will be served by a new gravity-fed private foul water drainage network, discharging to the public sewer at manhole 9804. A new direct connection will be required, to be formalised through a Section 106 agreement with Wessex Water.

Recommendations

The following recommendations have been made for the proposed development:

- Earthworks at the site to support the proposed development should remove any minor depressions at the site, which in turn will prevent rainwater from collecting at these locations and causing surface water ponding.
- The proposed development should be served by a sustainable surface water drainage system, as outlined in Section 4.0, which will manage surface water runoff from impermeable areas of the site.
- External levels of the site should be designed such that overland flows are directed away from buildings and towards area of soft landscaping.
- In areas where there is an indicated increased risk of surface water flooding, finished floor levels should be lifted by a minimum of 150 mm to prevent internal flooding. External levels should also be designed to avoid creating any depressions where water could accumulate.
- Site management should undertake routine inspection of the proposed onsite and existing downstream private drainage system to identify any issues which will need to be rectified. Remedial actions should be promptly taken to ensure the surface water drainage system continues to operate as designed.

8.0 Appendices

Appendix A – Feasibility Layout Plan

Appendix B – Topographical Survey

Appendix C – Groundtech Consulting Ground Investigation extracts

Appendix D – Under Ground Utility and CCTV Survey

Appendix E – Wiltshire Council Level 1 SFRA Groundwater Emergence Map Extract

Appendix F – Wessex Water Pre-Development Enquiry Response and Sewer Record Plan

Appendix G – Drainage Strategy

Appendix H – Surface Water Drainage Calculations

Appendix A

Feasibility Layout Plan



BOUNDARY LINES

PROPOSED DEVELOPMENT AREA

SURFACE TYPE

TARMAC ENTRANCE ROAD & CAR PARK

TARMAC FOOTPATH

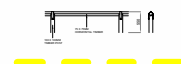
BLOCK PAVED ENTRANCE

RESIN PAVING

BOUNDARY TREATMENTS TBC



1800H RAILINGS



550H TIMBER KNEE RAIL

*All proposed levels shown are indicative and subject to variation of up to $\pm 500\text{mm}$ during detailed design and construction.
*All landscaping shown on this drawing is indicative only. For accurate and up-to-date landscaping design, refer to the most recent revision of the approved landscaping scheme or drawings prepared by the appointed landscape architect.

REVISIONS

LNT Construction

Unit 2, Helios 47, Isabella Road, Garforth, Leeds, LS25 2DY
Tel: 0113 385 3850

PROJECT

LAND OFF TOWCESTER ROAD
TROWBRIDGE
BA14 0FY

TITLE

WIP SITE PLAN

SCALE

As indicated @ A2

DATE

12/05/2026 08:34:15

DRAWING NUMBER

BA14 0FY - WIP-01

DRAWN

AOA

REVIEWED

L-JL

STATUS

FOR INFORMATION ONLY

REVISION

WIP SITE PLAN

1 : 500

Appendix B

Topographical Survey

Quickdraw Surveys Ltd, 58 Mavis Drive
Coppull, Lancashire, PR7 5AF
Telephone: 01257 795111

E-mail: admin@QuickdrawSurveys.co.uk
Web Site: www.QuickdrawSurveys.co.uk

Notes:

- The survey has been related to the Ordnance Survey National Grid and level datum using Leica GPS SmartNet data.
- The extent of tree canopies and tree bole sizes are estimated.
- Only features that are accessible/visible at the time of survey can be detailed.
- There are no guarantees offered on the drainage information supplied.
- Before commencing works please check important dimensions on-site.
- Should there be any discrepancies, inconsistencies, omissions or queries please contact Quickdraw Surveys Ltd as soon as possible for a resolution.

Abbreviations:

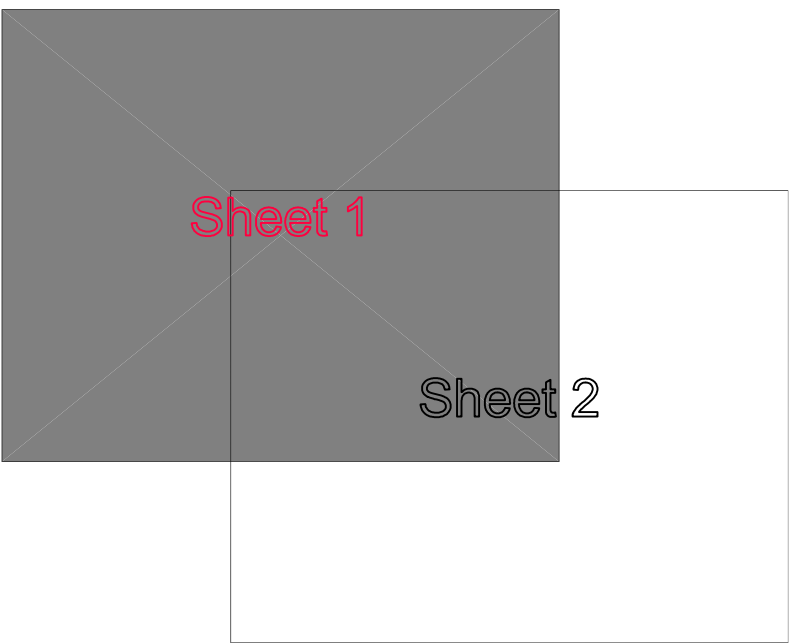
Topographical Surveys

BT	British Telecom Cover	FPR	Post & Rail	RS	Road Sign
Bin	Litter Bin	FPW	Post & Wire	RWP	Rain water pipe
Bin Stop		FSF	Safety Barrier	SV	Stop Valve
BT	British Telecom Cover	FWM	Wire Mesh	Stoy	Cable Stay
CPS	Conc Paving Slabs	FT	Floodlight	TB	Telephone Box
CTV	Cable Television Cover	FP	Flagpole	TL	Traffic Light
Elec	Electric Cover	G	Gully	TP	Telegraph Pole
EP	Electric Pole	GV	Gas Valve	VP	Vent Pipe
ER	Earthing Rod	Hyd	Hydrant	WM	Water Meter
Fenc	Mixed Fencing	IC	Inspection Cover	WO	Water Outlet
FBW	Barbed Wire	JB	Junction box	UTL	Unable to Lift
FCB	Close Board	KO	Kerb Outlet		
FCI	Corrugated Iron	LB	Ladder Box		
FCL	Chain Link	LP	Lamp Post		
FOP	Conc Panel	Mkr	Utility marker		
FOM	Displaced Fence	PM	Parking Meter		
FR	Iron Railings	P	Post		
FOB	Open Board	RE	Rodding Eye		
FPD	Post & Chain	RNP	Road Name Plate		
ALev	Arch Level	ILev	Invert Level	ThLev	Threshold Level
BLev	Bed Level	PLev	Pavement Level	Top	Top of Fence Level
CLev	Cover Level	RLev	Ridge Level	ToW	Top of Wall Level
ELev	Eaves Level	SLev	Roof Level	WL	Water Level

Station Co-ordinates:

Station	Easting	Northing	Level
STN1	385963.757	152878.958	43.754
STN2	385965.995	152865.355	42.916
STN3	385986.785	152827.836	44.549
STN4	385953.315	152793.578	44.546
STN5	385997.402	152684.561	46.012
STN6	386137.747	152561.858	46.012
STN7	386088.664	152638.273	45.554

Sheet Layout: Sheet 1 of 2



A0 Plot @ 1:250

Client LNT Construction Ltd.
Date February 2026
Project Topographical Survey
Land off Towcester Road,
Trowbridge, BA14 0FY.

Scale 1:250
Drawing Number QDS/ 350/1589/TOP
Revision 0

Quickdraw Surveys Ltd, 58 Mavis Drive
Coppull, Lancashire, PR7 5AF
Telephone: 01257 795111

E-mail: admin@QuickdrawSurveys.co.uk
Web Site: www.QuickdrawSurveys.co.uk

Notes:

The survey has been related to the Ordnance Survey National Grid and level datum using Leica GPS SmartNet data.
The extent of tree canopies and tree bole sizes are estimated.
Only features that are accessible/visible at the time of survey can be detailed.
There are no guarantees offered on the drainage information supplied.
Before commencing works please check important dimensions on-site.
Should there be any discrepancies, inconsistencies, omissions or queries please contact Quickdraw Surveys Ltd as soon as possible for a resolution.

Abbreviations:

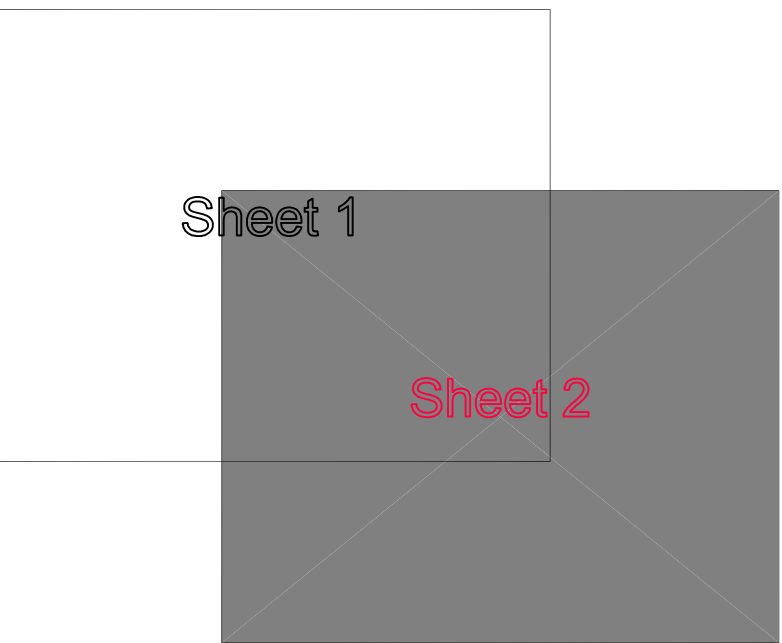
Topographical Surveys

BT	British Telecom Cover	FPR	Post & Rail	RS	Road Sign
Bin	Litter Bin	FPW	Post & Wire	RWP	Rain water pipe
BS	Bus Stop	FSF	Safety Barrier	SV	Stop Valve
BT	British Telecom Cover	FWM	Wire Mesh	Stoy	Cable Stay
CPS	Conc Paving Slabs	FT	Floodlight	TB	Telephone Box
CTV	Cable Television Cover	FP	Flagpole	TL	Traffic Light
Elec	Electric Cover	G	Gully	TP	Telegraph Pole
EP	Electric Pole	GV	Gas Valve	VP	Vent Pipe
ER	Earthing Rod	Hyd	Hydrant	WM	Water Meter
FBR	Barbed Wire	IC	Inspection Cover	WO	Water Outlet
FCB	Close Board	JB	Junction box	UTL	Unable to Lift
FCI	Corrugated Iron	KO	Kerb Outlet		
FCL	Chain Link	LB	Ladder Box		
FCP	Conc Panel	LP	Lamp Post		
FDM	Displaced Fence	Mkr	Utility marker		
FR	Iron Railings	PM	Parking Meter		
FOB	Open Board	P	Post		
FPD	Post & Chain	RE	Rodding Eye		
		RNP	Road Name Plate		
ALev	Arch Level	ILev	Invert Level	ThLev	Threshold Level
BLLev	Bed Level	PLLev	Pipefall Level	Top	Top of Fence Level
CLLev	Cover Level	RLLev	Ridge Level	ToW	Top of Wall Level
ELLev	Eaves Level	SLev	Soft Level	WLLev	Water Level

Station Co-ordinates:

Station	Easting	Northing	Level
STN1	385963.751	155878.955	43.754
STN2	385965.095	155866.355	43.916
STN3	385986.785	155827.836	44.549
STN4	385953.315	155793.578	44.546
STN5	385997.405	155684.561	46.012
STN6	386137.747	155641.858	46.012
STN7	386088.664	155638.273	45.554

Sheet Layout: Sheet 2 of 2

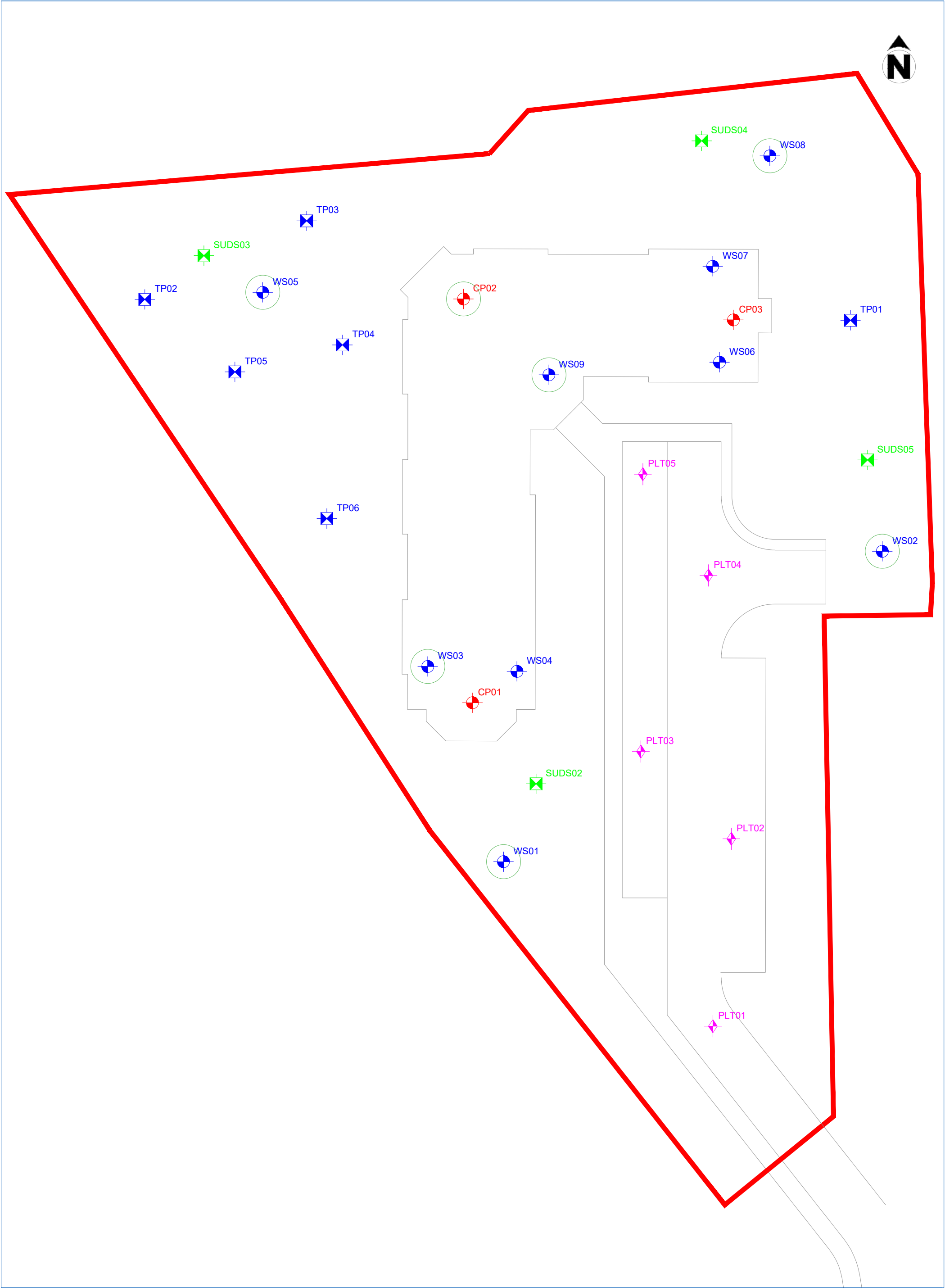


A0 Plot @ 1:250

Client	LNT Construction Ltd.
Date	February 2026
Project	Topographical Survey Land off Towcester Road, Trowbridge, BA14 0FY.
Scale	1:250
Drawing Number	QDS/ 350/1589/TOP
Revision	0

Appendix C

Groundtech Consulting Ground Investigation extracts



GROUNDTECH CONSULTING 	CLIENT	DATE				Status		Notes  Location of Cable Percussive Borehole  Location of Windowless Sample Borehole  Location of Soil Percolation Test  Location of Plate Load Test  Location of Trial Pit  Install 
	LNT CARE DEVELOPMENTS	FEBRUARY 2026				Preliminary		
	PROJECT TITLE	SCALE				Draft		
	TOWCESTER ROAD, TROWBRIDGE	NTS				Issued		
	PLAN TITLE	PLAN NUMBER				For Comment		
	EXPLORATORY HOLE LOCATION PLAN	GRO-26036-P04	Rev.	Details	Date	Approved		

Borehole Log

Borehole No.

WS01

Sheet 1 of 2

Project Name: TOWCESTER ROAD,
TROWBRIDGEProject No.
GRO-26036

Co-ords: -

Hole Type
WS

Location: TROWBRIDGE

Level:

Scale
1:25

Client: LNT CARE DEVELOPMENTS

Dates: 19/02/2026 - 19/02/2026

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10	ES		0.20			Grass over brown slightly clayey slightly sandy TOPSOIL. Sand is fine to medium.	
		0.50	ES					Soft light brown orange sandy CLAY. Sand is fine to coarse. <i>Becoming firm at 0.5m begl.</i>	
		1.20 1.20	D	N=3 (0,0/0,1,1,1)	1.20			Firm brown mottled orange slightly sandy CLAY. Sand is fine to medium.	1
		2.00 2.20	D					Dark brown grey thinly laminated MUDSTONE residually weathered recovered as stiff slightly sandy gravelly clay with occasional fossils. Gravel is angular to subangular fine to coarse. (OXFORD CLAY FORMATION). <i>Becoming clayey between 2.50m and 2.80m begl.</i>	
		2.60	ES	N=28 (3,4/7,8,7,6)	2.00				2
		3.00 3.20	D						
		3.20	D	N=40 (7,8/6,9,11,14)					3
		5.00	D						
									4
									5

Continued on next sheet

Remarks

1. Location cleared of services by a handheld CAT scanner. 2. Hand dug inspection pit to 1.20m begl. 3. Groundwater encountered at 1.20m begl. 5. Borehole terminated at 5.00m begl due to SPT refusal. 5. Monitoring standpipe installed to 5.00m (1.00m plain, 4.00m slotted).



Borehole Log

Borehole No.

WS01

Sheet 2 of 2

Project Name: TOWCESTER ROAD,
TROWBRIDGEProject No.
GRO-26036

Co-ords: -

Hole Type
WS

Location: TROWBRIDGE

Level:

Scale
1:25

Client: LNT CARE DEVELOPMENTS

Dates: 19/02/2026 - 19/02/2026

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		5.00		N=50 (2,8/50 for 195mm)				End of borehole at 5.00 m	
									6
									7
									8
									9
									10

Remarks

1. Location cleared of services by a handheld CAT scanner. 2. Hand dug inspection pit to 1.20m begl. 3. Groundwater encountered at 1.20m begl. 5. Borehole terminated at 5.00m begl due to SPT refusal. 5. Monitoring standpipe installed to 5.00m (1.00m plain, 4.00m slotted).



Project Name: TOWCESTER ROAD,
TROWBRIDGEProject No.
GRO-26036

Co-ords: -

Hole Type
WS

Location: TROWBRIDGE

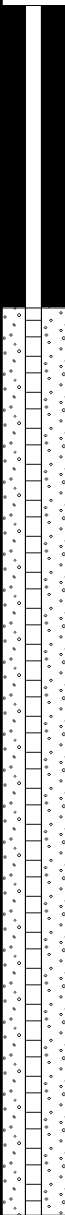
Level:

Scale
1:25

Client: LNT CARE DEVELOPMENTS

Dates: 20/02/2026 - 20/02/2026

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Black TARMAC.	
		0.25	ES		0.20			MADE GROUND: Light brown beige sandy GRAVEL. Gravel is angular to subangular fine to coarse of tarmac, brick and concrete.	
		0.60	ES		0.50			MADE GROUND: Firm light brown orange slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to medium of brick and concrete.	
		1.00	ES		0.80			Firm light grey mottled orange slightly gravelly CLAY. Gravel is angular to subangular fine to medium of limestone.	1
		1.20 1.20	D	N=2 (0,0/0,0,1,1)	1.20			Firm light brown grey CLAY.	
								<u>Becoming stiff at 1.50m begl.</u>	
		2.00 2.00	D	N=23 (2,3/4,5,6,8)	2.00			Dark brown grey thinly laminated MUDSTONE residually weathered recovered as stiff slightly sandy gravelly clay with occasional fossils. Gravel is angular to subangular fine to coarse. (OXFORD CLAY FORMATION).	2
		3.00 3.00	D	N=42 (2,4/9,7,10,16)					3
		4.00 4.00	D	N=50 (3,7/50 for 230mm)	4.00			End of borehole at 4.00 m	4
									5

Remarks

1. Location cleared of services by a handheld CAT scanner. 2. Hand dug inspection pit to 1.20m begl. 3. No groundwater encountered. 5. Borehole terminated at 4.00m begl due to SPT refusal. 5. Monitoring standpipe installed to 4.00m (1.00m plain, 3.00m slotted).



Project Name: TOWCESTER ROAD,
TROWBRIDGEProject No.
GRO-26036

Co-ords: -

Hole Type
WS

Location: TROWBRIDGE

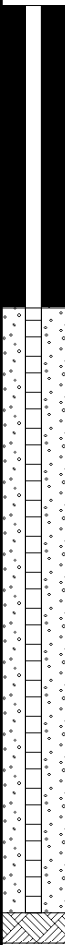
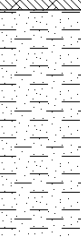
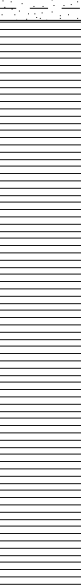
Level:

Scale
1:25

Client: LNT CARE DEVELOPMENTS

Dates: 19/02/2026 - 19/02/2026

Logged By
JS

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10	ES		0.20			Grass over brown slightly clayey slightly sandy TOPSOIL. Sand is fine to medium.	
								Soft light brown orange sandy CLAY. Sand is fine to coarse.	
		0.50	ES						
		1.00	ES	N=6 (0,0/1,1,2,2)	1.00			Firm brown mottled orange slightly sandy CLAY. Sand is fine to medium.	1
		1.20	D		1.20			Dark brown grey thinly laminated MUDSTONE residually weathered recovered as stiff slightly sandy gravelly clay with occasional fossils. Gravel is angular to subangular fine to coarse. (OXFORD CLAY FORMATION).	
		1.20							
		2.00	D						2
		2.10						Increasing content of shell fragments at 2.00m begl.	
		2.50	ES	N=26 (2,3/5,5,6,10)					
		3.00	D						
		3.10							
				N=50 (3,5/50 for 295mm)	3.10			End of borehole at 3.10 m	3
									4
									5

Remarks

1. Location cleared of services by a handheld CAT scanner. 2. Hand dug inspection pit to 1.20m begl. 3. No groundwater encountered. 5. Borehole terminated at 3.10m begl (due to SPT refusal. 5. Monitoring standpipe installed to 3.00m (1.00m plain, 2.00m slotted).



Borehole Log

Borehole No.

WS04

Sheet 1 of 1

Project Name: TOWCESTER ROAD,
TROWBRIDGEProject No.
GRO-26036

Co-ords: -

Hole Type
WS

Location: TROWBRIDGE

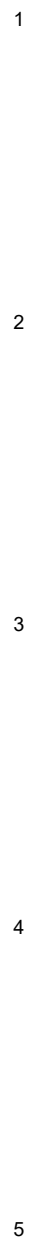
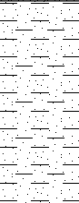
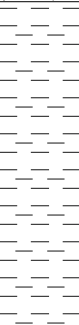
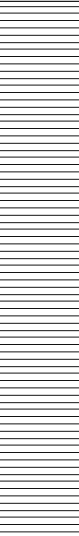
Level:

Scale
1:25

Client: LNT CARE DEVELOPMENTS

Dates: 19/02/2026 - 19/02/2026

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		0.10	ES		0.20			Grass over brown slightly sandy TOPSOIL. Sand is fine to coarse.			
										Soft light brown orange sandy CLAY. Sand is fine to coarse.	
		0.50	ES								
					0.90			Soft to firm light brown orange CLAY.			
		1.00	ES								
		1.20	D	N=4 (0,0/0,1,1,2)							
		1.20									
					2.00						Dark brown grey thinly laminated MUDSTONE residually weathered recovered as stiff sightly sandy gravelly clay with occasional fossils. Gravel is angular to subangular fine to coarse. (OXFORD CLAY FORMATION).
		2.00	D	N=19 (1,2/2,3,6,8)							
		2.00									
					2.50		ES				
					3.00		D	N=50 (5,9/50 for 190mm)			
			3.80								
						End of borehole at 3.80 m					

Remarks

1. Location cleared of services by a handheld CAT scanner. 2. Hand dug inspection pit to 1.20m begl. 3. Groundwater encountered at 0.60m begl. 5. Borehole terminated at 3.80m begl due to SPT refusal. 5. Borehole backfilled with arisings.



Borehole Log

Borehole No.

WS05

Sheet 1 of 2

Project Name: TOWCESTER ROAD,
TROWBRIDGEProject No.
GRO-26036

Co-ords: -

Hole Type
WS

Location: TROWBRIDGE

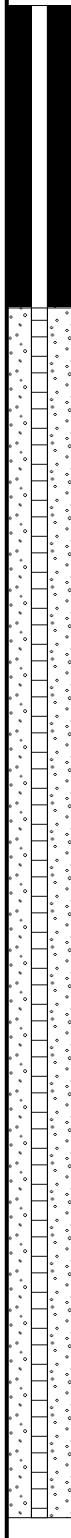
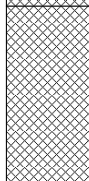
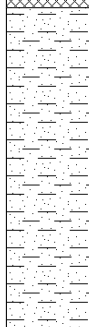
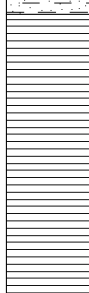
Level:

Scale
1:25

Client: LNT CARE DEVELOPMENTS

Dates: 19/02/2026 - 19/02/2026

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10	ES		0.20			MADE GROUND: Grass over dark brown slightly sandy TOPSOIL. Sand is fine to medium.	
					0.30			MADE GROUND: Black TARMAC.	
		0.40	ES					MADE GROUND: Light brown slightly clayey sandy GRAVEL. Gravel is angular to subangular fine to coarse of tarmac, brick and concrete with mesh netting fragments.	
					0.90			Firm light brown mottled grey slightly sandy CLAY. Sand is fine to coarse.	1
		1.20 1.20	D	N=4 (0,0/0,1,1,2)					
		2.00 2.00	D	N=19 (1,1/2,4,5,8)	2.00			Very weak dark grey residually weathered slightly clayey slightly sandy MUDSTONE with common shell fragments. (OXFORD CLAY FORMATION).	2
		3.00 3.00	D	N=25 (1,2/4,6,6,9)					3
		3.50	ES						
		4.00 4.00	D	N=24 (1,3/4,6,7,7)				Pocket of soft to firm CLAY between 3.60m and 4.60m begl.	4
		5.00	D		5.00			Continued on next sheet	5

Remarks

1. Location cleared of services by a handheld CAT scanner. 2. Hand dug inspection pit to 1.20m begl. 3. Groundwater encountered at 1.20m begl. 5. Borehole terminated at 5.00m begl due to SPT refusal. 5. Monitoring standpipe installed to 5.00m (1.00m plain, 4.00m slotted).



Borehole Log

Borehole No.

WS05

Sheet 2 of 2

Project Name: TOWCESTER ROAD,
TROWBRIDGEProject No.
GRO-26036

Co-ords: -

Hole Type
WS

Location: TROWBRIDGE

Level:

Scale
1:25

Client: LNT CARE DEVELOPMENTS

Dates: 19/02/2026 - 19/02/2026

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		5.00		N=24 (3,3/4,5,6,9)				End of borehole at 5.00 m	
									6
									7
									8
									9
									10

Remarks

1. Location cleared of services by a handheld CAT scanner. 2. Hand dug inspection pit to 1.20m begl. 3. Groundwater encountered at 1.20m begl. 5. Borehole terminated at 5.00m begl due to SPT refusal. 5. Monitoring standpipe installed to 5.00m (1.00m plain, 4.00m slotted).



Project Name: TOWCESTER ROAD,
TROWBRIDGEProject No.
GRO-26036

Co-ords: -

Hole Type
WS

Location: TROWBRIDGE

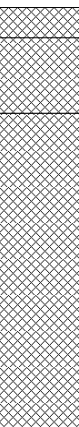
Level:

Scale
1:25

Client: LNT CARE DEVELOPMENTS

Dates: 20/02/2026 - 20/02/2026

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10			MADE GROUND: Black TARMAC.	1 -
		0.20	ES		0.35	MADE GROUND: Light brown beige sandy cobbly GRAVEL. Gravel is angular to subangular fine to coarse of tarmac, brick and concrete. Sand is fine to coarse.			
						MADE GROUND: Firm light grey orange slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to medium of brick and concrete. Sand is fine to medium.			
		1.00	ES						
		1.20	D	N=2 (0,0/0,0,1,1)	1.40		Firm orange brown slightly sandy gravelly CLAY. Gravel is angular to subangular fine to medium of limestone.	2 -	
		1.20	D				<u>Becoming laminated at 1.80m begl.</u>		
		1.50	ES						
		2.00	D	N=23 (1,3/5,5,6,7)					
		2.00	D						
		2.55		N=36 (2,3/9,10,9,8)	2.50		Dark brown grey thinly laminated MUDSTONE residually weathered recovered as stiff sightly sandy gravelly clay with occasional fossils. Gravel is angular to subangular fine to coarse. (OXFORD CLAY FORMATION).		
3.00	D		3.00		End of borehole at 3.00 m		3 -		
								4 -	
								5 -	

Remarks

1. Location cleared of services by a handheld CAT scanner. 2. Hand dug inspection pit to 1.20m begl. 3. Groundwater encountered at 2.40m begl. 5. Borehole terminated at 3.00m begl due to SPT refusal. 5. Borehole backfilled with arisings.



Borehole Log

Borehole No.

WS07

Sheet 1 of 1

Project Name: TOWCESTER ROAD,
TROWBRIDGEProject No.
GRO-26036

Co-ords: -

Hole Type
WS

Location: TROWBRIDGE

Level:

Scale
1:25

Client: LNT CARE DEVELOPMENTS

Dates: 20/02/2026 - 20/02/2026

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10	ES		0.09			MADE GROUND: Black TARMAC.	
					0.30			MADE GROUND: Light brown beige sandy cobbly GRAVEL. Gravel is angular to subangular fine to coarse of tarmac and concrete. Sand is fine to coarse.	
		0.50	ES					MADE GROUND: Firm light grey orange slightly sandy gravelly CLAY. Gravel is angular to subangular fine to medium of concrete and limestone. Sand is fine to coarse.	
		1.00	ES		0.90			Firm light brown mottled orange sandy CLAY. Sand is fine to coarse.	1
		1.20 1.20	D	N=2 (0,0/0,0,1,1)	1.40			Firm light brown CLAY.	
								<i>Becoming stiff and dark brown at 1.75m begl.</i>	
		2.00 2.00	D	N=16 (2,2/3,3,4,6)	2.10			Dark brown grey thinly laminated MUDSTONE residually weathered recovered as stiff slightly sandy gravelly clay with occasional fossils. Gravel is angular to subangular fine to coarse. (OXFORD CLAY FORMATION).	2
		3.00 3.00	D	N=29 (4,5/6,7,6,10)					3
		3.50	ES						
		4.00 4.00	D	N=50 (2,6/9,12,16,13)	4.00			End of borehole at 4.00 m	4
									5

Remarks

1. Location cleared of services by a handheld CAT scanner. 2. Hand dug inspection pit to 1.20m begl. 3. No groundwater encountered. 5. Borehole terminated at 4.00m begl due to SPT refusal. 5. Borehole backfilled with arisings.



Borehole Log

Borehole No.

WS08

Sheet 1 of 1

Project Name: TOWCESTER ROAD,
TROWBRIDGEProject No.
GRO-26036

Co-ords: -

Hole Type
WS

Location: TROWBRIDGE

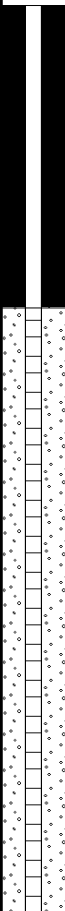
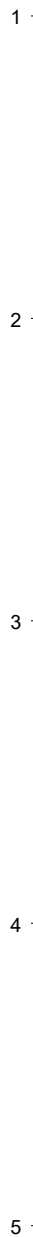
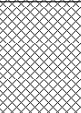
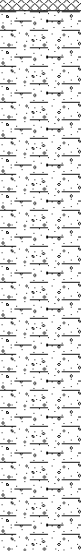
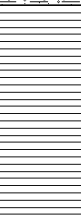
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Scale
1:25

Client: LNT CARE DEVELOPMENTS

Dates: 20/02/2026 - 20/02/2026

Logged By
JS

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10			MADE GROUND: Black TARMAC.	
		0.20	ES					MADE GROUND: Reddish grey slightly sandy GRAVEL. Gravel is angular to subangular fine to coarse of concrete, tarmac and limestone.	
					0.50				
		1.00	ES					Soft to firm grey mottled orange slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse of limestone and mudstone. Sand is fine to coarse.	
		1.20	D						
		1.20		N=2 (0,0/0,1,1,0)					
		2.00	D						
		2.00		N=11 (1,2/2,2,3,4)					
					2.30			Dark brown grey thinly laminated MUDSTONE residually weathered recovered as stiff sightly sandy gravelly clay with occasional fossils. Gravel is angular to subangular fine to coarse. (OXFORD CLAY FORMATION).	
		2.90	ES						
		3.00	D		3.00			End of borehole at 3.00 m	
		3.00		N=50 (2,4/10,9,14,17)					

Remarks

1. Location cleared of services by a handheld CAT scanner. 2. Hand dug inspection pit to 1.20m begl. 3. No groundwater encountered. 5. Borehole terminated at 3.00m begl due to SPT refusal. 5. Monitoring standpipe installed to 3.00m (1.00m plain, 2.00m slotted).



Project Name: TOWCESTER ROAD,
TROWBRIDGEProject No.
GRO-26036

Co-ords: -

Hole Type
WS

Location: TROWBRIDGE

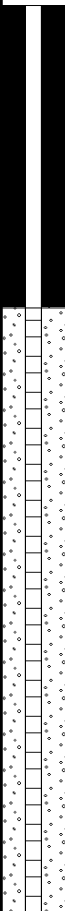
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Scale
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Client: LNT CARE DEVELOPMENTS

Dates: 20/02/2026 - 20/02/2026

Logged By
JS

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.15			MADE GROUND: Black TARMAC.	
		0.25	ES					MADE GROUND: Reddish grey slightly sandy GRAVEL. Gravel is angular to subangular fine to coarse of concrete and tarmac.	
		0.50	ES		0.50			Soft to firm grey mottled orange slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse of limestone and mudstone. Sand is fine to coarse.	1
		1.20 1.20	D	N=2 (0,0/1,1,0,0)					
		2.00 2.00	D	N=19 (1,3/2,5,6,6)	2.00			Dark brown grey thinly laminated MUDSTONE residually weathered recovered as stiff slightly sandy gravelly clay with occasional fossils. Gravel is angular to subangular fine to coarse. (OXFORD CLAY FORMATION).	2
		2.50	D						
		3.00 3.00	ES	N=50 (5,6/50 for 285mm)	3.00			End of borehole at 3.00 m	3
									4
									5

Remarks

1. Location cleared of services by a handheld CAT scanner. 2. Hand dug inspection pit to 1.20m begl. 3. No groundwater encountered. 5. Borehole terminated at 3.00m begl due to SPT refusal. 5. Monitoring standpipe installed to 3.00m (1.00m plain, 2.00m slotted).



Borehole Log

Borehole No.

CP01

Sheet 1 of 1

Project Name: TOWCESTER ROAD,
TROWBRIDGEProject No.
GRO-26036

Co-ords: -

Hole Type
CP

Location: TROWBRIDGE

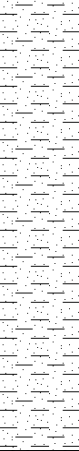
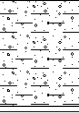
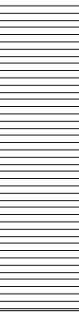
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Scale
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Client: LNT CARE DEVELOPMENTS

Dates: 18/02/2026 - 18/02/2026

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		0.15 0.20	ES D		0.25			Grass over brown slightly clayey sandy TOPSOIL. Sand is fine to coarse.	1		
								Stiff light brown orange slightly sandy fine to coarse CLAY.			
		0.80	D								
		1.20 - 1.65	U								
				1.70	D	N=19 (2,4/3,5,5,6)					
				2.00 2.00 - 2.45	D						
				3.00 - 3.45	U						
							3.30			Stiff light brown orange slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse of decayed organic matter.	
				3.50	D						
				4.00 4.00 - 4.45	D	N=31 (5,5/6,8,8,9)	4.00			Dark brown grey thinly laminated MUDSTONE residually weathered recovered as stiff sightly sandy gravelly clay with occasional fossils. Gravel is angular to subangular fine to coarse. (OXFORD CLAY FORMATION).	4
				5.00 - 5.45 5.00 - 5.50	D B						
											5
										6	
		6.50 6.50 - 6.95	D	N=41 (5,7/8,8,10,15)					7		
		8.00 8.00 - 8.45	D	N=41 (6,6/7,10,10,14)				At 8.00m begl becoming light grey.	8		
		9.50 9.50 - 10.00	D	N=31 (5,6/6,7,8,10)					9		
					10.00			End of borehole at 10.00 m	10		

Remarks

1. Location cleared of services by a handheld CAT scanner. 2. Hand dug inspection pit to 1.20m begl. 3. Groundwater encountered at 4.00m begl. 5. Borehole terminated at 10.00m begl. 5. Borehole backfilled with arisings.



GROUNDTECH CONSULTING					Borehole Log			Borehole No. CP02 Sheet 1 of 1	
Project Name: TOWCESTER ROAD, TROWBRIDGE			Project No. GRO-26036		Co-ords: -		Hole Type CP		
Location: TROWBRIDGE					Level:		Scale 1:50		
Client: LNT CARE DEVELOPMENTS					Dates: 18/02/2026 - 18/02/2026		Logged By CC		
Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.15			0.15		MADE GROUND: Black TARMAC.		
		0.40	D		0.60		MADE GROUND: Brown red angular to subangular fine to coarse cobbly GRAVEL of tarmac, brick and concrete.		
		1.00	D				Soft to firm brown slightly silty slightly gravelly CLAY. Gt gravel is angular to subangular fine to medium of chert and mudstone.		
		1.20 - 1.65	U						
		1.70	D				At 1.70m begl becoming dark brown.		
		2.00		N=15 (1,2/3,3,4,5)	2.00				
		2.00 - 2.45	D				Extremely weak dark grey black distinctly weathered MUDSTONE.		
		3.00 - 3.45	U				At 3.00m begl becoming firm.		
		3.50	D		3.50				
		4.00		N=17 (2,3/3,4,5,5)			Dark brown grey thinly laminated MUDSTONE residually weathered recovered as stiff sightly sandy gravelly clay with occasional fossils. Gravel is angular to subangular fine to coarse. (OXFORD CLAY FORMATION).		
	4.00 - 4.45	D							
	5.00 - 5.45	U							
	5.50	D							
	6.50		N=32 (3,5/7,8,8,9)						
	6.50 - 6.95	D							
	8.00 - 8.45	U							
	8.50	D							
	9.50		N=33 (5,5/6,8,8,11)						
	9.50 - 10.00	D							
				10.00			End of borehole at 10.00 m	10	

Remarks
1. Location cleared of services by a handheld CAT scanner. 2. Hand dug inspection pit to 1.20m begl. 3. Groundwater encountered at 5.00m begl. 5. Borehole terminated at 10.00m begl. 5. Monitoring standpipe installed to 2.00m (1.00m plain, 1.00m slotted).

Project Name: TOWCESTER ROAD,
TROWBRIDGEProject No.
GRO-26036

Co-ords: -

Hole Type
CP

Location: TROWBRIDGE

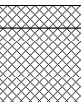
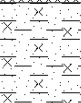
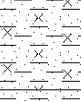
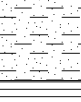
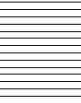
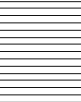
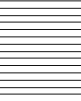
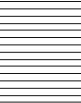
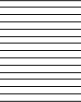
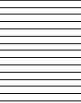
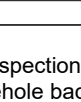
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Scale
1:50

Client: LNT CARE DEVELOPMENTS

Dates: 19/02/2026 - 19/02/2026

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.15			0.15			MADE GROUND: Black TARMAC.	
		0.30	D					MADE GROUND: Brown red angular to subangular fine to coarse cobbly GRAVEL of tarmac, brick and concrete.	
		1.00 1.00 1.20	D ES		0.65			Firm brown slightly silty slightly sandy CLAY. Sand is fine to coarse.	1
		1.20 - 1.65	D	N=50 (16,5/1,22,23,4)					
		2.00 - 2.45	U		1.90			Firm dark grey brown slightly sandy fine to coarse CLAY.	2
		2.50	D		2.50			Dark brown grey thinly laminated MUDSTONE residually weathered recovered as stiff slightly sandy gravelly clay with occasional fossils. Gravel is angular to subangular fine to coarse. (OXFORD CLAY FORMATION). <i>Between 3.00m begl and 5.00m begl extremely weak.</i>	3
		3.00 3.00 - 3.45	D	N=16 (2,3/3,4,4,5)					
		4.00 - 4.45	U						4
		4.50	D						
		5.00 5.00 - 5.45	D	N=23 (4,5/5,5,6,7)					5
		6.50 - 6.95	U						6
		7.00	D						7
		8.00 8.00 - 8.45	D	N=32 (3,4/6,8,8,10)					8
		9.00	ES						9
		9.50 - 9.95	D						
		10.00	D		10.00			End of borehole at 10.00 m	10

Remarks

1. Location cleared of services by a handheld CAT scanner. 2. Hand dug inspection pit to 1.20m begl. 3. Groundwater encountered at 5.00m begl. 5. Borehole terminated at 10.00m begl. 5. Borehole backfilled with arisings.



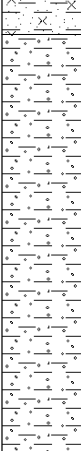
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Project Name: TOWCESTER ROAD, TROWBRIDGE				Project No. GRO-26036		Co-ords: - Level:		Date 19/02/2026	
Location: TROWBRIDGE				Dimensions (m):		1.5 		Scale 1:25	
Client: LNT CARE DEVELOPMENTS				Depth 1.45		0.3 		Logged JS	

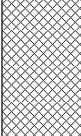
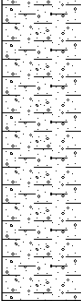
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.15			Grass over brown slightly sandy slightly clayey TOPSOIL. Sand is fine to medium.	1
			HVP=42			Soft to firm light brown slightly gravelly sandy CLAY. Gravel is angular to subangular fine to medium of mudstone. Sand is fine to coarse.		
			HVP=45					
			HVP=55	1.35				2
				1.45			Firm brown grey gravelly CLAY. Gravel is angular fine to medium of mudstone.	
							End of pit at 1.45 m	3
								4
								5

Remarks: 1. Location cleared of services using a handheld CAT scanner. 2. No groundwater encountered. 3. Pit sides stable. 4. Trial pit terminated at 1.45m begl. 5. Trial pit backfilled with arisings.

Stability: Stable



				Trial Pit Log			Trialpit No SUDS03 Sheet 1 of 1		
Project Name: TOWCESTER ROAD, TROWBRIDGE				Project No. GRO-26036		Co-ords: - Level:		Date 19/02/2026	
Location: TROWBRIDGE				Dimensions (m):		1.5 		Scale 1:25	
Client: LNT CARE DEVELOPMENTS				Depth 1.80		0.3 		Logged JS	
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
			HVP=40	0.15			Grass over brown slightly sandy slightly clayey TOPSOIL. Sand is fine to medium.		
				0.40			Firm brown slightly silty sandy CLAY. Sand is fine to coarse.		
				1.80			Firm brown grey gravelly CLAY. Gravel is angular to subangular fine to medium of mudstone.		
							End of pit at 1.80 m		
1 2 3 4 5									
Remarks: 1. Location cleared of services using a handheld CAT scanner. 2. No groundwater encountered. 3. Pit sides stable. 4. Trial pit terminated at 1.80m begl. 5. Trial pit backfilled with arisings.									
Stability: Stable									

				Trial Pit Log			Trialpit No SUDS04 Sheet 1 of 1			
Project Name: TOWCESTER ROAD, TROWBRIDGE				Project No. GRO-26036		Co-ords: - Level:		Date 19/02/2026		
Location: TROWBRIDGE				Dimensions (m):		1.5 		Scale 1:25		
Client: LNT CARE DEVELOPMENTS				Depth 1.60		0.3 		Logged JS		
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
	Depth	Type	Results							
				0.10		  	MADE GROUND: Black TARMAC.			1
				0.60			MADE GROUND: Reddish grey cobbly GRAVEL. Gravel is angular to subangular fine to coarse of tarmac, concrete and limestone.			
				1.60			Firm greenish grey mottled orange slightly gravelly sandy CLAY. Gravel is angular to subrounded fine to coarse of limestone. Sand is fine to coarse.			
							End of pit at 1.60 m			2
										3
										4
										5
Remarks: 1. Location cleared of services using a handheld CAT scanner. 2. No groundwater encountered. 3. Pit sides stable. 4. Trial pit terminated at 1.60m begl. 5. Trial pit backfilled with arisings.										
Stability: Stable										



				Trial Pit Log			Trialpit No SUDS05 Sheet 1 of 1		
Project Name: TOWCESTER ROAD, TROWBRIDGE				Project No. GRO-26036		Co-ords: - Level:		Date 20/02/2026	
Location: TROWBRIDGE				Dimensions (m):		1.5 		Scale 1:25	
Client: LNT CARE DEVELOPMENTS				Depth 1.80		0.3 		Logged JS	

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.10		 	MADE GROUND: Black TARMAC.	
				0.70			MADE GROUND: Reddish grey cobbly GRAVEL. Gravel is angular to subangular fine to coarse of tarmac, concrete and limestone.	
				1.70		 	Firm greenish grey mottled orange slightly gravelly slightly sandy CLAY. Gravel is angular to subrounded fine to coarse of limestone. Sand is fine to coarse.	1
				1.80			Dark brown grey thinly laminated MUDSTONE residually weathered recovered as stiff slightly sandy gravelly clay with occasional fossils. Gravel is angular to subangular fine to medium.	2
							End of pit at 1.80 m	
								3
								4
								5

Remarks: 1. Location cleared of services using a handheld CAT scanner. 2. No groundwater encountered. 3. Pit sides stable. 4. Trial pit terminated at 1.80m begl. 5. Trial pit backfilled with arisings.

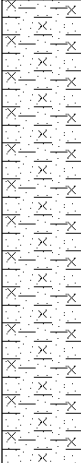
Stability: Stable



				Trial Pit Log			Trialpit No TP01 Sheet 1 of 1		
Project Name: TOWCESTER ROAD, TROWBRIDGE				Project No. GRO-26036		Co-ords: - Level:		Date 18/02/2026	
Location: TROWBRIDGE				Dimensions (m): Depth 1.40		1.8 		Scale 1:25 Logged JS	
Client: LNT CARE DEVELOPMENTS									
Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
				0.10			MADE GROUND: Black TARMAC.		
	0.20	ES					MADE GROUND: Reddish grey cobbly GRAVEL. Gravel is angular to subangular fine to coarse of brick, tarmac, concrete and limestone.		
	0.50	ES		0.40			MADE GROUND: Reddish brown grey GRAVEL. Gravel is angular to subrounded fine to coarse of concrete and limestone.		
	0.70	ES		0.60			Firm greenish grey mottled orange sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse of limestone.		
				1.40			Becoming stiff at 1.20m begl. ----- End of pit at 1.40 m		
1 2 3 4 5									
Remarks: 1. Location cleared of services using a handheld CAT scanner. 2. No groundwater encountered. 3. Pit sides collapsing from 0.60m begl. 4. Trial pit terminated at 1.80m begl due to an obstruction. 5. Trial pit backfilled with arisings.									
Stability: Unstable									



				Trial Pit Log				Trialpit No TP02 Sheet 1 of 1	
Project Name: TOWCESTER ROAD, TROWBRIDGE				Project No. GRO-26036		Co-ords: - Level:		Date 19/02/2026	
Location: TROWBRIDGE						Dimensions (m):		Scale 1:25	
Client: LNT CARE DEVELOPMENTS						Depth 1.95		Logged CC	

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.10	ES	HVP=45	0.15		 Grass over dark brown slightly sandy TOPSOIL. Sand is fine to medium.	 Firm dark brown very sandy slightly silty CLAY. Sand is fine to coarse. <i>Becoming light brown at 0.25m begl.</i>	1	
	0.50	ES							
	1.80	ES			1.70			 Dark brown grey thinly laminated MUDSTONE residually weathered recovered as stiff sightly sandy gravelly clay with occasional fossils. Gravel is angular to subangular fine to coarse. (OXFORD CLAY FORMATION). <i>End of pit at 1.95 m</i>	2
				1.95				3	
								4	
								5	

Remarks: 1. Location cleared of services using a handheld CAT scanner. 2. No groundwater encountered. 3. Pit sides collapsing from 1.70m begl. 4. Trial pit terminated at 1.80m begl. 5. Trial pit backfilled with arisings.		
Stability: Unstable		

Date
19/02/2026

1.8

Scale
1:25

Depth
0.50

03

Logged
JS

[illegible]

Remarks:	1. Location cleared of services using a handheld CAT scanner. 2. Groundwater encountered at 0.35m begl. 3. Pit sides stable. 4. Trial pit terminated at 0.50m begl due to an obstruction. 5. Trial pit backfilled with arisings.
----------	--

Stability: Stable



				Trial Pit Log				Trialpit No TP04 Sheet 1 of 1	
Project Name: TOWCESTER ROAD, TROWBRIDGE				Project No. GRO-26036		Co-ords: - Level:		Date 19/02/2026	
Location: TROWBRIDGE						Dimensions (m):		Scale 1:25	
Client: LNT CARE DEVELOPMENTS						Depth 1.75		Logged CC	

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10	ES	HVP=58	0.15			MADE GROUND: Grass over dark brown slightly sandy TOPSOIL. Sand is fine to medium.	1
	0.20	ES		0.40			MADE GROUND: Dark brown gravelly sandy CLAY. Gravel is angular to subangular fine to coarse of concrete, brick and tarmac. Sand is fine to coarse.	
				0.60			MADE GROUND: Grey CONCRETE slab with low cobble content of angular to subangular brick.	
	0.80	ES					Stiff high strength light brown grey slightly sandy CLAY. Sand is fine to coarse.	
				1.75			Becoming dark brown grey at 1.60m begl.	
							End of pit at 1.75 m	2
								3
								4
								5

Remarks: 1. Location cleared of services using a handheld CAT scanner. 2. Groundwater encountered at 0.65m begl. 3. Pit sides collapsing from 1.50m begl. 4. Trial pit terminated at 1.75m begl. 5. Trial pit backfilled with arisings.		
Stability: Unstable		

				Trial Pit Log				Trialpit No TP05 Sheet 1 of 1	
Project Name: TOWCESTER ROAD, TROWBRIDGE				Project No. GRO-26036		Co-ords: - Level:		Date 20/02/2026	
Location: TROWBRIDGE				Dimensions (m):		1.8 		Scale 1:25	
Client: LNT CARE DEVELOPMENTS				Depth 2.50		0.3 		Logged JS	

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10	ES		0.15			Grass over dark brown slightly sandy slightly clayey TOPSOIL. Sand is fine to medium.	
	0.30	ES		0.60			Soft light brown sandy CLAY. Sand is fine to coarse.	
	2.00	ES	HVP=65	2.30		Firm medium strength brown sandy CLAY. Sand is fine to medium.	1	
	2.40	ES		2.50		Extremely weak dark grey thinly laminated slightly clayey MUDSTONE distinctly weathered with moderate common shell fragments. (OXFORD CLAY FORMATION).	2	
						End of pit at 2.50 m	3	
							4	
							5	

Remarks: 1. Location cleared of services using a handheld CAT scanner. 2. Groundwater encountered at 1.80m begl. 3. Pit sides stable. 4. Trial pit terminated at 2.50m begl due to bedrock obstruction. 5. Trial pit backfilled with arisings.

Stability: Stable



				Trial Pit Log				Trialpit No TP06 Sheet 1 of 1	
Project Name: TOWCESTER ROAD, TROWBRIDGE				Project No. GRO-26036		Co-ords: - Level:		Date 20/02/2026	
Location: TROWBRIDGE						Dimensions (m):		Scale 1:25	
Client: LNT CARE DEVELOPMENTS						Depth 1.90		Logged JS	

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10	ES		0.15			Grass over dark brown slightly sandy slightly clayey TOPSOIL with high rootlet content. Sand is fine to medium. Soft light brown sandy CLAY. Sand is fine to coarse.	
				0.50			Firm medium strength brown sandy CLAY. Sand is fine to medium.	
	0.90	ES	HVP=50				Dark brown grey thinly laminated MUDSTONE residually weathered recovered as stiff sightly sandy gravelly clay with occasional fossils. Gravel is angular to subangular fine to coarse. (OXFORD CLAY FORMATION).	1
	1.60	ES	HVP=60	1.50				
	1.85	ES	HVP=100	1.90				2
End of pit at 1.90 m								5

Remarks: 1. Location cleared of services using a handheld CAT scanner. 2. Groundwater encountered at 1.20m begl. 3. Pit sides stable. 4. Trial pit terminated at 1.90m begl. 5. Trial pit backfilled with arisings.		
Stability: Stable		

TOWCESTER ROAD, TROWBRIDGE
GRO-26036
LNT CARE DEVELOPMENTS

SOIL PERCOLATION TEST



Sheet 1 of 2

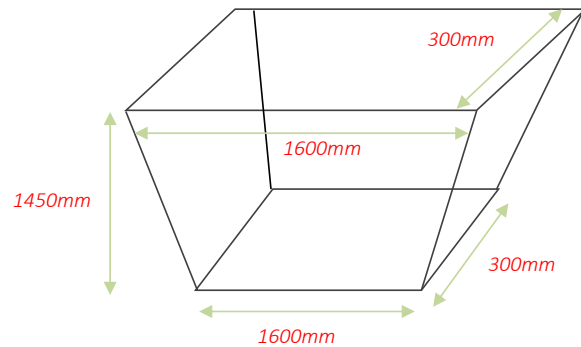
Date of Test: 18/02/2026

POSITION: SuDS2
TEST 1

Weather: Cloudy, Dry

Engineer: Joel Swift
Checked: Luke Harrison

Trial Pit Measurements



Pit Depth (mm):	1450
Pit Details:	Open with no stone filling
Groundwater Level:	NGW

Test Data

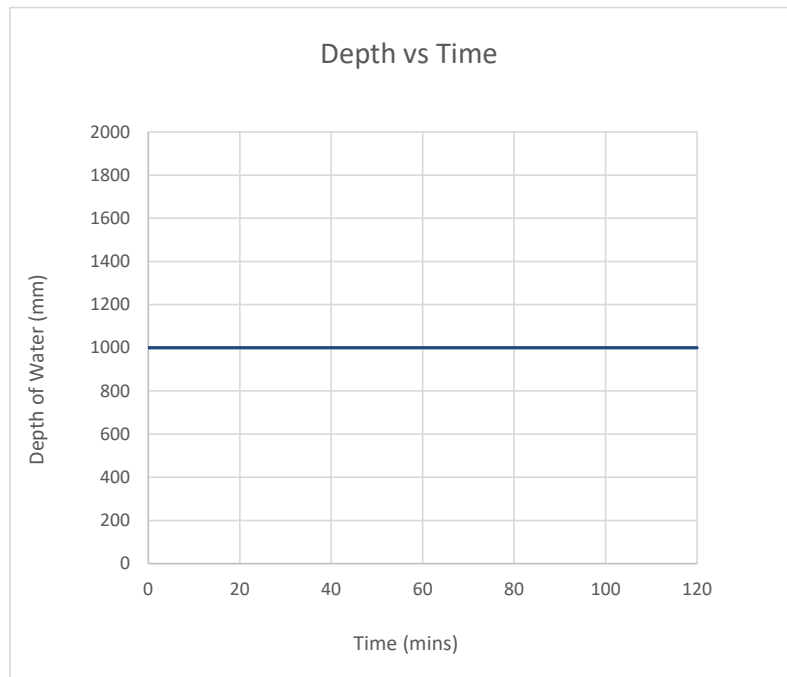
Time Elapsed (mins)	Depth to Water Level (mm)
0	450
1	450
2	450
3	450
5	450
6	450
10	450
15	450
20	450
30	450
40	450
50	450
60	450
75	450
90	450
105	450
120	450

SOIL PERCOLATION TEST



Sheet 2 of 2

POSITION: SuDS2
TEST 1



Volume of Pit (m ³)	0.696
Void Ratio of Infill	1
Volume of Infill (m ³)	N/A
Volume of Water in Pit (m ³)	0.48

Compliance Check:

Water Level at 75% effective depth (mm)	750
---	-----

Water Level at 25% effective depth (mm)	250
---	-----

Test not BRE 365 compliant with BRE 365 - insufficient time to drain past 25% effective depth

Soil Infiltration Rate Calculation

Water Level 1	1000
Water Level 2	1000
Time to Drain from Level 1 to Level 2 (mins)	120
Volume of water discharged (m ³)	0

Discharge Area (m ²)	4.28
----------------------------------	------

Soil Infiltration Rate (m/min)	0
--------------------------------	---

Soil Infiltration Rate (m/sec)	0.00E+00
--------------------------------	----------

TOWCESTER ROAD, TROWBRIDGE
GRO-26036
LNT CARE DEVELOPMENTS

SOIL PERCOLATION TEST



Sheet 1 of 2

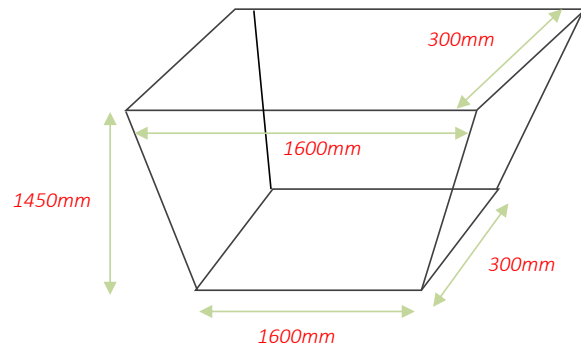
Date of Test: 18/02/2026

POSITION: SuDS2
TEST 2

Weather: Cloudy, Dry

Engineer: Joel Swift
Checked: Luke Harrison

Trial Pit Measurements



Pit Depth (mm):	1450
Pit Details:	Open with no stone filling
Groundwater Level:	NGW

Test Data

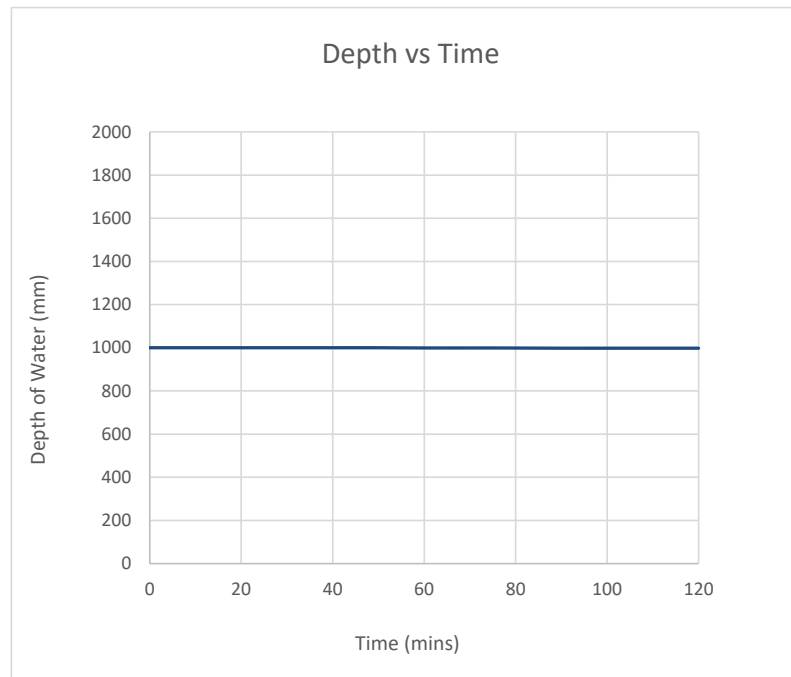
Time Elapsed (mins)	Depth to Water Level (mm)
0	450
1	450
2	450
3	450
5	450
6	450
10	450
15	450
20	450
30	450
40	450
50	450
60	451
75	451
90	452
105	452
120	452

SOIL PERCOLATION TEST



Sheet 2 of 2

POSITION: SuDS2
TEST 2



Volume of Pit (m ³)	0.696
Void Ratio of Infill	1
Volume of Infill (m ³)	N/A
Volume of Water in Pit (m ³)	0.48

Compliance Check:

Water Level at 75% effective depth (mm)	750
---	-----

Water Level at 25% effective depth (mm)	250
---	-----

Test not BRE 365 compliant with BRE 365 - insufficient time to drain past 25% effective depth

Soil Infiltration Rate Calculation

Water Level 1	1000
Water Level 2	998
Time to Drain from Level 1 to Level 2 (mins)	120
Volume of water discharged (m ³)	0.00096

Discharge Area (m ²)	4.2762
----------------------------------	--------

Soil Infiltration Rate (m/min)	1.871E-06
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Soil Infiltration Rate (m/sec)	3.12E-08
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TOWCESTER ROAD, TROWBRIDGE
GRO-26036
LNT CARE DEVELOPMENTS

SOIL PERCOLATION TEST



Sheet 1 of 2

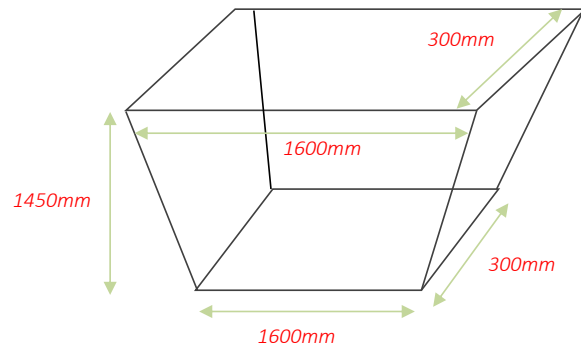
Date of Test: 18/02/2026

POSITION: SuDS2
TEST 3

Weather: Cloudy, Dry

Engineer: Joel Swift
Checked: Luke Harrison

Trial Pit Measurements



Pit Depth (mm):	1450
Pit Details:	Open with no stone filling
Groundwater Level:	NGW

Test Data

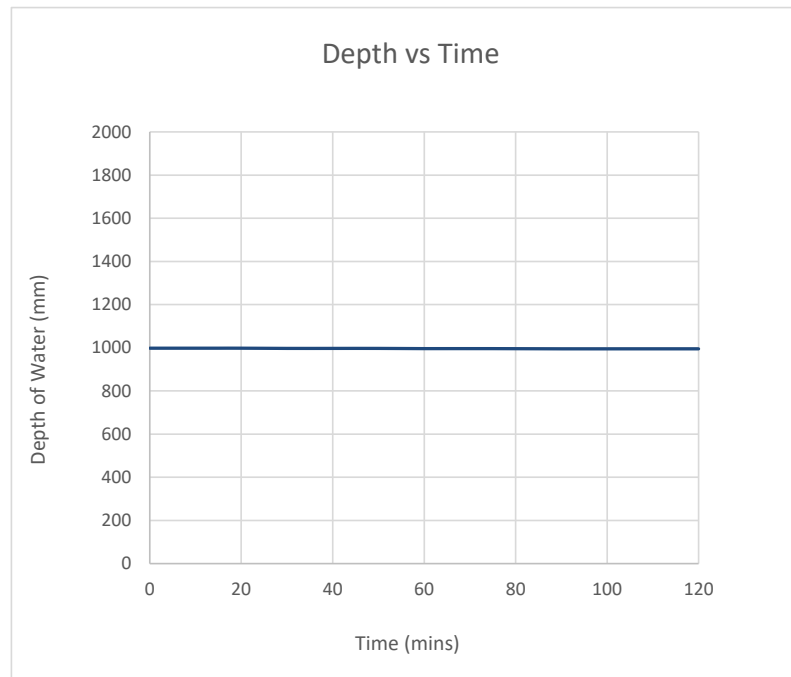
Time Elapsed (mins)	Depth to Water Level (mm)
0	452
1	452
2	452
3	452
5	452
6	452
10	452
15	452
20	452
30	453
40	453
50	453
60	454
75	454
90	455
105	455
120	455

SOIL PERCOLATION TEST



Sheet 2 of 2

POSITION: SuDS2
TEST 3



Volume of Pit (m ³)	0.696
Void Ratio of Infill	1
Volume of Infill (m ³)	N/A
Volume of Water in Pit (m ³)	0.47904

Compliance Check:

Water Level at 75% effective depth (mm)	748.5
Water Level at 25% effective depth (mm)	249.5

Test not BRE 365 compliant with BRE 365 - insufficient time to drain past 25% effective depth

Soil Infiltration Rate Calculation

Water Level 1	998
Water Level 2	995
Time to Drain from Level 1 to Level 2 (mins)	120
Volume of water discharged (m ³)	0.00144

Discharge Area (m ²)	4.2667
----------------------------------	--------

Soil Infiltration Rate (m/min)	2.812E-06
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Soil Infiltration Rate (m/sec)	4.69E-08
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TOWCESTER ROAD, TROWBRIDGE
GRO-26036
LNT CARE DEVELOPMENTS

SOIL PERCOLATION TEST



Sheet 1 of 2

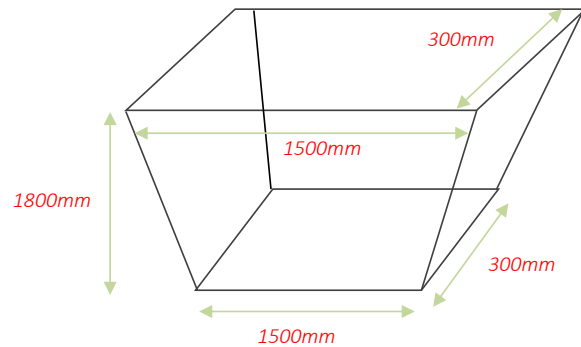
Date of Test: 19/02/2026

POSITION: SuDS3
TEST 1

Weather: Cloudy, Dry

Engineer: Joel Swift
Checked: Luke Harrison

Trial Pit Measurements



Pit Depth (mm):	1800
Pit Details:	Open with no stone filling
Groundwater Level:	NGW

Test Data

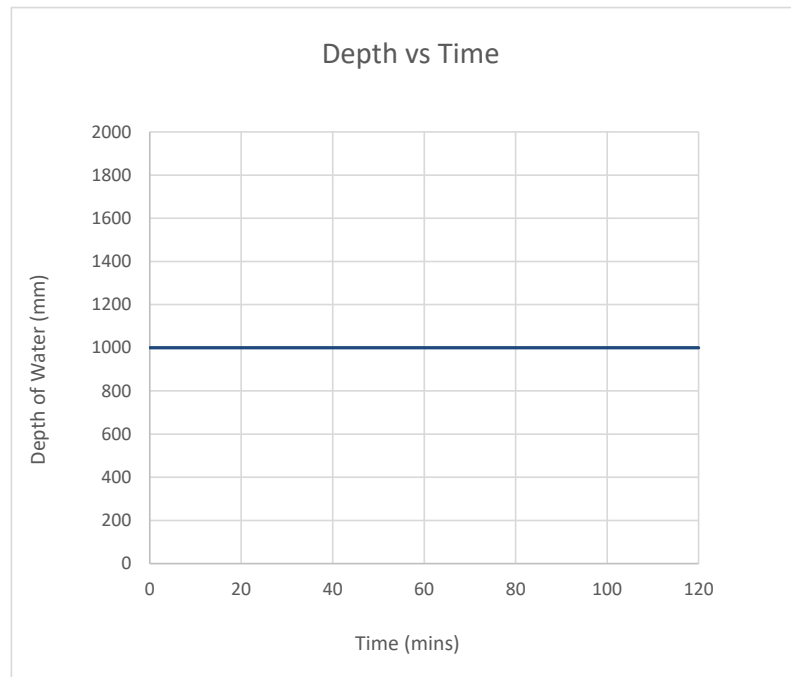
Time Elapsed (mins)	Depth to Water Level (mm)
0	800
1	800
2	800
3	800
5	800
6	800
10	800
15	800
20	800
30	800
40	800
50	800
60	800
75	800
90	800
105	800
120	800

SOIL PERCOLATION TEST



Sheet 2 of 2

POSITION: SuDS3
TEST 1



Volume of Pit (m ³)	0.81
Void Ratio of Infill	1
Volume of Infill (m ³)	N/A
Volume of Water in Pit (m ³)	0.45

Compliance Check:

Water Level at 75% effective depth (mm)	750
---	-----

Water Level at 25% effective depth (mm)	250
---	-----

Test not BRE 365 compliant with BRE 365 - insufficient time to drain past 25% effective depth

Soil Infiltration Rate Calculation

Water Level 1	1000
Water Level 2	1000
Time to Drain from Level 1 to Level 2 (mins)	120
Volume of water discharged (m ³)	0

Discharge Area (m ²)	4.05
----------------------------------	------

Soil Infiltration Rate (m/min)	0
--------------------------------	---

Soil Infiltration Rate (m/sec)	0.00E+00
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TOWCESTER ROAD, TROWBRIDGE
GRO-26036
LNT CARE DEVELOPMENTS

SOIL PERCOLATION TEST



Sheet 1 of 2

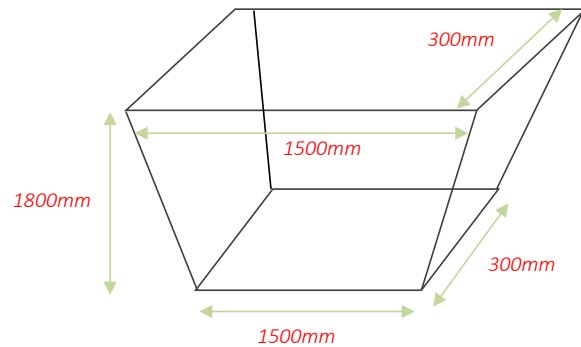
Date of Test: 19/02/2026

POSITION: SuDS3
TEST 2

Weather: Cloudy, Dry

Engineer: Joel Swift
Checked: Luke Harrison

Trial Pit Measurements



Pit Depth (mm):	1800
Pit Details:	Open with no stone filling
Groundwater Level:	NGW

Test Data

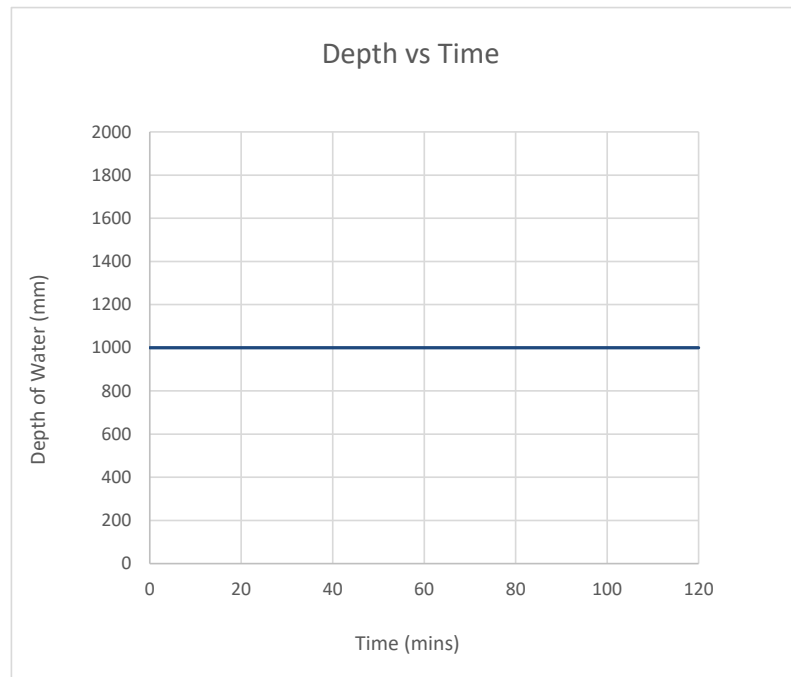
Time Elapsed (mins)	Depth to Water Level (mm)
0	800
1	800
2	800
3	800
5	800
6	800
10	800
15	800
20	800
30	800
40	800
50	800
60	800
75	800
90	800
105	800
120	800

SOIL PERCOLATION TEST



Sheet 2 of 2

POSITION: SuDS3
TEST 2



Volume of Pit (m ³)	0.81
Void Ratio of Infill	1
Volume of Infill (m ³)	N/A
Volume of Water in Pit (m ³)	0.45

Compliance Check:

Water Level at 75% effective depth (mm)	750
---	-----

Water Level at 25% effective depth (mm)	250
---	-----

Test not BRE 365 compliant with BRE 365 - insufficient time to drain past 25% effective depth

Soil Infiltration Rate Calculation

Water Level 1	1000
Water Level 2	1000
Time to Drain from Level 1 to Level 2 (mins)	120
Volume of water discharged (m ³)	0

Discharge Area (m ²)	4.05
----------------------------------	------

Soil Infiltration Rate (m/min)	0
--------------------------------	---

Soil Infiltration Rate (m/sec)	0.00E+00
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TOWCESTER ROAD, TROWBRIDGE
GRO-26036
LNT CARE DEVELOPMENTS

SOIL PERCOLATION TEST



Sheet 1 of 2

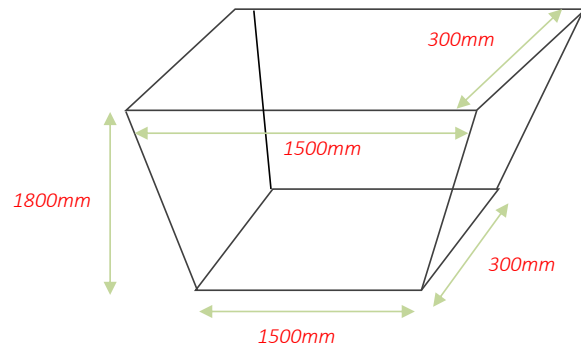
Date of Test: 19/02/2026

POSITION: SuDS3
TEST 3

Weather: Cloudy, Dry

Engineer: Joel Swift
Checked: Luke Harrison

Trial Pit Measurements



Pit Depth (mm):	1800
Pit Details:	Open with no stone filling
Groundwater Level:	NGW

Test Data

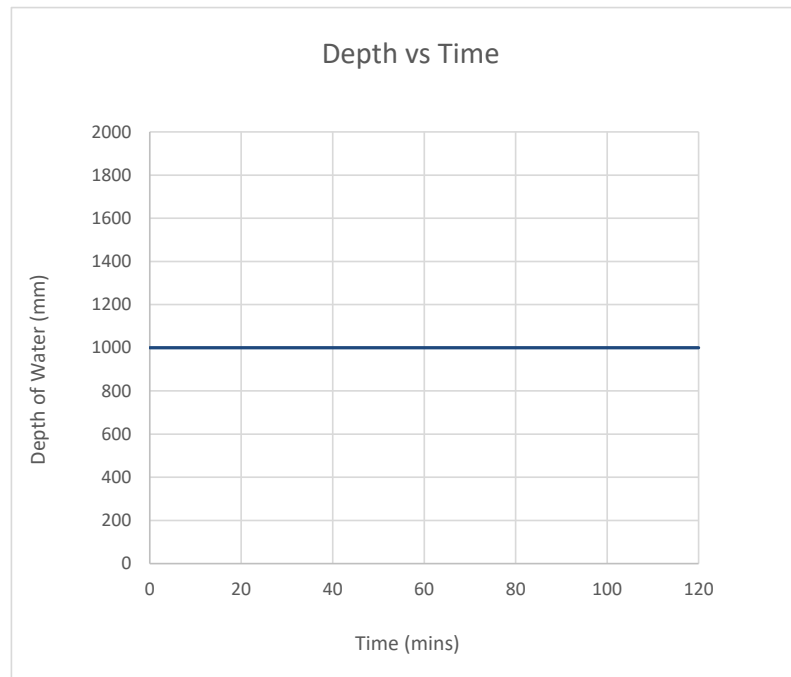
Time Elapsed (mins)	Depth to Water Level (mm)
0	800
1	800
2	800
3	800
5	800
6	800
10	800
15	800
20	800
30	800
40	800
50	800
60	800
75	800
90	800
105	800
120	800

SOIL PERCOLATION TEST



Sheet 2 of 2

POSITION: SuDS3
TEST 3



Volume of Pit (m ³)	0.81
Void Ratio of Infill	1
Volume of Infill (m ³)	N/A
Volume of Water in Pit (m ³)	0.45

Compliance Check:

Water Level at 75% effective depth (mm)	750
---	-----

Water Level at 25% effective depth (mm)	250
---	-----

Test not BRE 365 compliant with BRE 365 - insufficient time to drain past 25% effective depth

Soil Infiltration Rate Calculation

Water Level 1	1000
Water Level 2	1000
Time to Drain from Level 1 to Level 2 (mins)	120
Volume of water discharged (m ³)	0

Discharge Area (m ²)	4.05
----------------------------------	------

Soil Infiltration Rate (m/min)	0
--------------------------------	---

Soil Infiltration Rate (m/sec)	0.00E+00
--------------------------------	----------

TOWCESTER ROAD, TROWBRIDGE
GRO-26036
LNT CARE DEVELOPMENTS

SOIL PERCOLATION TEST



Sheet 1 of 2

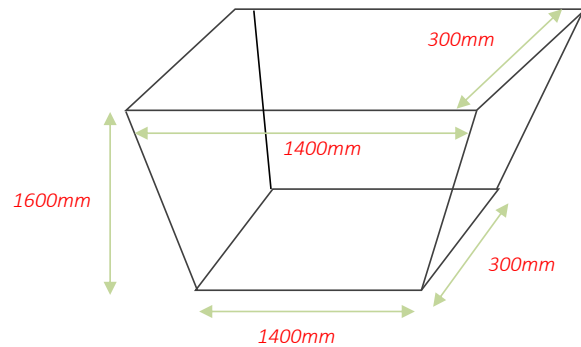
Date of Test: 19/02/2026

POSITION: SuDS4
TEST 1

Weather: Cloudy, Dry

Engineer: Joel Swift
Checked: Luke Harrison

Trial Pit Measurements



Pit Depth (mm):	1600
Pit Details:	Open with no stone filling
Groundwater Level:	NGW

Test Data

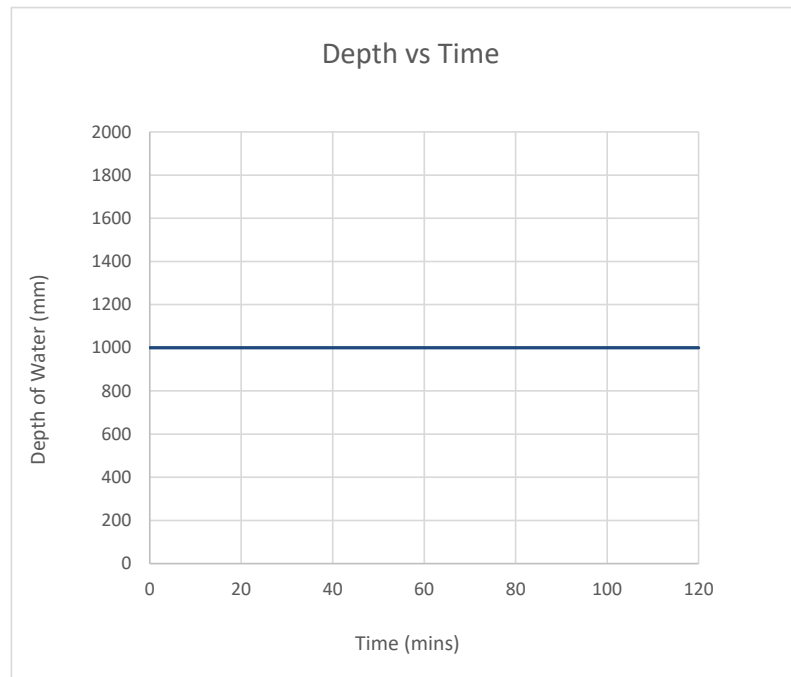
Time Elapsed (mins)	Depth to Water Level (mm)
0	600
1	600
2	600
3	600
5	600
6	600
10	600
15	600
20	600
30	600
40	600
50	600
60	600
75	600
90	600
105	600
120	600

SOIL PERCOLATION TEST



Sheet 2 of 2

POSITION: SuDS4
TEST 1



Volume of Pit (m ³)	0.672
Void Ratio of Infill	1
Volume of Infill (m ³)	N/A
Volume of Water in Pit (m ³)	0.42

Compliance Check:

Water Level at 75% effective depth (mm)	750
---	-----

Water Level at 25% effective depth (mm)	250
---	-----

Test not BRE 365 compliant with BRE 365 - insufficient time to drain past 25% effective depth

Soil Infiltration Rate Calculation

Water Level 1	1000
Water Level 2	1000
Time to Drain from Level 1 to Level 2 (mins)	120
Volume of water discharged (m ³)	0

Discharge Area (m ²)	3.82
----------------------------------	------

Soil Infiltration Rate (m/min)	0
--------------------------------	---

Soil Infiltration Rate (m/sec)	0.00E+00
--------------------------------	----------

TOWCESTER ROAD, TROWBRIDGE
GRO-26036
LNT CARE DEVELOPMENTS

SOIL PERCOLATION TEST



Sheet 1 of 2

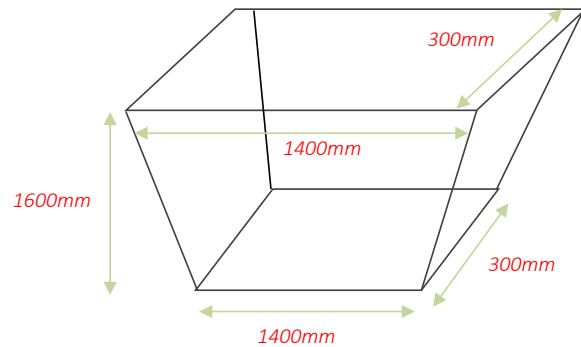
Date of Test: 19/02/2026

POSITION: SuDS4
TEST 2

Weather: Cloudy, Dry

Engineer: Joel Swift
Checked: Luke Harrison

Trial Pit Measurements



Pit Depth (mm):	1600
Pit Details:	Open with no stone filling
Groundwater Level:	NGW

Test Data

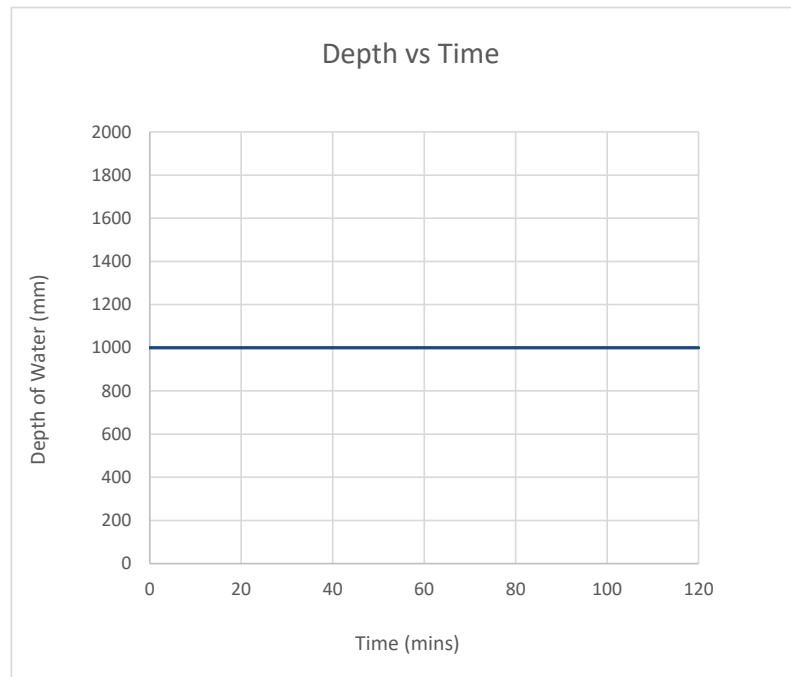
Time Elapsed (mins)	Depth to Water Level (mm)
0	600
1	600
2	600
3	600
5	600
6	600
10	600
15	600
20	600
30	600
40	600
50	600
60	600
75	600
90	600
105	600
120	600

SOIL PERCOLATION TEST



Sheet 2 of 2

POSITION: SuDS4
TEST 2



Volume of Pit (m ³)	0.672
Void Ratio of Infill	1
Volume of Infill (m ³)	N/A
Volume of Water in Pit (m ³)	0.42

Compliance Check:

Water Level at 75% effective depth (mm)	750
---	-----

Water Level at 25% effective depth (mm)	250
---	-----

Test not BRE 365 compliant with BRE 365 - insufficient time to drain past 25% effective depth

Soil Infiltration Rate Calculation

Water Level 1	1000
Water Level 2	1000
Time to Drain from Level 1 to Level 2 (mins)	120
Volume of water discharged (m ³)	0

Discharge Area (m ²)	3.82
----------------------------------	------

Soil Infiltration Rate (m/min)	0
--------------------------------	---

Soil Infiltration Rate (m/sec)	0.00E+00
--------------------------------	----------

TOWCESTER ROAD, TROWBRIDGE
GRO-26036
LNT CARE DEVELOPMENTS

SOIL PERCOLATION TEST



Sheet 1 of 2

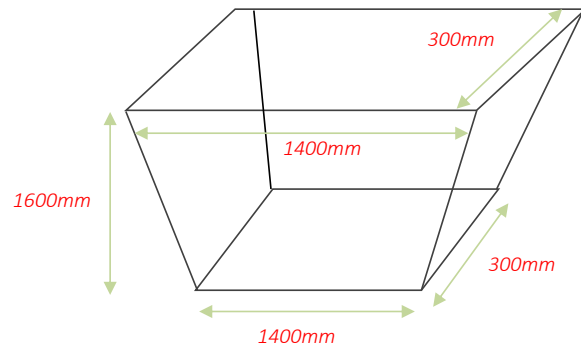
Date of Test: 19/02/2026

POSITION: SuDS4
TEST 3

Weather: Cloudy, Dry

Engineer: Joel Swift
Checked: Luke Harrison

Trial Pit Measurements



Pit Depth (mm):	1600
Pit Details:	Open with no stone filling
Groundwater Level:	NGW

Test Data

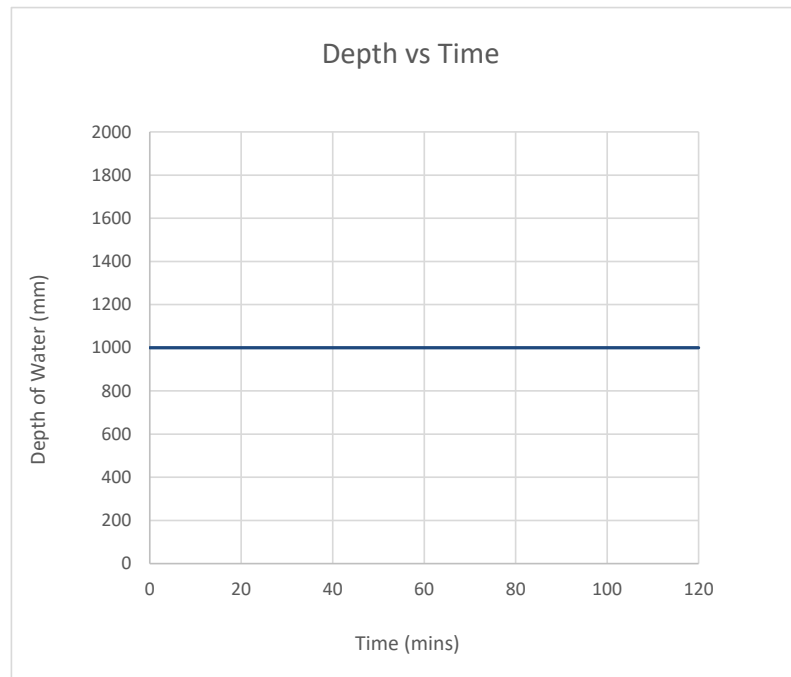
Time Elapsed (mins)	Depth to Water Level (mm)
0	600
1	600
2	600
3	600
5	600
6	600
10	600
15	600
20	600
30	600
40	600
50	600
60	600
75	600
90	600
105	600
120	600

SOIL PERCOLATION TEST



Sheet 2 of 2

POSITION: SuDS4
TEST 3



Volume of Pit (m ³)	0.672
Void Ratio of Infill	1
Volume of Infill (m ³)	N/A
Volume of Water in Pit (m ³)	0.42

Compliance Check:

Water Level at 75% effective depth (mm)	750
---	-----

Water Level at 25% effective depth (mm)	250
---	-----

Test not BRE 365 compliant with BRE 365 - insufficient time to drain past 25% effective depth

Soil Infiltration Rate Calculation

Water Level 1	1000
Water Level 2	1000
Time to Drain from Level 1 to Level 2 (mins)	120
Volume of water discharged (m ³)	0

Discharge Area (m ²)	3.82
----------------------------------	------

Soil Infiltration Rate (m/min)	0
--------------------------------	---

Soil Infiltration Rate (m/sec)	0.00E+00
--------------------------------	----------

TOWCESTER ROAD, TROWBRIDGE
GRO-26036
LNT CARE DEVELOPMENTS

SOIL PERCOLATION TEST



Sheet 1 of 2

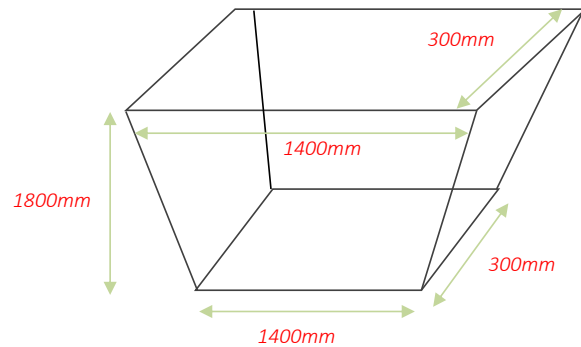
Date of Test: 20/02/2026

POSITION: SuDS5
TEST 1

Weather: Cloudy, Dry

Engineer: Joel Swift
Checked: Luke Harrison

Trial Pit Measurements



Pit Depth (mm):	1800
Pit Details:	Open with no stone filling
Groundwater Level:	NGW

Test Data

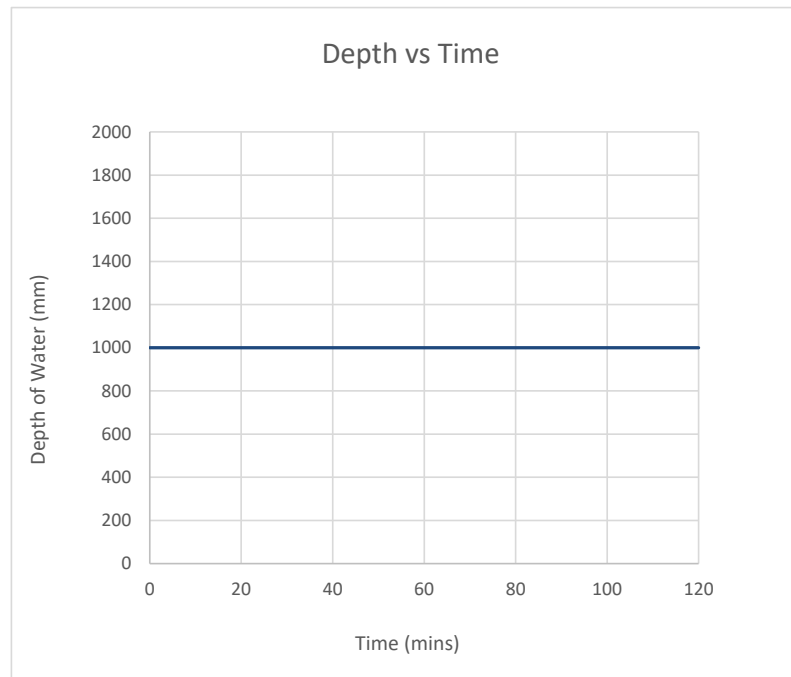
Time Elapsed (mins)	Depth to Water Level (mm)
0	800
1	800
2	800
3	800
5	800
6	800
10	800
15	800
20	800
30	800
40	800
50	800
60	800
75	800
90	800
105	800
120	800

SOIL PERCOLATION TEST



Sheet 2 of 2

POSITION: SuDS5
TEST 1



Volume of Pit (m ³)	0.756
Void Ratio of Infill	1
Volume of Infill (m ³)	N/A
Volume of Water in Pit (m ³)	0.42

Compliance Check:

Water Level at 75% effective depth (mm)	750
---	-----

Water Level at 25% effective depth (mm)	250
---	-----

Test not BRE 365 compliant with BRE 365 - insufficient time to drain past 25% effective depth

Soil Infiltration Rate Calculation

Water Level 1	1000
Water Level 2	1000
Time to Drain from Level 1 to Level 2 (mins)	120
Volume of water discharged (m ³)	0

Discharge Area (m ²)	3.82
----------------------------------	------

Soil Infiltration Rate (m/min)	0
--------------------------------	---

Soil Infiltration Rate (m/sec)	0.00E+00
--------------------------------	----------

TOWCESTER ROAD, TROWBRIDGE
GRO-26036
LNT CARE DEVELOPMENTS

SOIL PERCOLATION TEST



Sheet 1 of 2

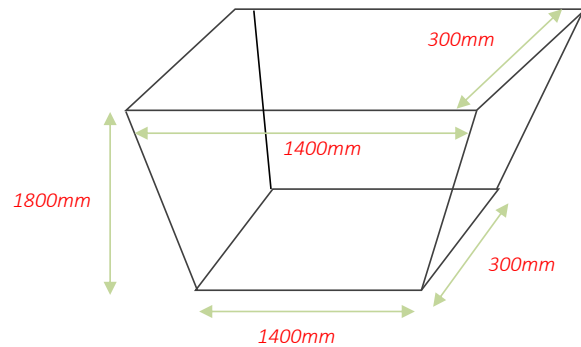
Date of Test: 20/02/2026

POSITION: SuDS5
TEST 2

Weather: Cloudy, Dry

Engineer: Joel Swift
Checked: Luke Harrison

Trial Pit Measurements



Pit Depth (mm):	1800
Pit Details:	Open with no stone filling
Groundwater Level:	NGW

Test Data

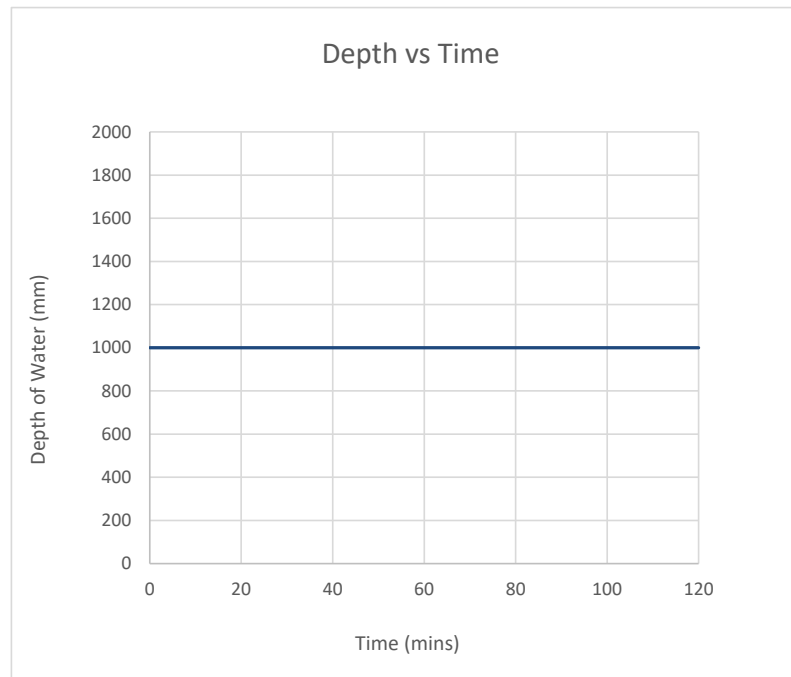
Time Elapsed (mins)	Depth to Water Level (mm)
0	800
1	800
2	800
3	800
5	800
6	800
10	800
15	800
20	800
30	800
40	800
50	800
60	800
75	800
90	800
105	800
120	800

SOIL PERCOLATION TEST



Sheet 2 of 2

POSITION: SuDS5
TEST 2



Volume of Pit (m ³)	0.756
Void Ratio of Infill	1
Volume of Infill (m ³)	N/A
Volume of Water in Pit (m ³)	0.42

Compliance Check:

Water Level at 75% effective depth (mm)	750
---	-----

Water Level at 25% effective depth (mm)	250
---	-----

Test not BRE 365 compliant with BRE 365 - insufficient time to drain past 25% effective depth

Soil Infiltration Rate Calculation

Water Level 1	1000
Water Level 2	1000
Time to Drain from Level 1 to Level 2 (mins)	120
Volume of water discharged (m ³)	0

Discharge Area (m ²)	3.82
----------------------------------	------

Soil Infiltration Rate (m/min)	0
--------------------------------	---

Soil Infiltration Rate (m/sec)	0.00E+00
--------------------------------	----------

TOWCESTER ROAD, TROWBRIDGE
GRO-26036
LNT CARE DEVELOPMENTS

SOIL PERCOLATION TEST



Sheet 1 of 2

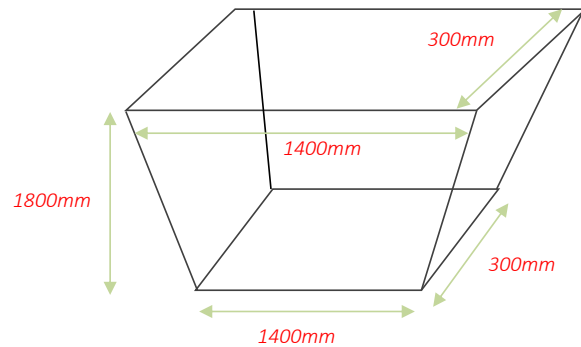
Date of Test: 20/02/2026

POSITION: SuDS5
TEST 3

Weather: Cloudy, Dry

Engineer: Joel Swift
Checked: Luke Harrison

Trial Pit Measurements



Pit Depth (mm):	1800
Pit Details:	Open with no stone filling
Groundwater Level:	NGW

Test Data

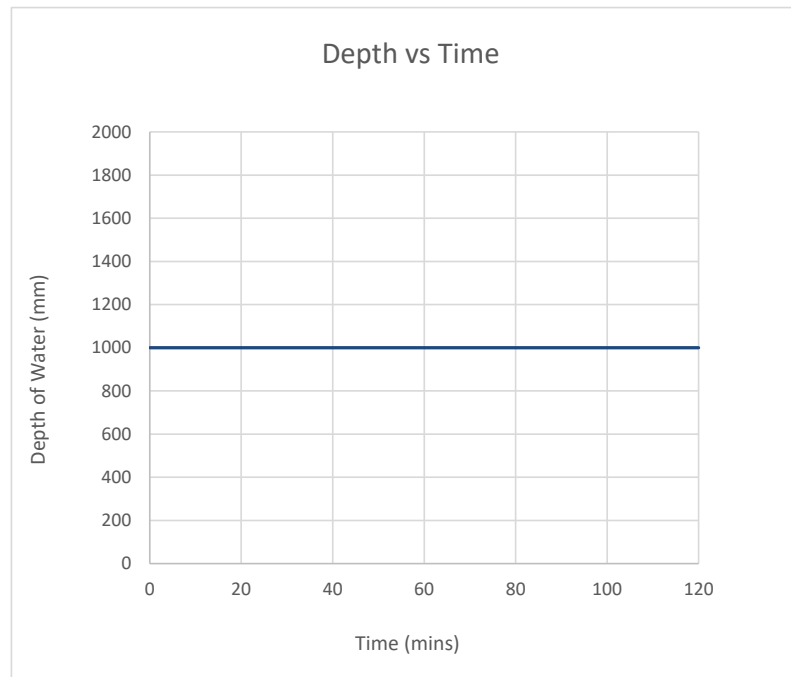
Time Elapsed (mins)	Depth to Water Level (mm)
0	800
1	800
2	800
3	800
5	800
6	800
10	800
15	800
20	800
30	800
40	800
50	800
60	800
75	800
90	800
105	800
120	800

SOIL PERCOLATION TEST



Sheet 2 of 2

POSITION: SuDS5
TEST 3



Volume of Pit (m ³)	0.756
Void Ratio of Infill	1
Volume of Infill (m ³)	N/A
Volume of Water in Pit (m ³)	0.42

Compliance Check:

Water Level at 75% effective depth (mm)	750
---	-----

Water Level at 25% effective depth (mm)	250
---	-----

Test not BRE 365 compliant with BRE 365 - insufficient time to drain past 25% effective depth

Soil Infiltration Rate Calculation

Water Level 1	1000
Water Level 2	1000
Time to Drain from Level 1 to Level 2 (mins)	120
Volume of water discharged (m ³)	0

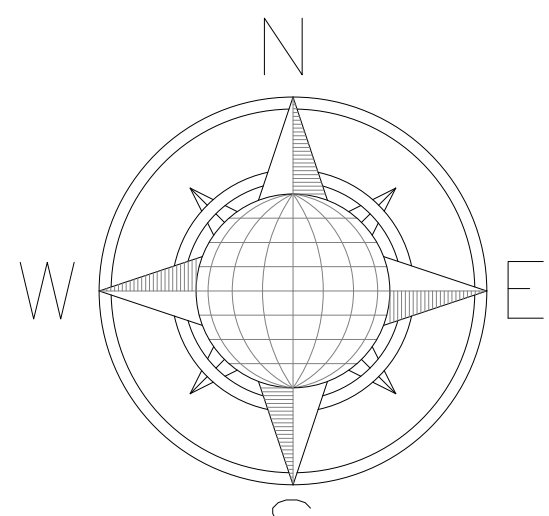
Discharge Area (m ²)	3.82
----------------------------------	------

Soil Infiltration Rate (m/min)	0
--------------------------------	---

Soil Infiltration Rate (m/sec)	0.00E+00
--------------------------------	----------

Appendix D

Under Ground Utility and CCTV Survey



Approximate North

Sheet No.: 01

Sheet No.: 02

Sheet No.: 03

Sheet No.: 04

PLEASE NOTE:
Utility Asset Records and
Topographical plan provided by Client.
Please refer to frozen layers for
desktop survey.

PLEASE NOTE:
Utility Asset Records and
Topographical plan provided by Client.
Please refer to frozen layers for
desktop survey.

PLEASE NOTE:
Utility Asset Records and
Topographical plan provided by Client.
Please refer to frozen layers for
desktop survey.

PLEASE NOTE:
Utility Asset Records and
Topographical plan provided by Client.
Please refer to frozen layers for
desktop survey.

LEGEND		
Utility Survey Point Features		
AV Air Valve	IC Gully Round	MH MH - Round
BB Belisha Beacon	IC IC	MH MH - Surface Water
CP CCTV Camera Pole	IC IC - Comm	MK Marker Post
CR Cable Riser	IC IC - Electric	12.24 Pipe Riser
DP Down Pipe	IC IC - Round	RE Recessed Light
DPG Down Pipe To Ground	IC IC - Telecom	RE Rodding Eye
EP Electrical Pole	IC IC - TCSU/TFL	SC Stop Cock
ER Earth Rod	IC IC - CATV	TL Traffic Light
FM Fire Hydrant	LP Lamp Post	TP Telegraph Pole
GM Gas Meter	MH MH	V Valve General
GV Gas Valve	MH MH - District Heat	WM Water Meter
G Gully	MH MH - Foul	WV Water Valve

Utility Survey Linework Features		
Communications	EHV Electrical - Extra High Voltage	
BT British Telecom	EHV Electrical - High Voltage	
CATV Cable TV	EHV Electrical - Low Voltage	
CCTV Closed Circuit TV	EHV Electrical - TFL	
COMMS Communications	SL Street Lighting	
FOL Fibre Optic Line	TCSU Traffic Control System Unit	
FOLC Fibre Optic Line - Cct		
FOLC Fibre Optic Line - Energis		
FOLC Fibre Optic Line - Fibernet		
FOLC Fibre Optic Line - Level 3		
FOLC Fibre Optic Line - Mercury		
FOLC Fibre Optic Line - MFS		
FOLC Fibre Optic Line - Tanet		
FOLC Fibre Optic Line - Virgin		
FOLC Fibre Optic Line - Vozafone		
FOLC Fibre Optic Line - Verizon		
FOLC Fibre Optic Line - WCOM		
UA UA Passive Sweep		
TS Telecom Service		
Drainage		
CW Combined Water		
FW Foul Water		
SW Surface Water		
RM Rising Main		
Water		
FRW Fire Water		
WM Water Main		
WS Water Service		
Electrical		
E Electrical Service		
EE Electrical Earth		
P Electrical Pilot Cable		
Other		
DH District Heat		
FU Fuel Pipe		
XX Decommissioned/Abandoned		
Manhole Chamber		
Manhole ID		
PEO Pot End		
Scope of Works		

PAS128 Quality Levels		
(Consult document PAS128-2022.pdf for full details)		
XX - A - Quality Level A	XX - B3 - Quality Level B3	
XX - B1 - Quality Level B1	XX - B3P - Quality Level B3P	
XX - B1P - Quality Level B1P	XX - B4 - Quality Level B4	
XX - B2 - Quality Level B2	XX - C - Quality Level C	
XX - B2P - Quality Level B2P	XX - D - Quality Level D	

Special Survey Features		
E-XXXX-XXX	ES-XXXX-XXX	
ID N-YYYY-YYY Survey Station	ID N-YYYY-YYY Scan Target	
H-ZZZ-ZZZ	H-ZZZ-ZZZ	

Utility Survey Abbreviations		
AB Abandoned	MH Manhole	
AR Assumed Route	NVO Not Visible Outlet	
BI Illuminated Bollard	OE Overhead Electric	
BLD Blocked	OT Overhead Telecom	
CL Cover Level	SCP Soffit Level	
CPD Capped	TFR Taken From Records	
CUT Decommissioned Utility	TVM Ticket Vending Machine	
ECCCTV End of CCTV Survey	UTO Unable to Open	
EOG End of GPR Signal	UTS Unable to Survey	
EOT End of Trace	UTS Unable to Trace	
EOS End of Survey	UKN Unknown	
IC Inspection Cover	WL Water Level	
IL Invert Level	XXS Service Depth	
CSER Confined Space Entry Required		

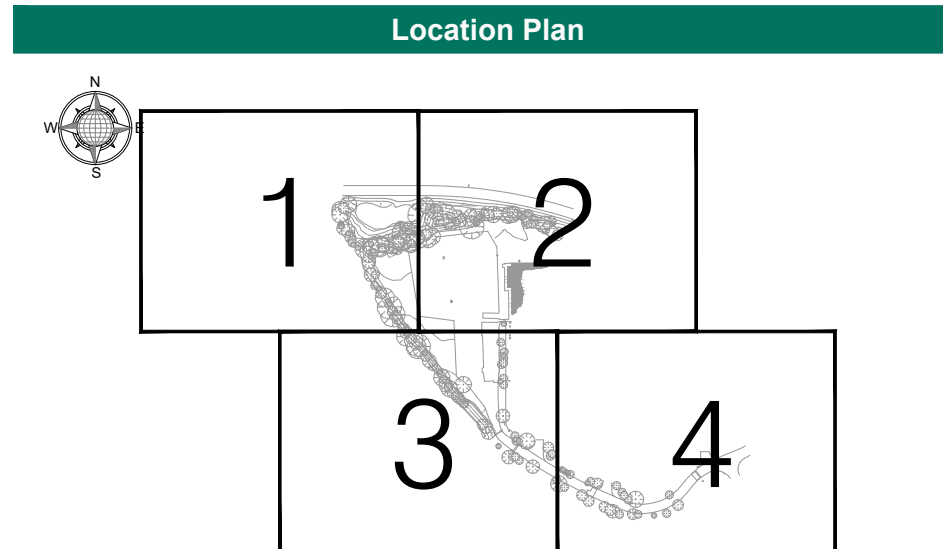
Utility Material Abbreviations		
AC Asbestos Cement	CO Concrete	SI Spun Iron
BC Brick Chamber	DI Ductile Iron	ST Steel
CI Cast Iron	PE Polyethylene	WTR Water
Level Measured For	Level Measured For	
Ducts/Pipes At Pits Is To	At Pits Is To	
Top of The Service	Of The Service	

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All reasonable endeavours have been used to capture the required data in the survey to the agreed standards of accuracy. Where features have been obstructed due to a lack of access, the areas will be annotated as 'VFB (Unable To Survey)'. The Company shall not be liable for any damages or consequential losses arising from the reliance on survey information beyond its specified scale and accuracy, or survey information used for purposes other than that stated in the Contract of Works.

Any concerns with the survey should be raised with Murphy Geospatial, who will endeavour to promptly provide a remedy. The Client shall not seek recourse through any third party until such time as Murphy Geospatial have had the opportunity to address any concerns raised.

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Revisions				
Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	CHB - 10/02/26	CHB - 10/02/26	BK - 10/02/26
B	Added CCTV Survey	EO - 25/02/26	BK - 10/03/26	ER - 10/03/26
C	Added CCTV Survey	EO - 25/02/26	BK - 10/03/26	ER - 10/03/26
D	MH19 details added	EO - 15/04/26	BK - 16/04/26	ER - 20/04/26



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Phone: (+44) 0192 362 4800
Email: info@murphygcs.com

London Manchester Birmingham Glasgow Belfast Cork Kildare

Client	LNT Construction Ltd
Project	Utility & CCTV Survey: Towcester Road, Trowbridge, BA14 0FY
Site Address	Towcester Road, Trowbridge, BA14 0FY
Description	Underground Utility Survey(PAS128)
Survey Grid	Localised OSGB36(15) - Scale Factor 1.0
Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)
RICS Band	Band F
Drawing Scale	NTS @A0
Drawing Number	MGS68039-U-RevD-Overview

[illegible]

Special Survey Features

ID E=XXXX XXXX
ID # N=YYYYYY
Utility Station
N=ZZZZZZ

ID# E=XXXX XXXX
ID# N=YYYYYY
Scan Target
N=ZZZZZZ

Utility Survey Abbreviations	
AB	Abandoned
AR	Assumed Route
BL	Illuminated Bolland
CL	Cover Level
CP	Capped
CDT	Discontinued Utility
ECCTV	End of CCTV Survey
EOG	End of GPR Signal
EOT	End of Trace
EOS	End of Survey
I	Inspection Cover
IL	Invert Level
CSFR	Confined Space Entry Required

MH	Manhole
NVO	Not Visible Outlet
OE	Overhead Electric
OH	Overhead Telecom
SO	Soft Level
TFR	Taken from Records
TM	Time Vending Machine
UTO	Unable to Open
UTS	Unable to Survey
UTL	Unable to Trace
UKN	Unknown
WL	Water Level
XXD	Service Depth

Any concerns with the survey should be raised with Murphy Geospatial, who will endeavour to promptly provide a remedy. The Client shall not seek recourse through any third party until such time as Murphy Geospatial have had the opportunity to redress any concerns raised.

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Revisions				
Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	CHB - 10/02/26	CHB - 16/02/26	BK - 16/02/26
B	Added CCTV Survey	EO - 25/02/26	BK - 10/03/26	
C	Added CCTV Survey	EO - 13/03/26	BK - 18/03/26	ER - 20/03/26
D	MH19 details added	EO - 15/04/26	BK - 16/04/26	ER - 20/04/26

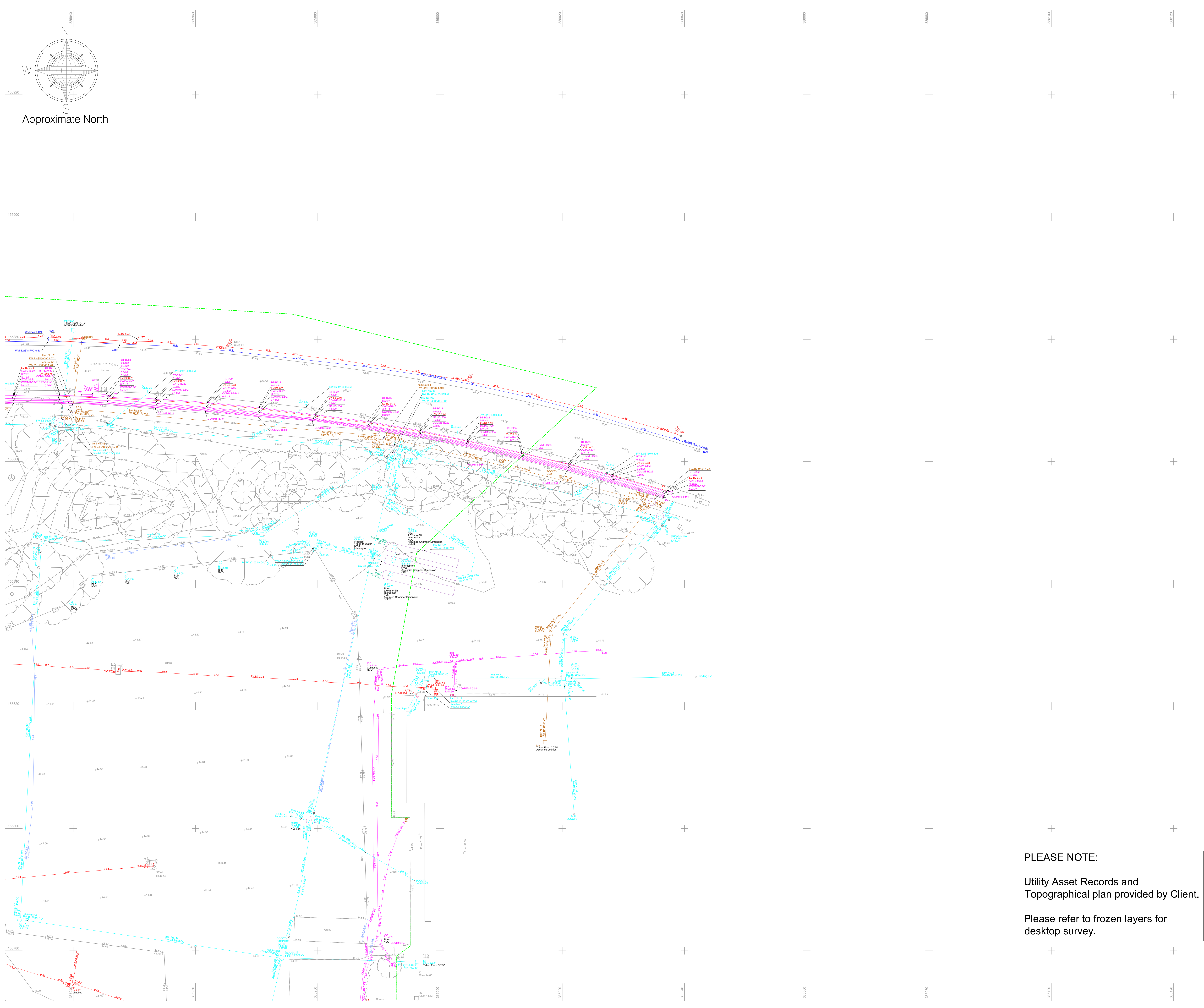


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LEGEND		
Utility Survey Point Features		
AV Air Valve	IC IC	MH - Round
BB Belisha Beacon	IC - Comm	MH - Surface Water
CP CCTV Camera Pole	IC - Electric	Marker Post
CR Cable Riser	IC - Round	Pipe Riser
DP Down Pipe	IC - Telecom	Recessed Light
DPC Down Pipe To Ground	IC - TCSU/TFL	Rodding Eye
EP Electrical Pole	IC - CATV	Stop Cock
ER Earth Rod	LP Lamp Post	Traffic Light
FR Fire Hydrant	MH	Telegraph Pole
GM Gas Meter	MH - District Heat	Valve General
GV Gas Valve	MH - Foul	Water Meter
G Gully		Water Valve

Utility Survey Linework Features		
BT British Telecom	EHV Electrical - Extra High Voltage	
CATV Cable TV	HV Electrical - High Voltage	
CCTV Closed Circuit TV	LV Electrical - Low Voltage	
COMMS Communications	TFL Electrical - TFL	
FOL Fibre Optic Line	SL Street Lighting	
FOLC Fibre Optic Line - Cot	TCSU Traffic Control System Unit	
FOLE Fibre Optic Line - Energis	Gas	
FOLF Fibre Optic Line - Fibernet	G Gas Service	
FOLL Fibre Optic Line - Level 3	GLP Gas Low Pressure	
FOLM Fibre Optic Line - Mercury	GIP Gas Intermediate Pressure	
FOLN Fibre Optic Line - MFS	GMP Gas Medium Pressure	
FOLT Fibre Optic Line - Tanet	GHP Gas High Pressure	
FOLV Fibre Optic Line - Virgin	GPR + Unknown	
FOLV Fibre Optic Line - Vodafone	ED Empty Duct	
FOLV Fibre Optic Line - Verizon	GPR Anomaly	
FOLV Fibre Optic Line - WCOM	UA Unknown Asset	
TS Telecom Service	UA Possible Sweep	
	UCL Unknown Cable	
	GPR Slab	
	GPR Survey Area	
	GPR buried structure	
	GPR Reinforced Slab	
	GPR Interface layer (change in material)	
	Other	
	DH District Heat	
	FU Fuel Pipe	
	XX Decommissioned/Abandoned	
	Manhole Chamber	
	Manhole ID	
	PEO Pot End	
	Scope of Works	

PAS128 Quality Levels	
(Consult document 'PAS128-2022.pdf' for full details)	
XX - A - Quality Level A	XX - B3 - Quality Level B3
XX - B1 - Quality Level B1	XX - B3P - Quality Level B3P
XX - B1P - Quality Level B1P	XX - B4 - Quality Level B4
XX - B2 - Quality Level B2	XX - C - Quality Level C
XX - B2P - Quality Level B2P	XX - D - Quality Level D

Special Survey Features	
E-XXXX-XXX	ES-XXXX-XXX
ID N-YYYY-YYY Survey Station	ID N-YYYY-YYY Scan Target
H-ZZZ-ZZZ	H-ZZZ-ZZZ

Utility Survey Abbreviations	
AB Abandoned	MH Manhole
AR Assumed Route	NVO Not Visible Outlet
BI Illuminated Bollard	OE Overhead Electric
BLD Blocked	OT Overhead Telecom
CL Cover Level	SCF Soft Level
CPD Capped	TFR Taken From Records
CUT Decommissioned Utility	TVM Ticket Vending Machine
ECCCTV End of CCTV Survey	UTO Unable to Open
EOG End of GPR Signal	UTS Unable to Survey
EOT End of Trace	UTTS Unable to Trace
EOS End of Survey	UKN Unknown
IC Inspection Cover	WL Water Level
IL Invert Level	XX6 Service Depth
CSER Confined Space Entry Required	

Utility Material Abbreviations	
AC Asbestos Cement	CO Concrete
BC Brick Chamber	DI Ductile Iron
CI Cast Iron	PE Polyethylene
	SI Spun Iron
	ST Steel
	WTR Water

Level Measured For	Level Measured For
Ducts/Pipes At Pits Is To	At Pits Is To
Top of The Service	Of The Service

0.80d

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Location Plan	
1	2
3	4

Revisions			
Rev	Description	Surveyed by	Checked by
A	First Issue	CHB - 10/02/26	CHB - 10/02/26
B	Added CCTV Survey	EO - 25/02/26	EO - 10/03/26
C	Added CCTV Survey	EO - 13/03/26	EO - 20/03/26
D	MH19 details added	EO - 15/04/26	EO - 20/04/26



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Email: info@murphygs.com

London Manchester Birmingham Glasgow Belfast Cork Kildare

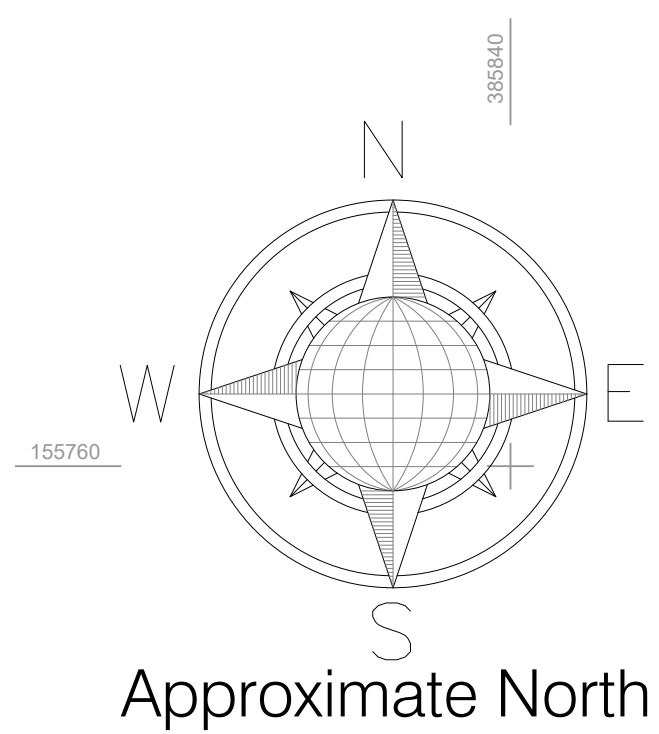


PLEASE NOTE:

Utility Asset Records and Topographical plan provided by Client.

Please refer to frozen layers for desktop survey.

Client	LNT Construction Ltd
Project	Utility & CCTV Survey: Towcester Road, Trowbridge, BA14 0FY
Site Address	Towcester Road, Trowbridge, BA14 0FY
Description	Underground Utility Survey(PAS128)
Survey Grid	Localised OSGB36(15) - Scale Factor 1.0
Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)
RICS Band	Band F
Drawing Scale	1:200 @A0
Drawing Number	MGS68039-U-RevD-02

[illegible]

PAS128 Quality Levels			
(Consult document 'PAS128:2022.pdf' for full details)			
— XX - A —	Quality Level A	— XX - B3 —	Quality Level B3
— XX - B1 —	Quality Level B1	— XX - B3P —	Quality Level B3P
— XX - B1P —	Quality Level B1P	— XX - B4 —	Quality Level B4
— XX - B2 —	Quality Level B2	— XX - C —	Quality Level C
— XX - B2P —	Quality Level B2P	— XX - D —	Quality Level D

Special Survey Features			
E=XXXX.XXX		E=XXXX.XXX	
ID N=YYYY.YYY	Survey Station	ID N=YYYY.YYY	Scan Target
H=ZZZ.ZZZ		H=ZZZ.ZZZ	

Utility Survey Abbreviations			
AB	Abandoned	MH	Manhole
AR	Assumed Route	NVO	Not Visible Outlet
BI	Illuminated Bollard	OE	Overhead Electric
BLD	Blockade	OT	Overhead Telecom
CL	Cover Level	SFR	Soft Level
CPD	Capped	TFR	Taken From Records
CU	Disconnected Utility	TMT	Truck Tending Machine
EOCCTV	End of CCTV Survey	UO	Unable to Open
E0G	End of GPR Signal	US	Unable to Survey
EOT	End of Trace	UTN	Unable to Trace
E0S	End of Survey	UKN	Unknown
IC	Inspection Cover	WL	Water Level
IL	Invert Level	XG	Service Depth
CSER	Confined Space Entry Required		

Utility Material Abbreviations					
AC	Asbestos Cement	CO	Concrete	SI	Spun Iron
BC	Brick Chamber	DI	Ductile Iron	ST	Steel
CI	Cast Iron	PE	Polyethylene	WTR	Water
Level Measured For Ducts/Pipes At Pits Is To Top Of The Service			Level Measured For Drainage At Pits Is To Invert Level Of The Service		

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Location Plan



Revisions				
Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	CHB - 10/02/26	CHB - 16/02/26	BK - 16/02/26
B	Added CCTV Survey	EO - 25/02/26	BK - 18/03/26	ER - 10/03/26
C	Added CCTV Survey	EO - 13/03/26	BK - 18/03/26	ER - 20/03/26
D	M419 details added	EO - 16/04/26	BK - 16/04/26	FR - 20/04/26



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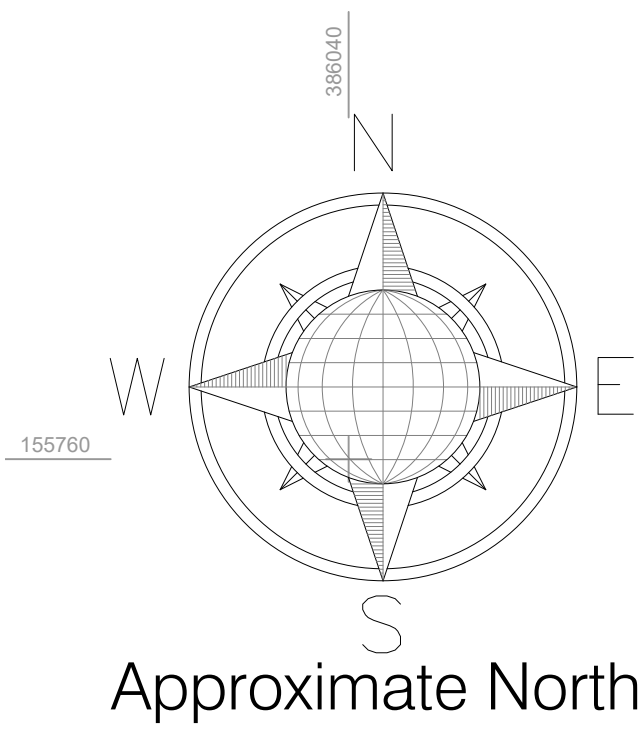
London	Manchester	Birmingham	Glasgow	Belfast	Cork	Kildare
Client	LNT Construction Ltd					
Project	Utility & CCTV Survey Towcester Road, Towbridge, BA14 0FY					
Site Address	Towcester Road Towbridge, BA14 0FY					
Description	Underground Utility Survey (PAS128)					
Survey Grid	Localised OSGB36(15) - Scale Factor 1.0					
Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)					
RICS Band	Band F					
Drawing Scale	1:200 @A0					
Drawing Number	MGS68039-U-RevD-03					

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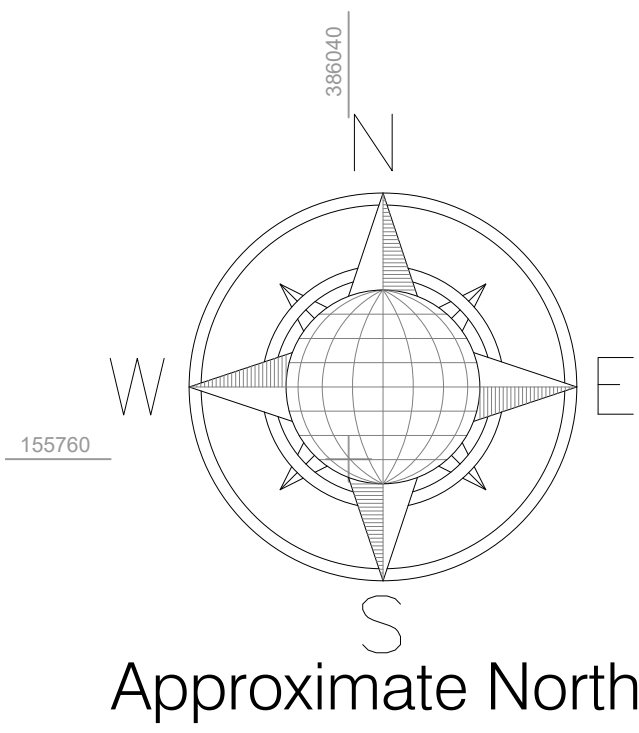
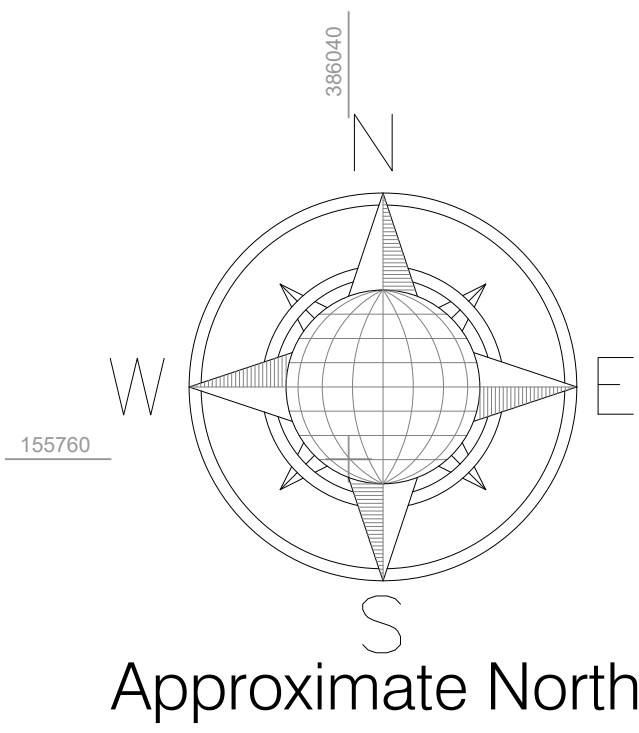
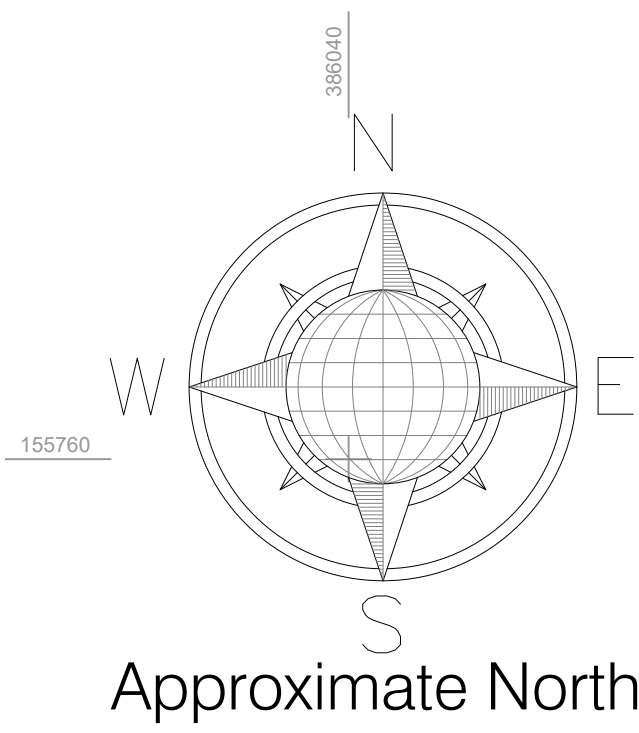
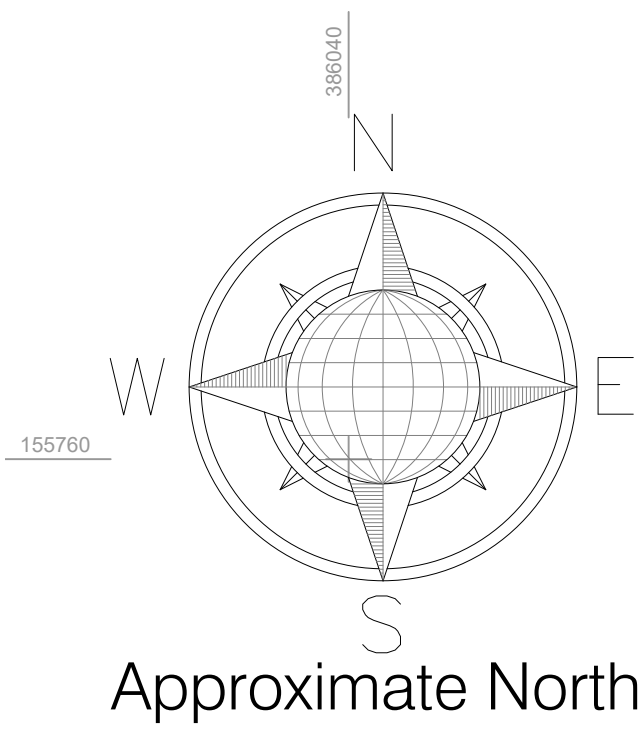
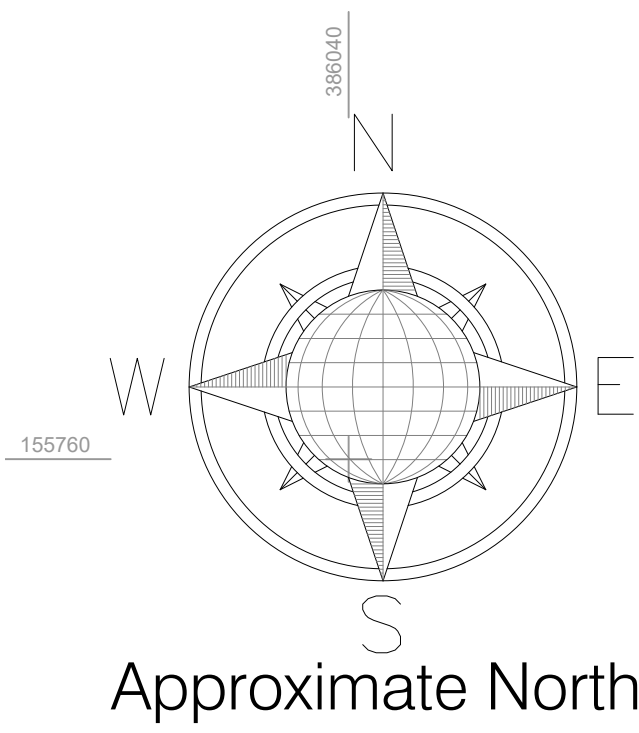
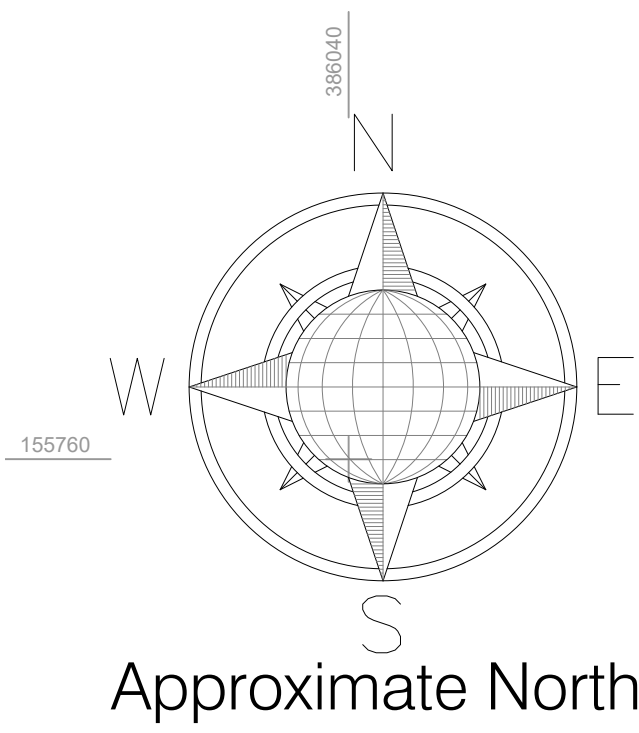
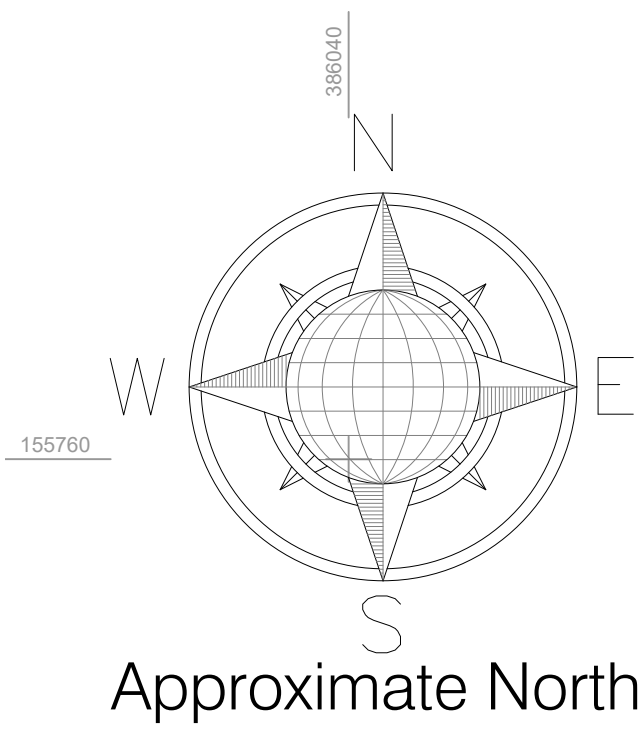
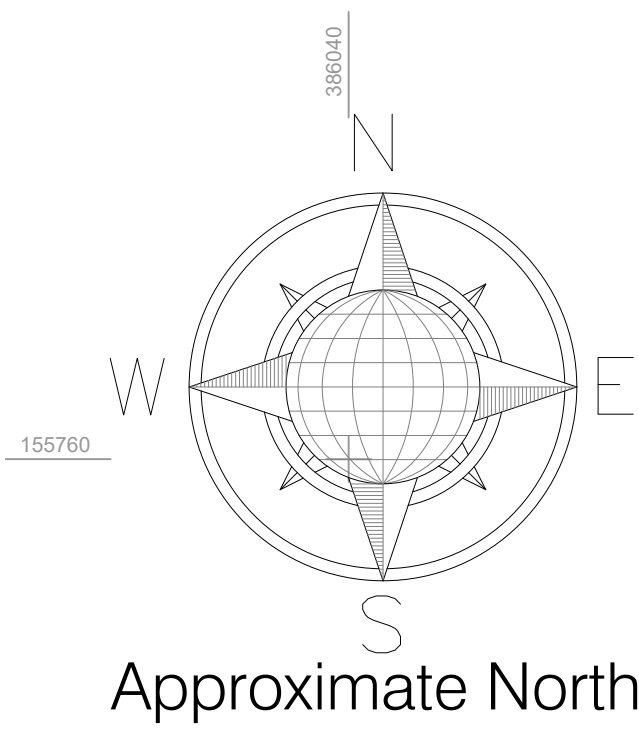
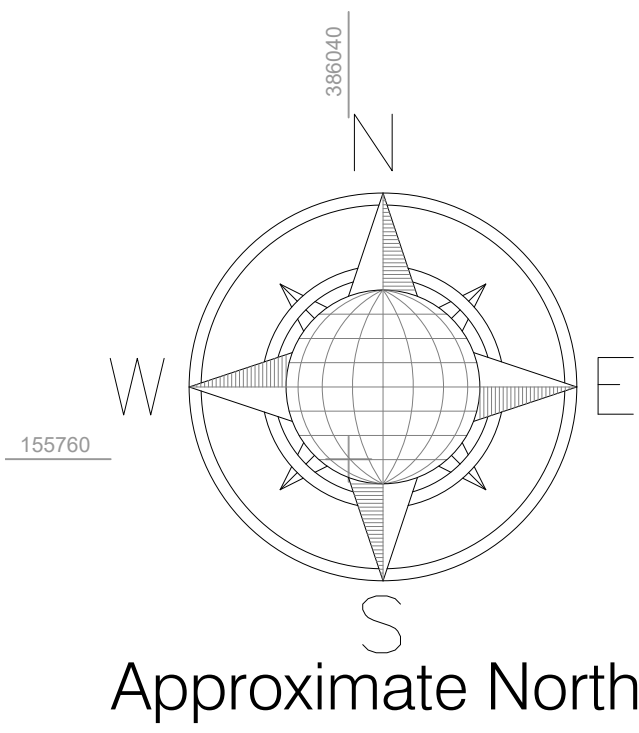
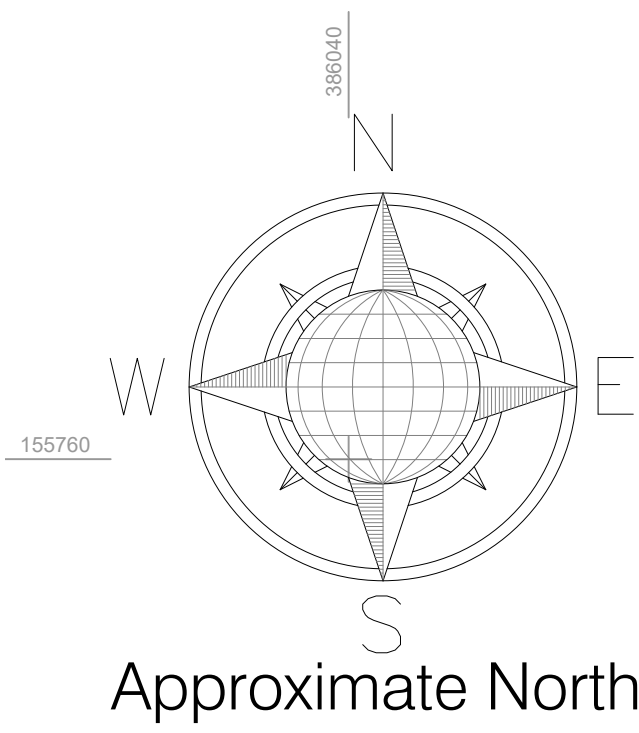
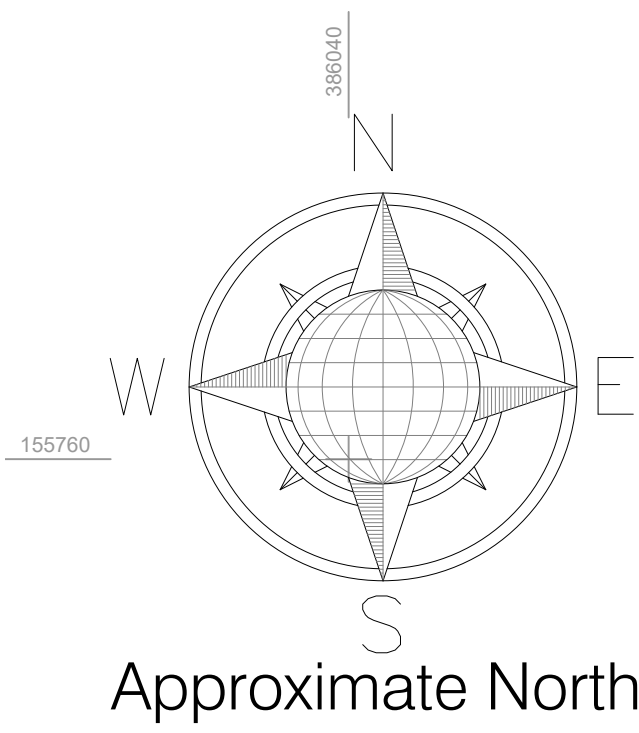
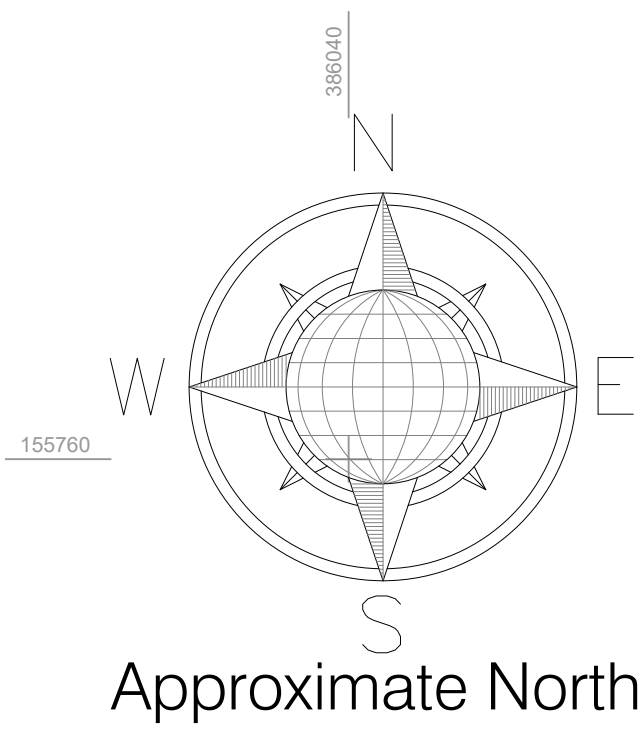
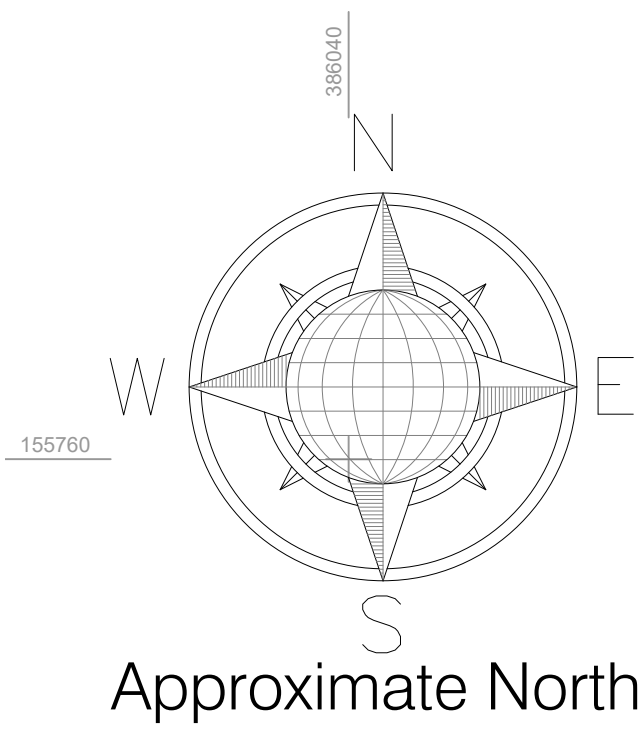
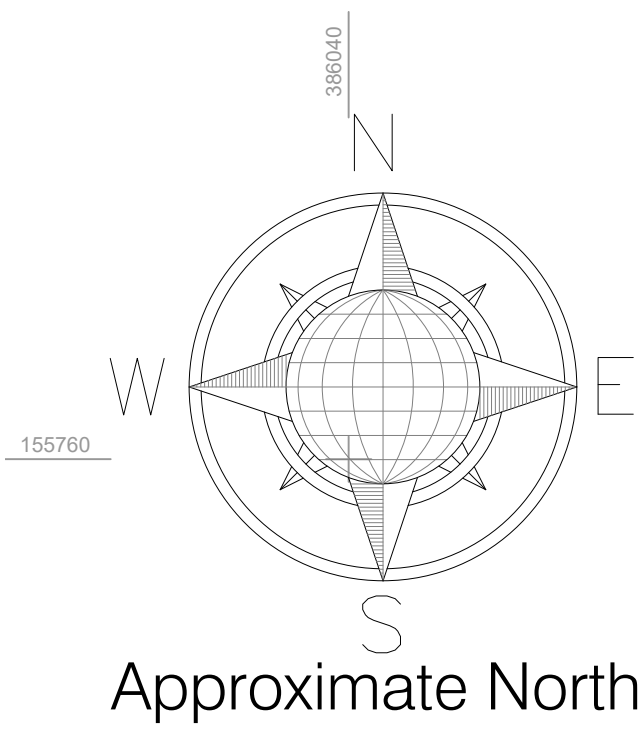
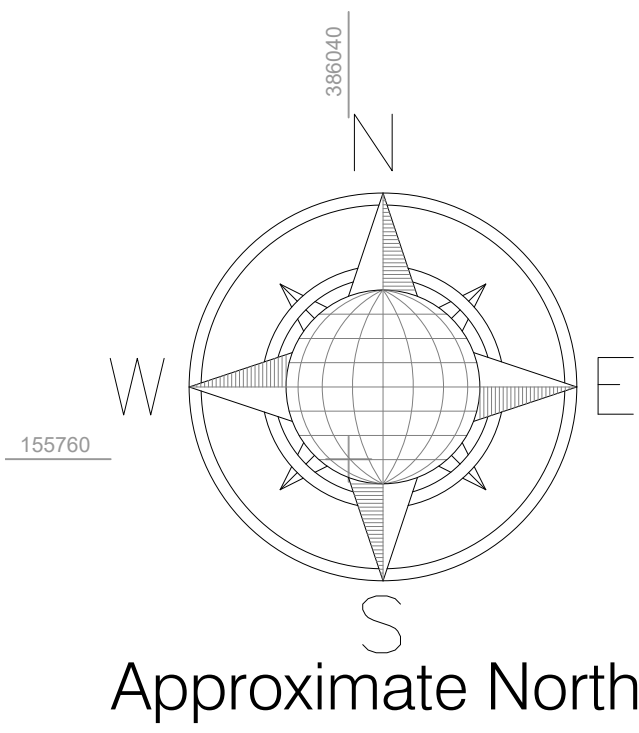
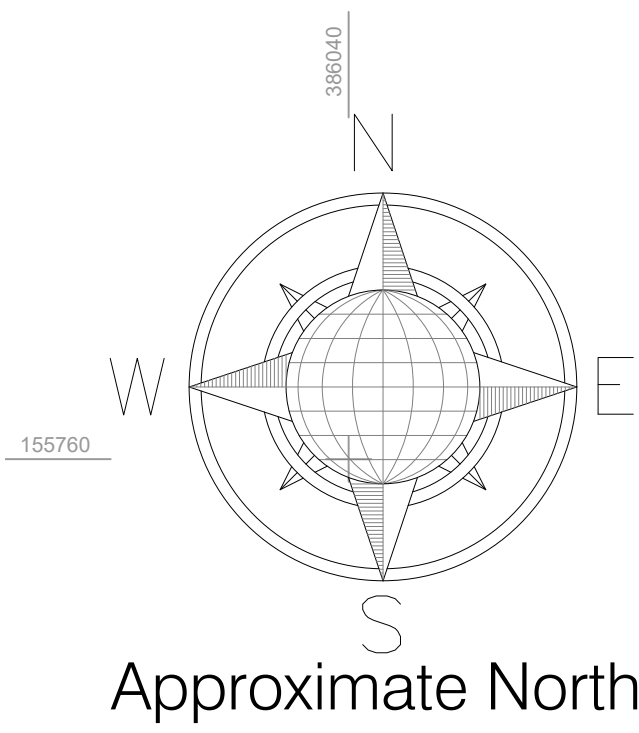
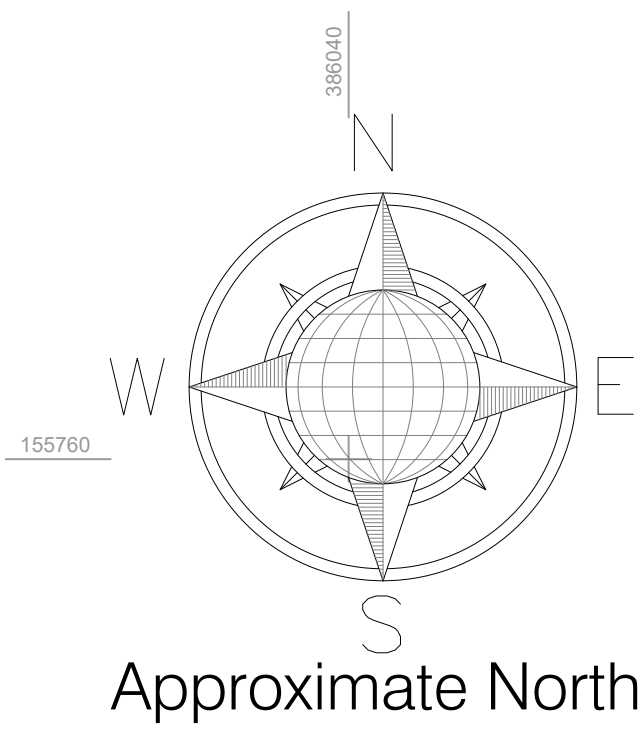
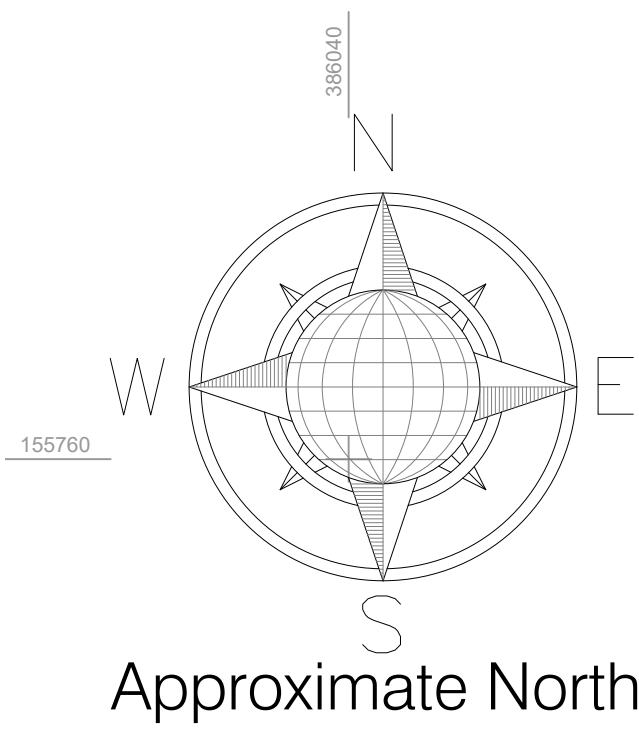
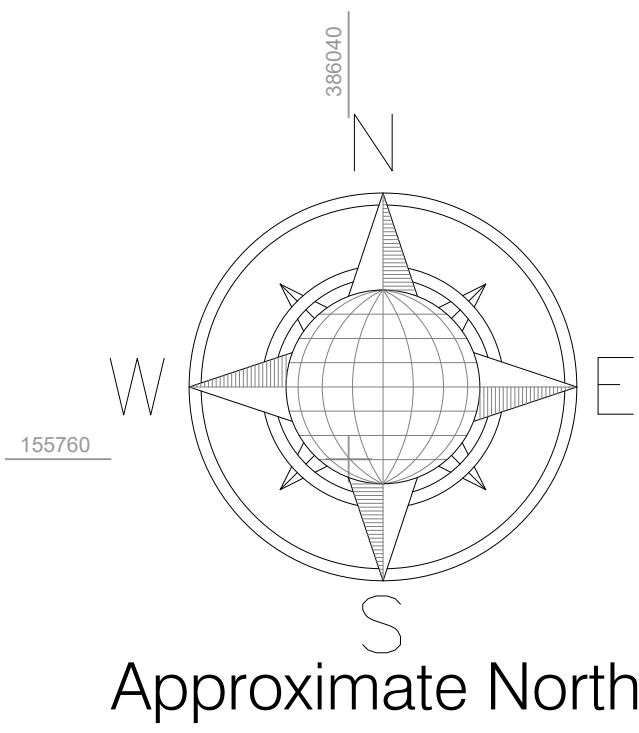
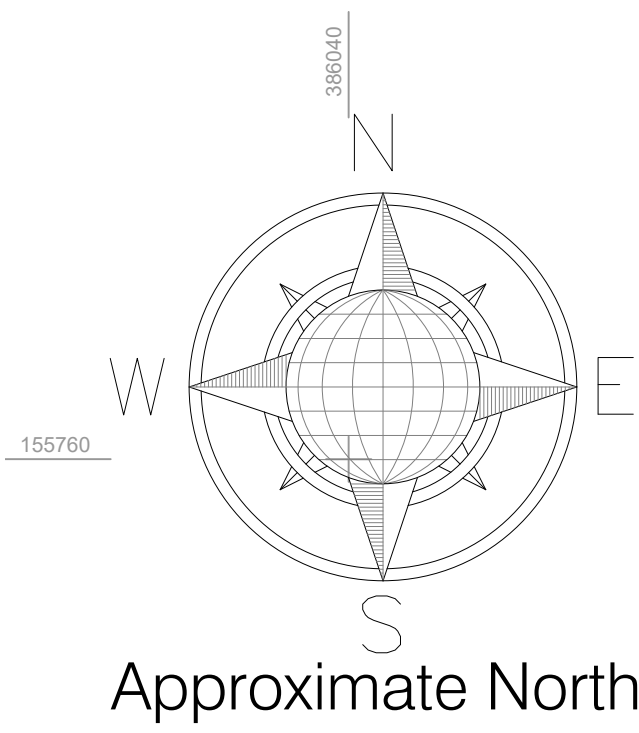
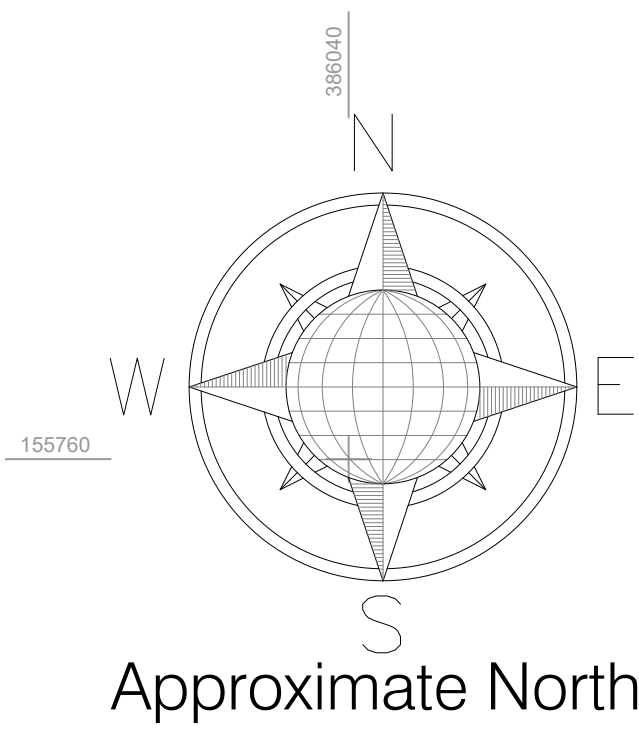
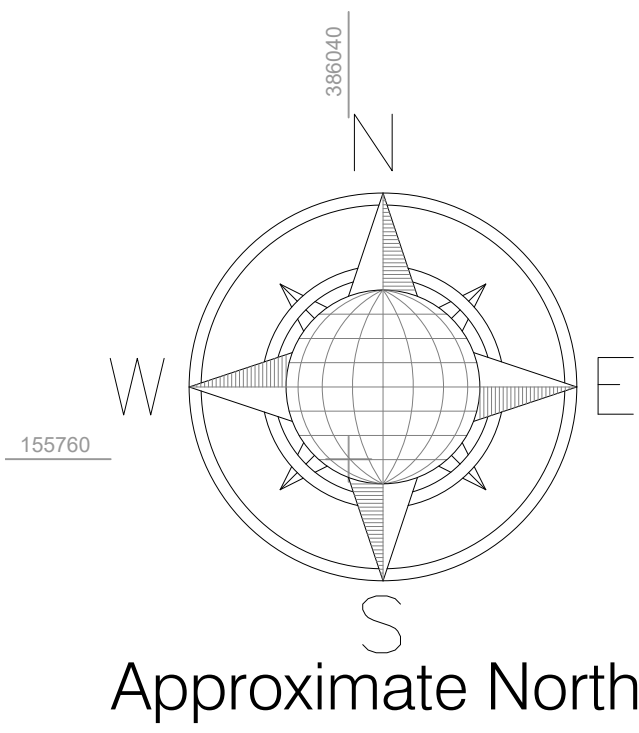
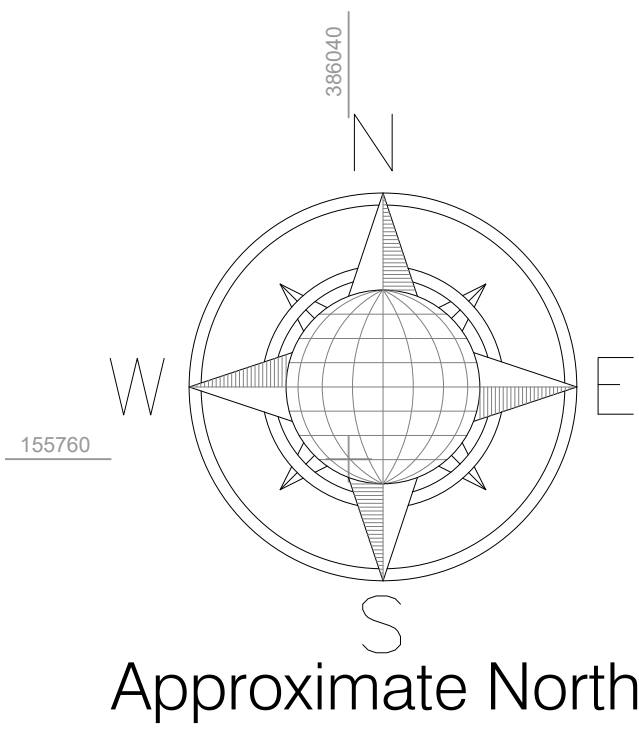
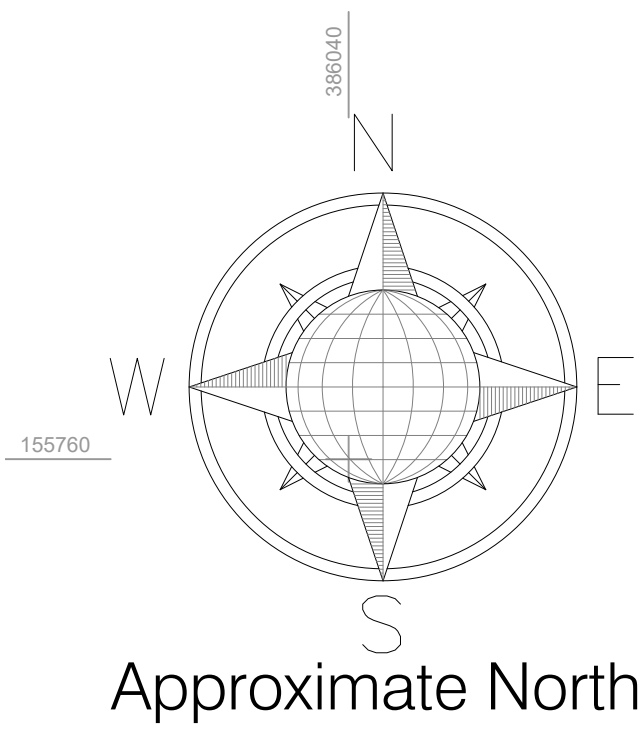
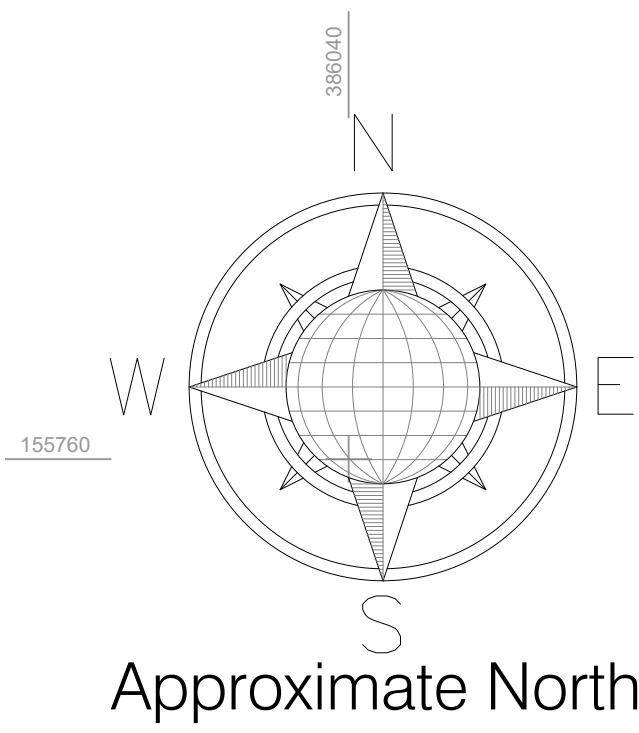
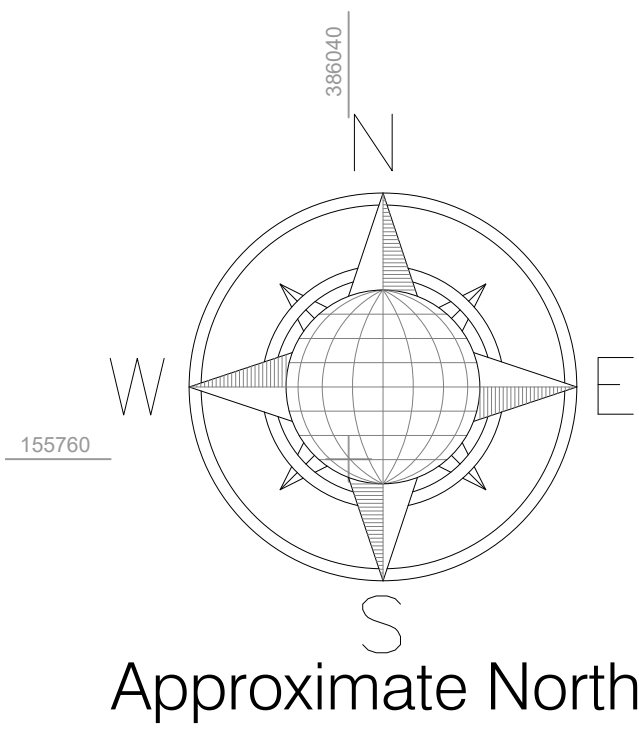
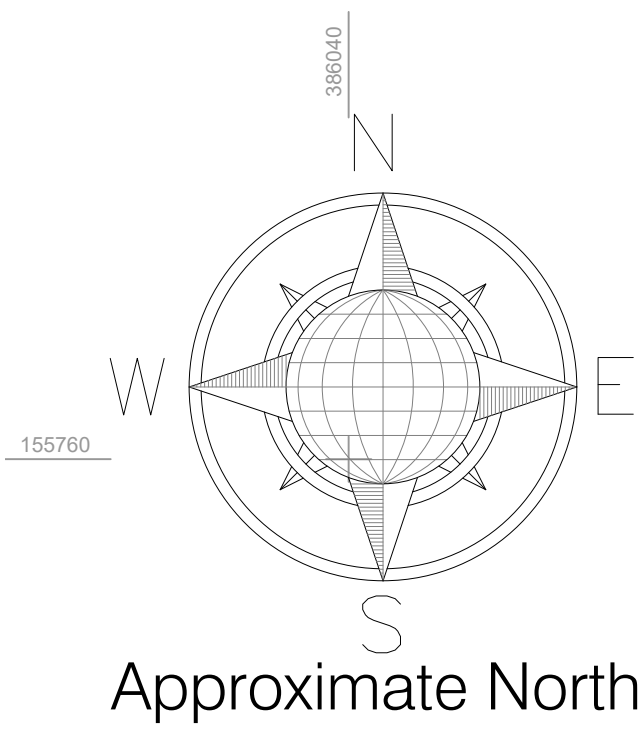
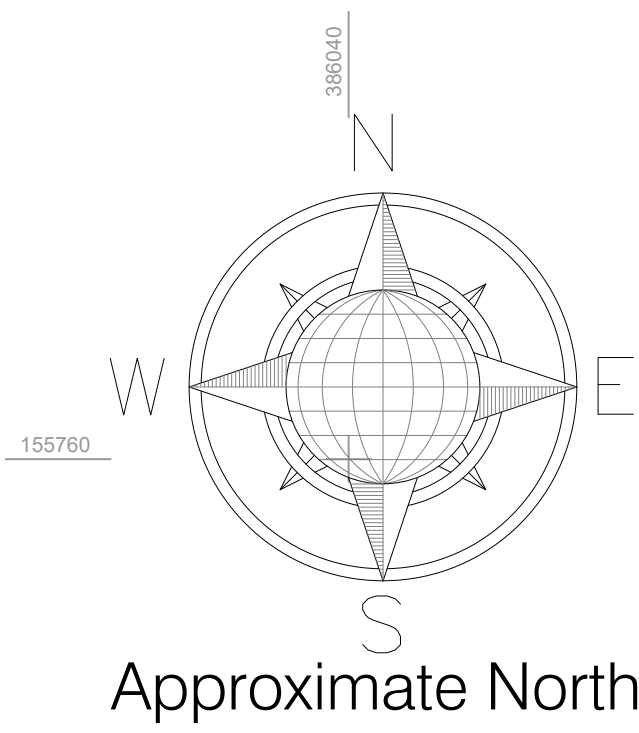
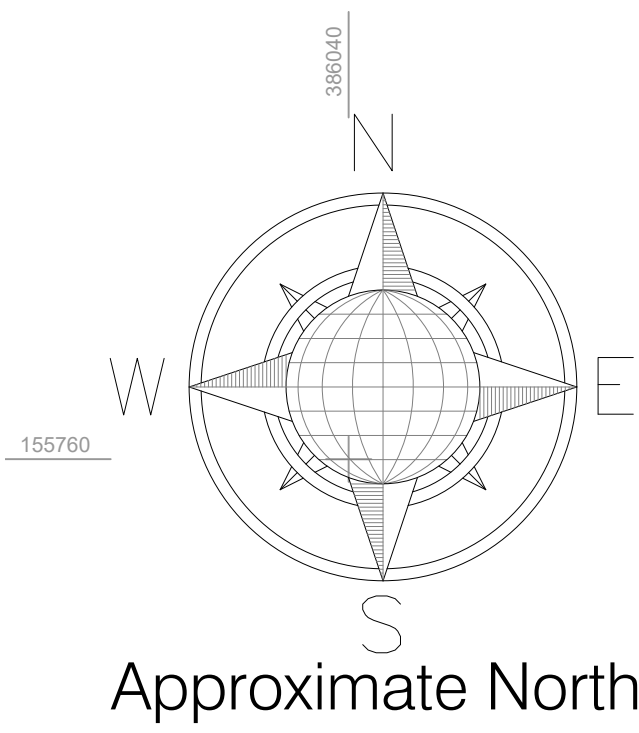
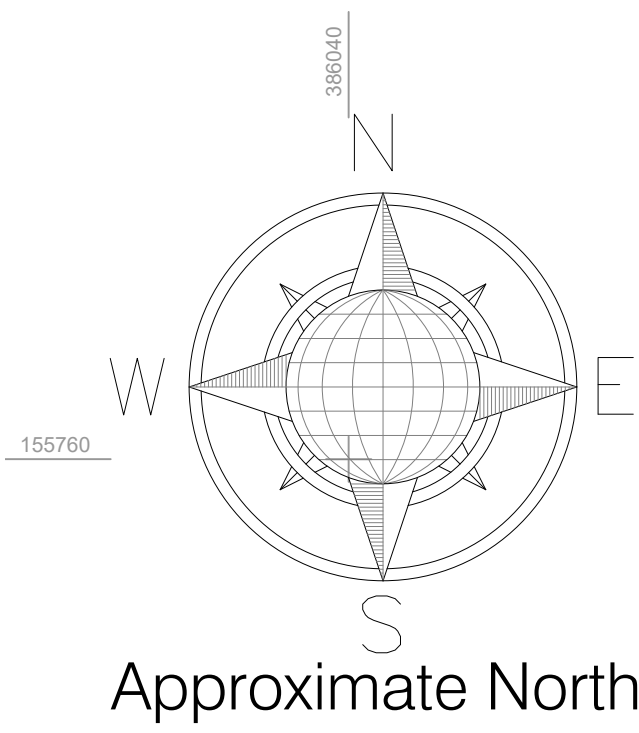
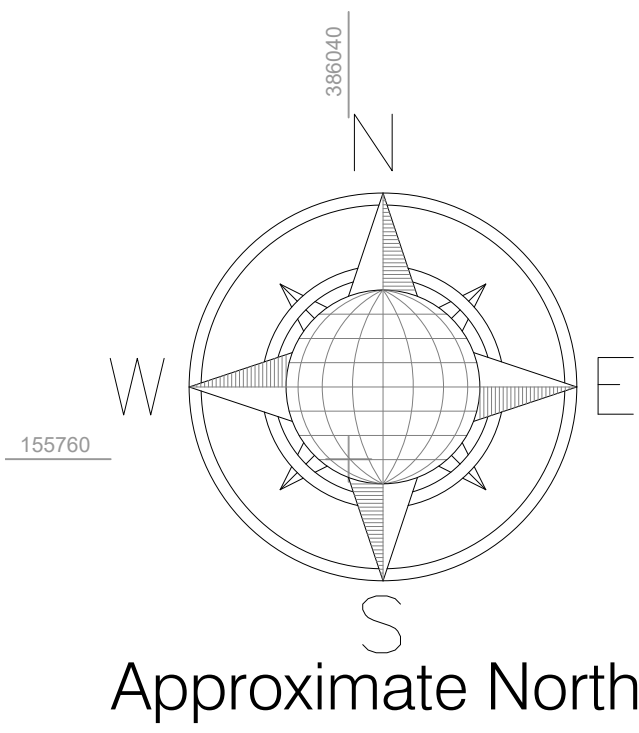
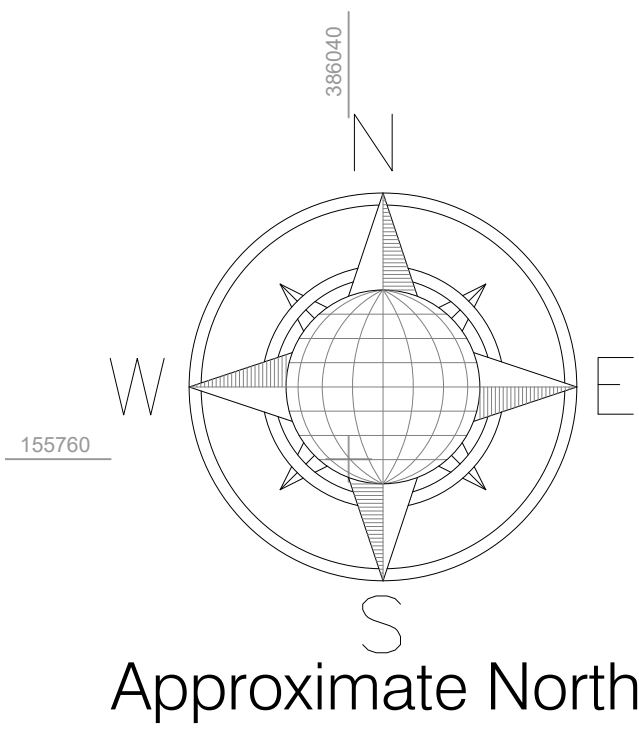
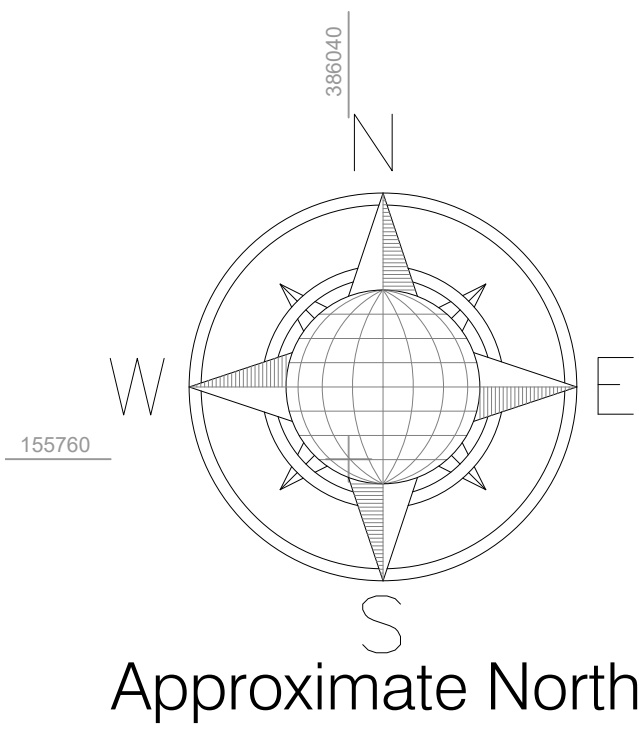
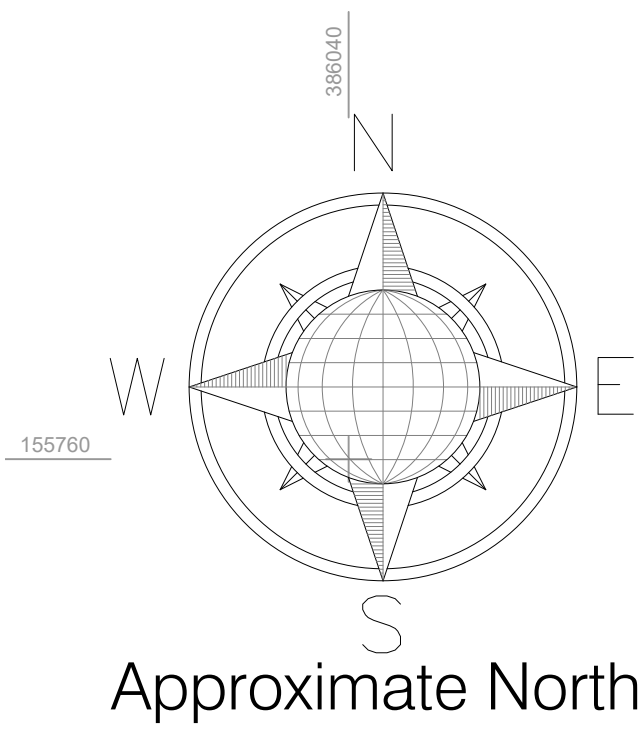
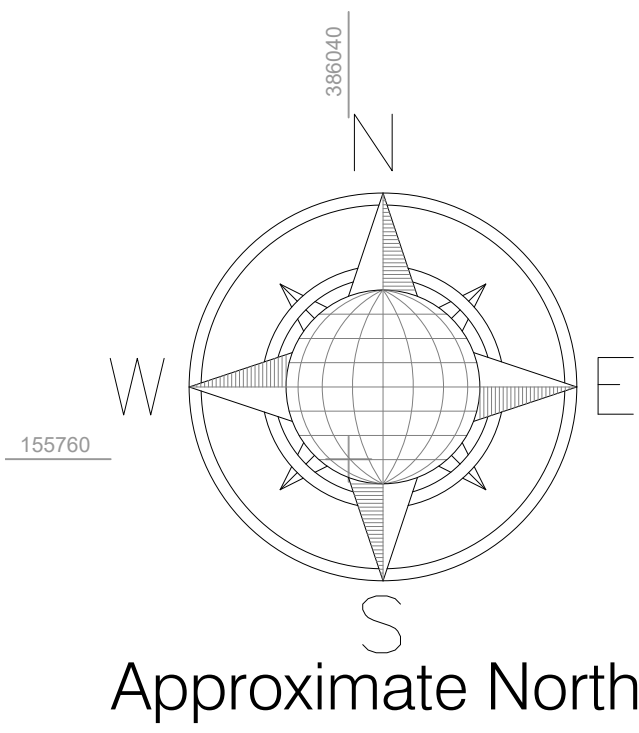
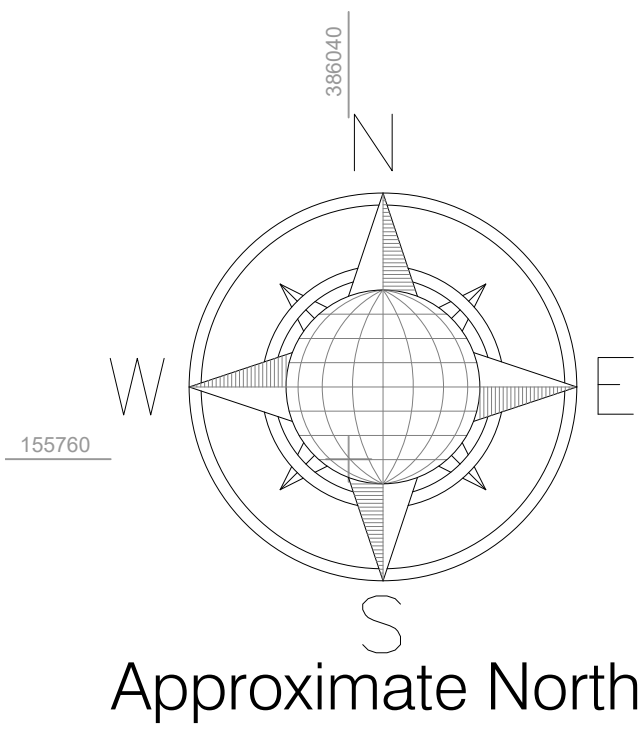
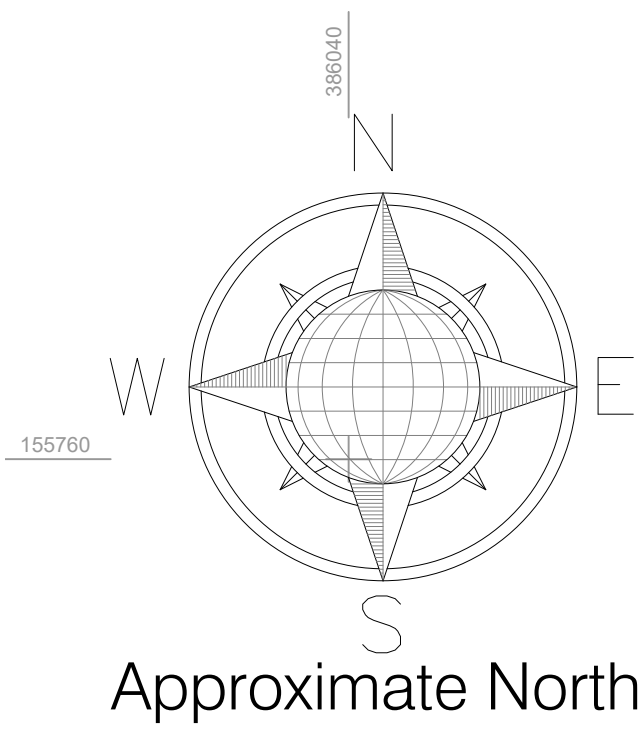
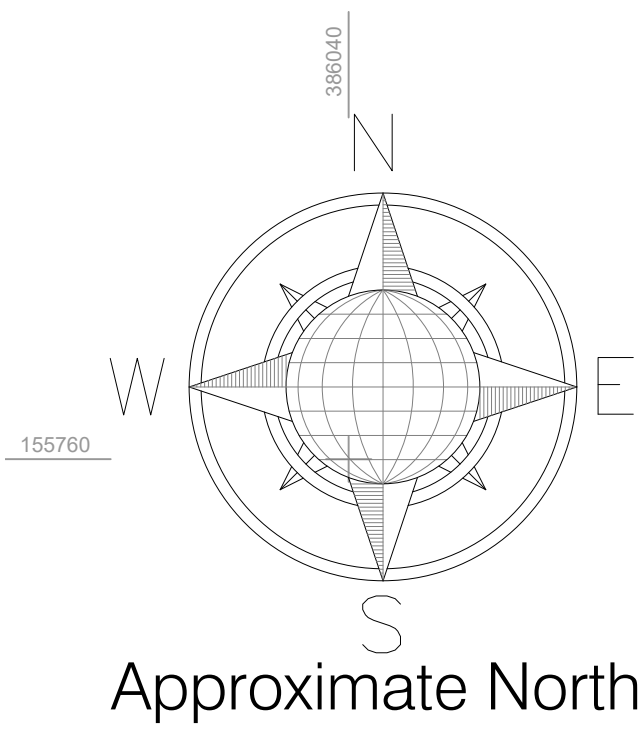
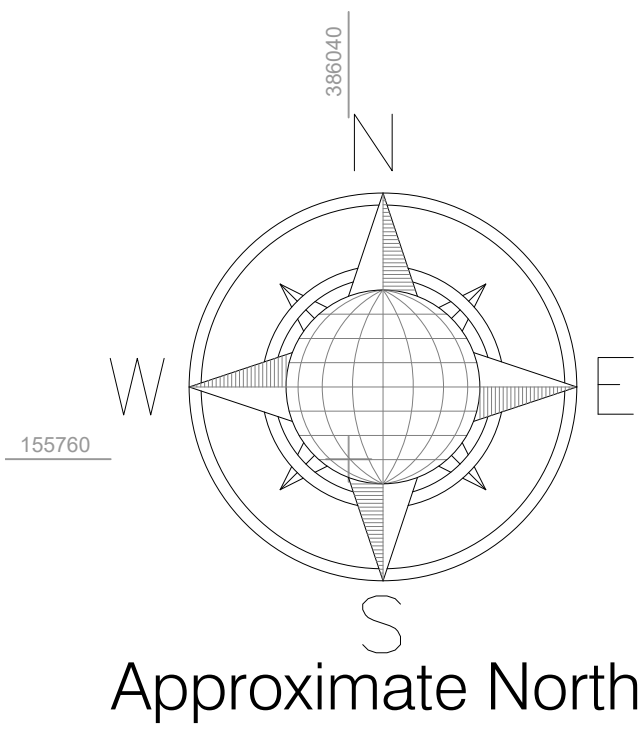
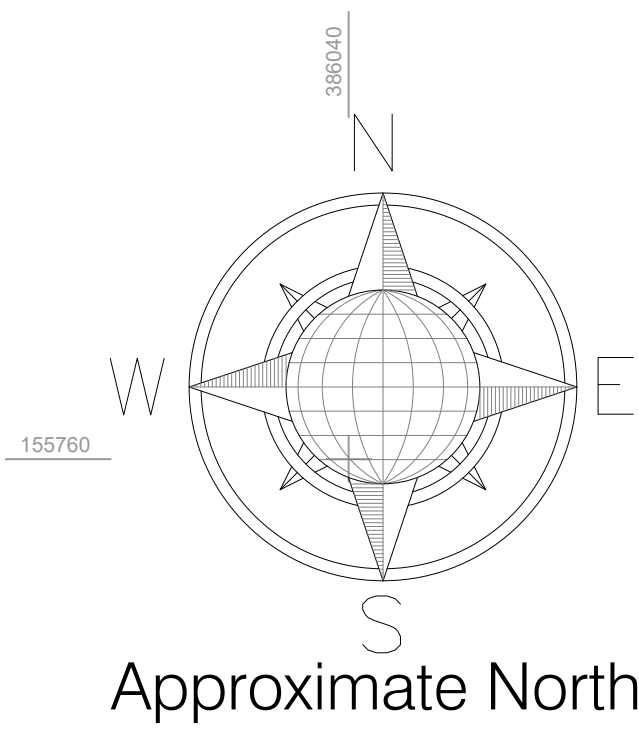
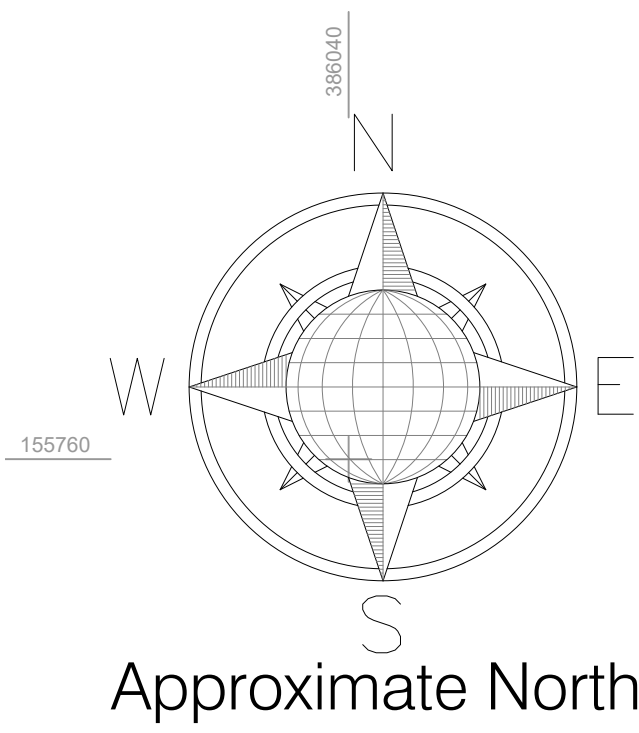
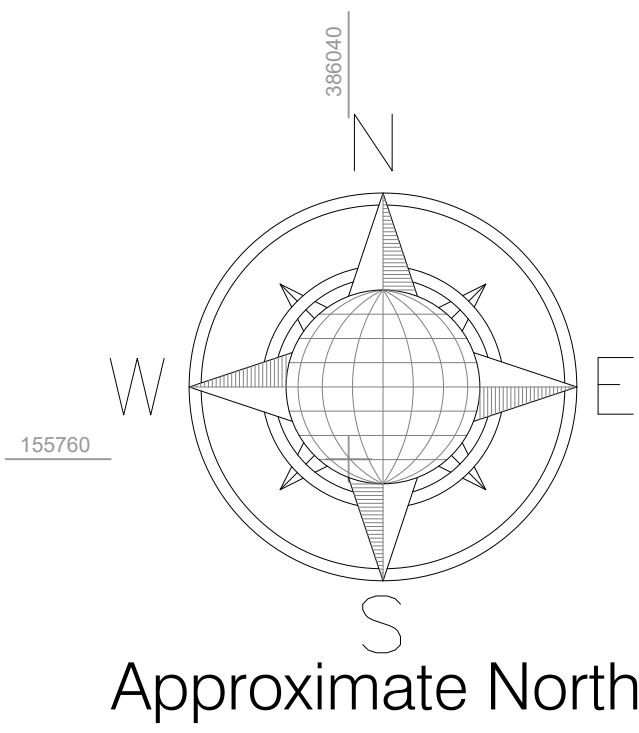
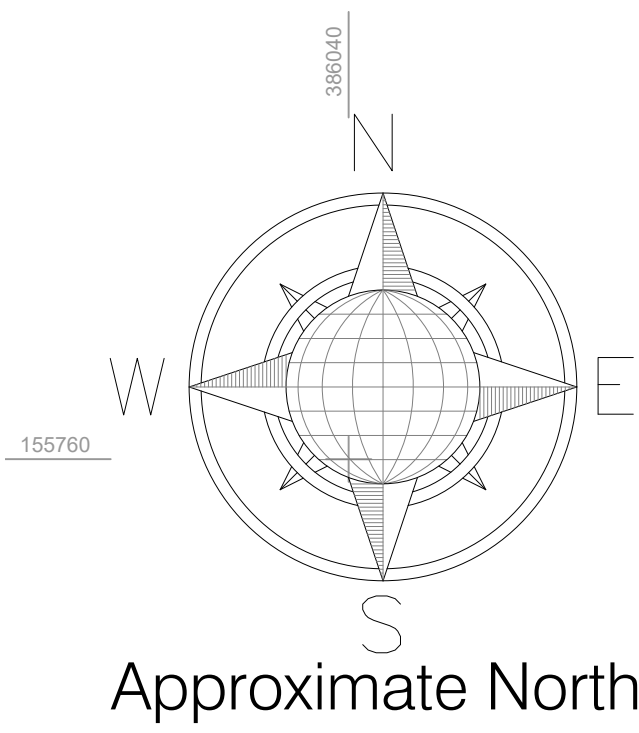
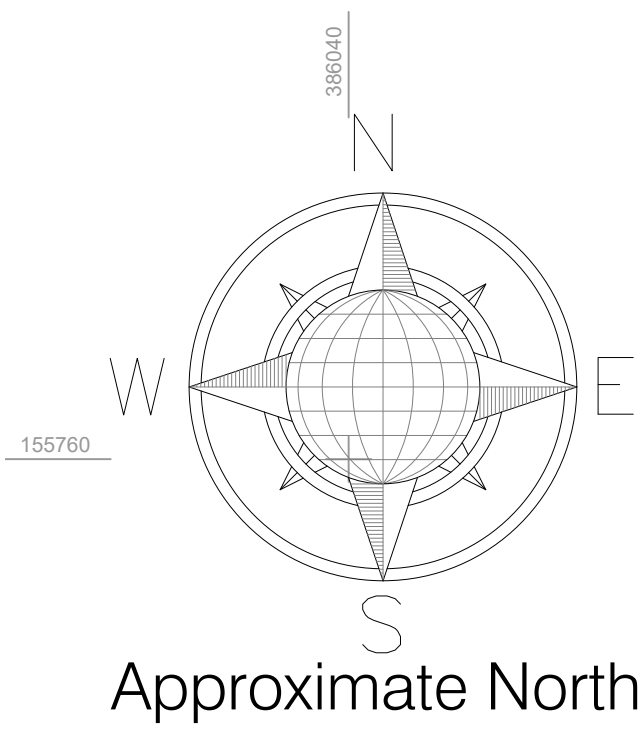
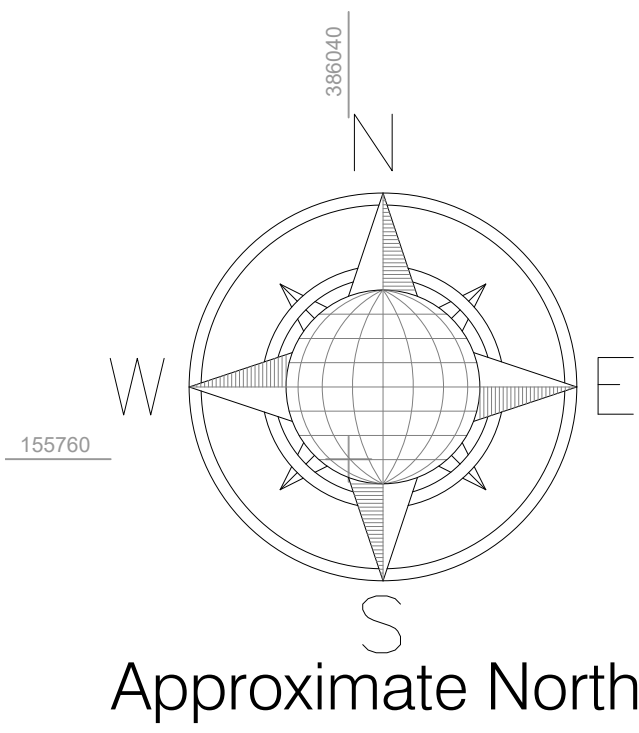
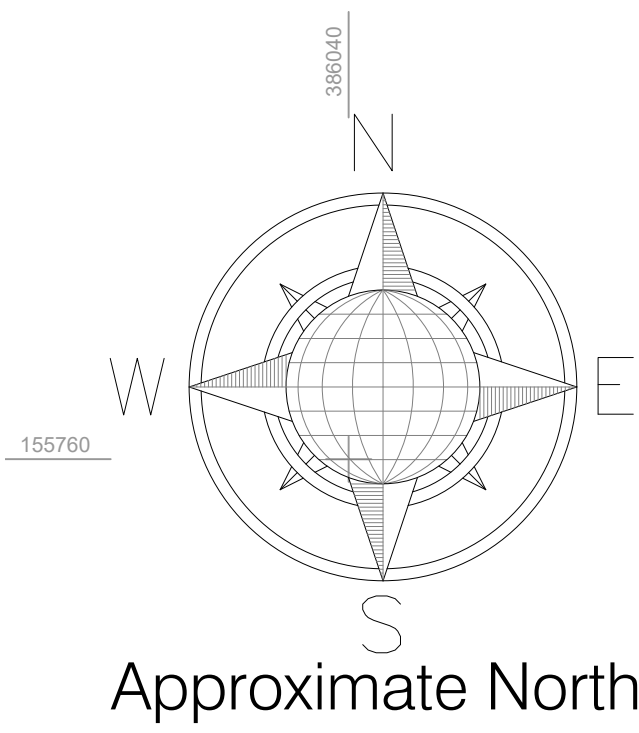
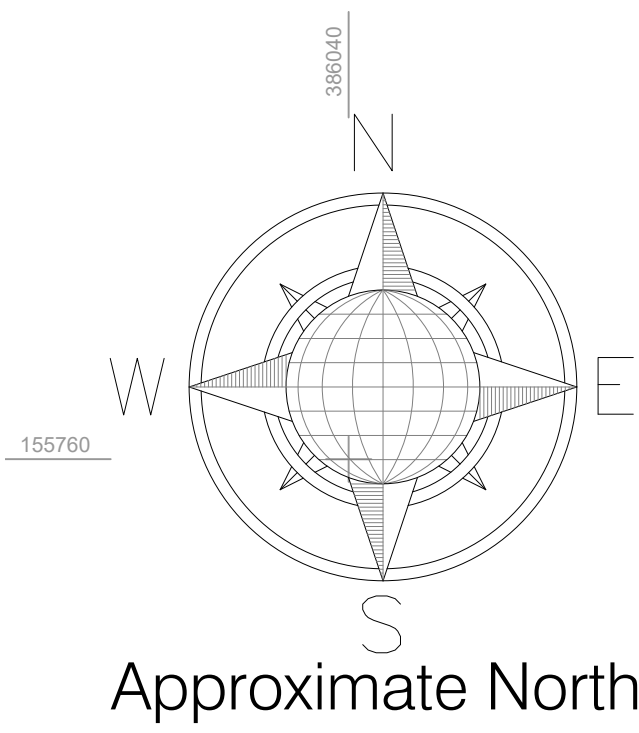
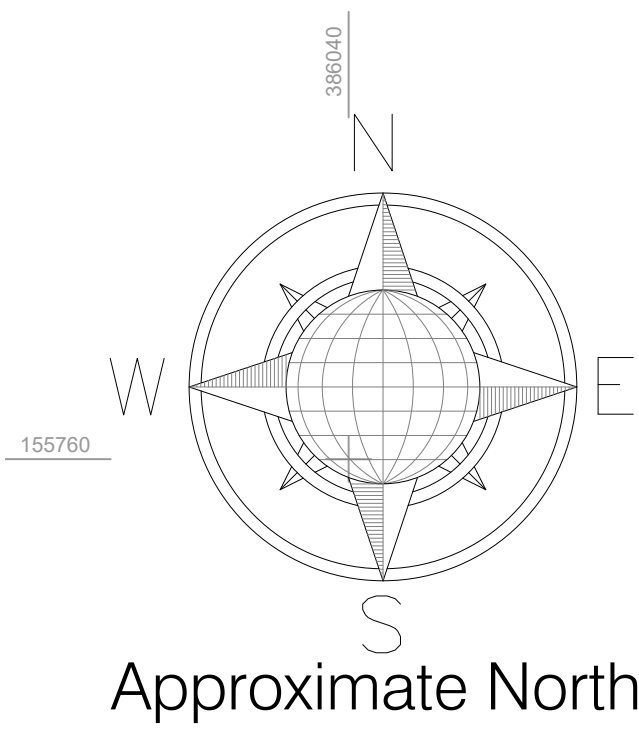
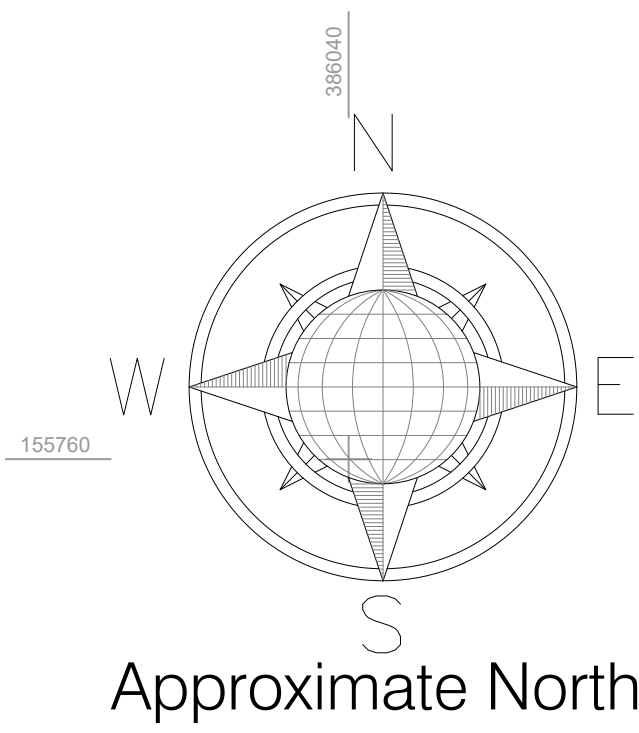
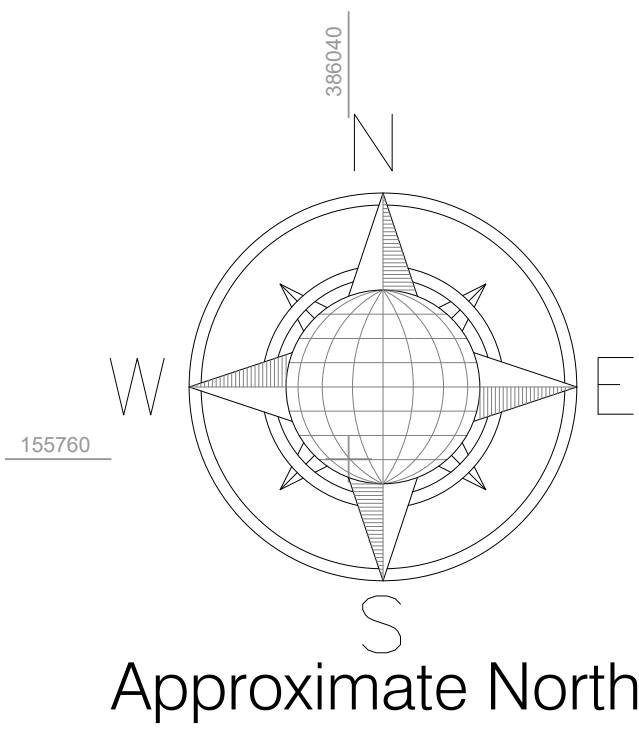
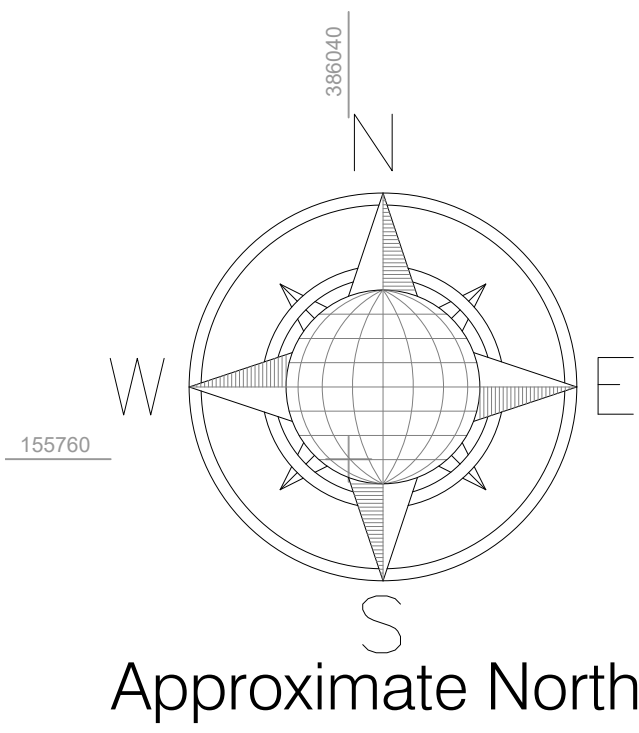
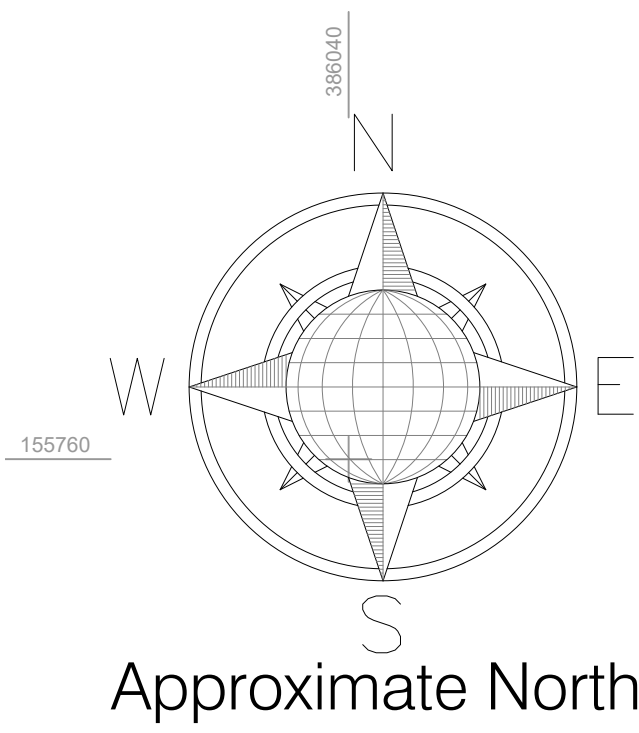
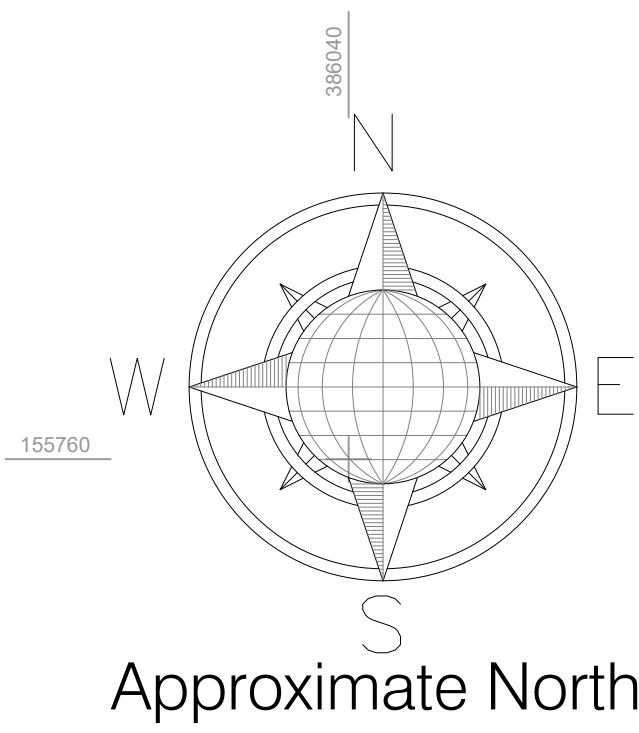
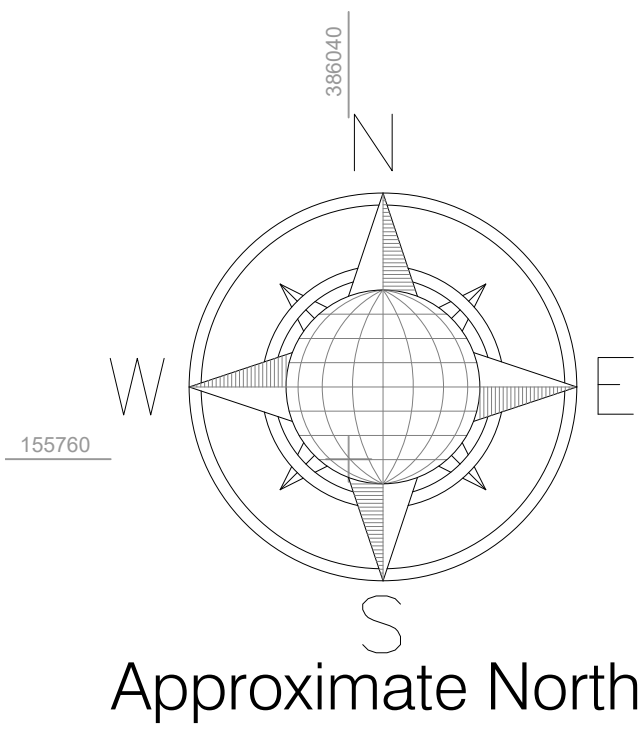
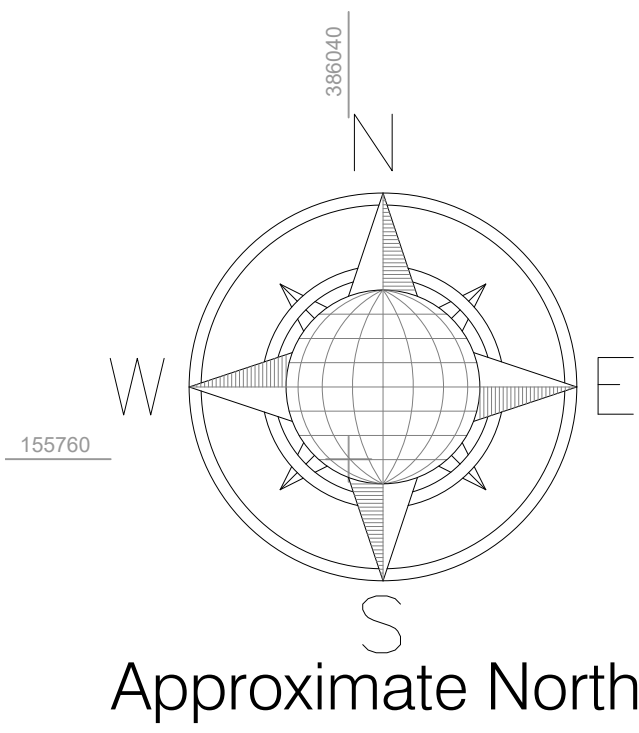
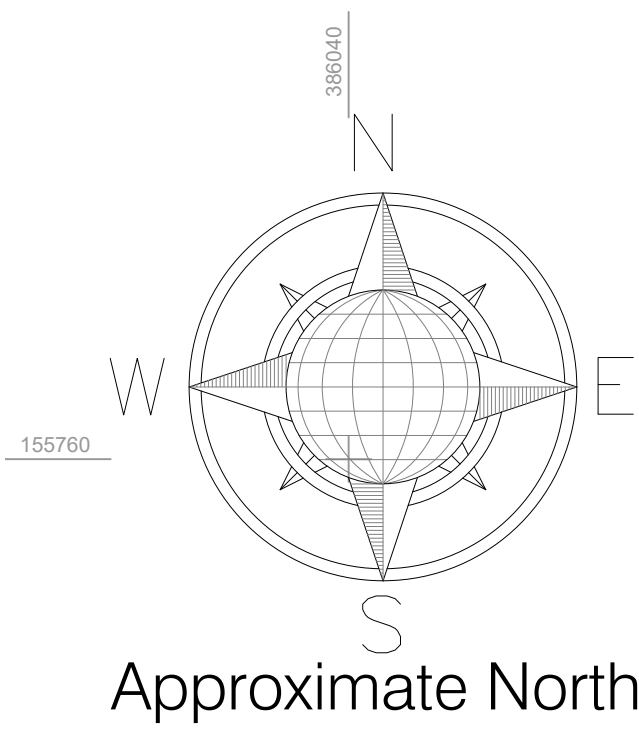
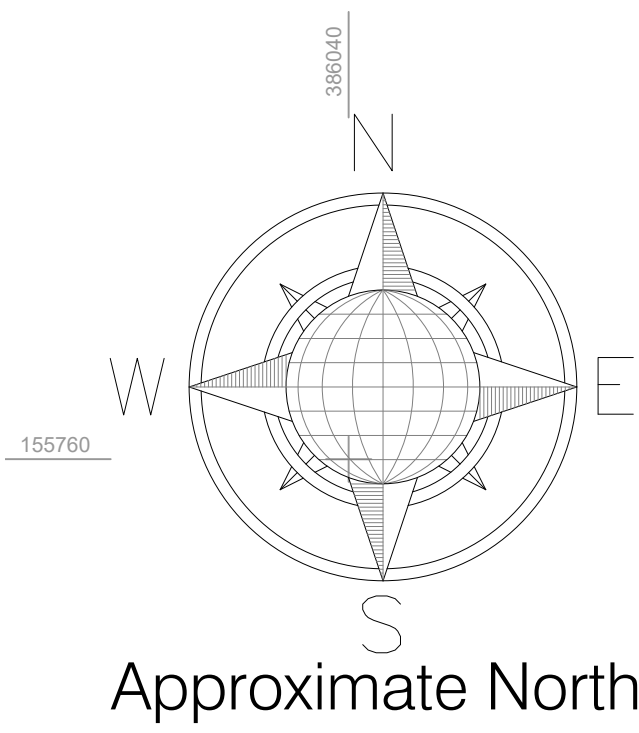
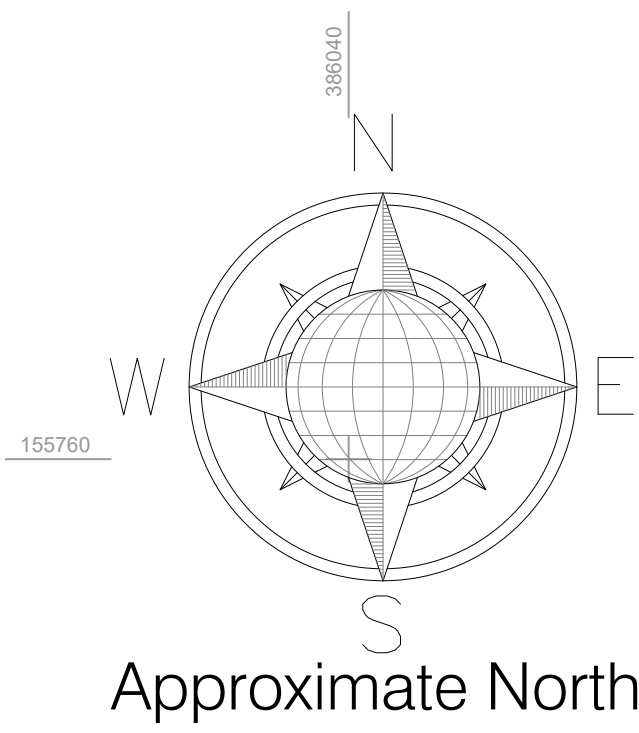
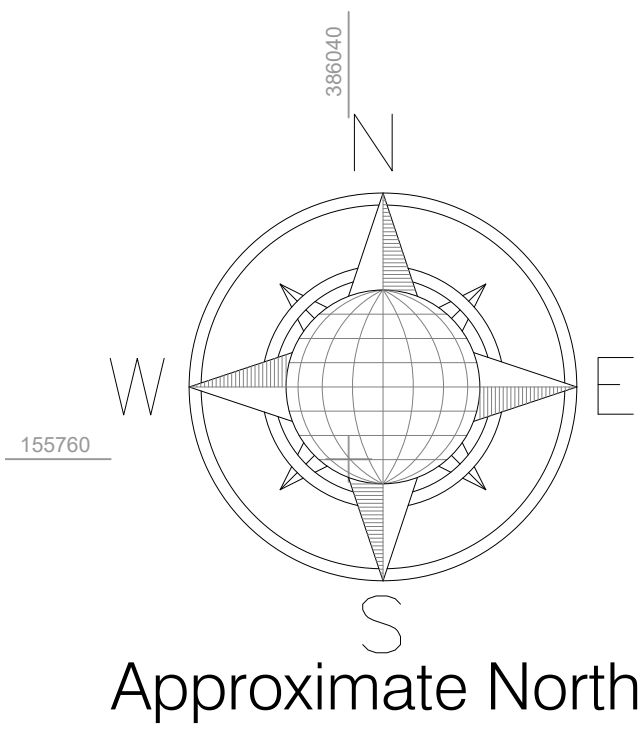
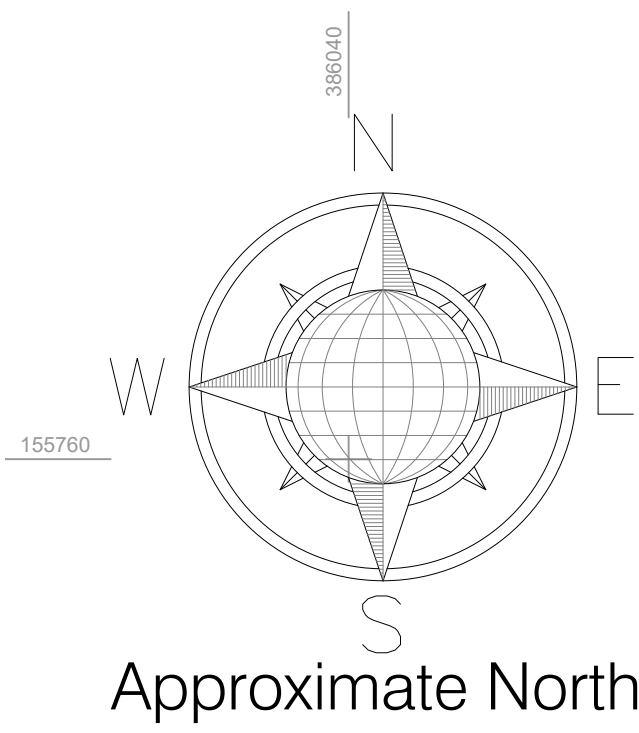
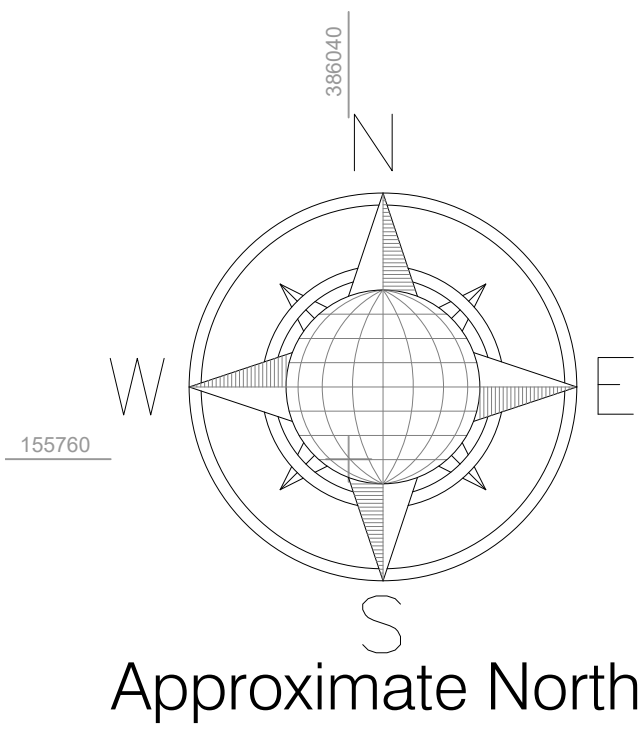
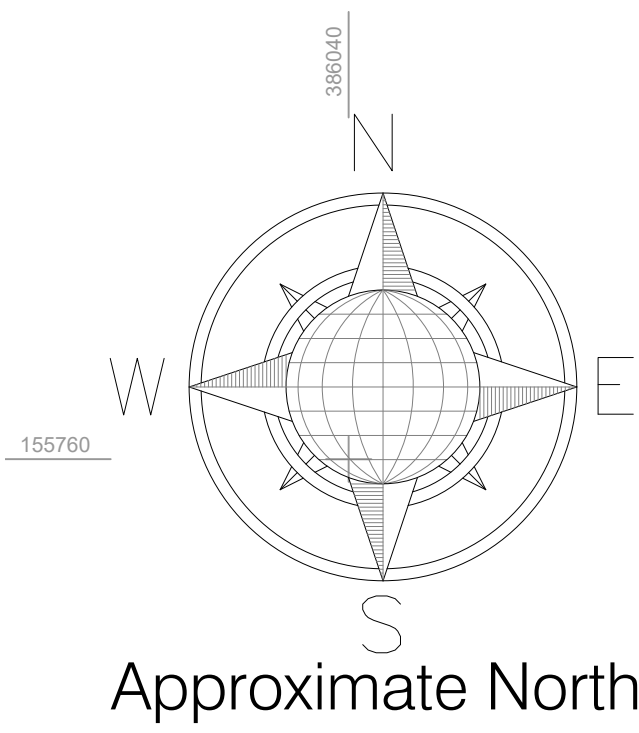
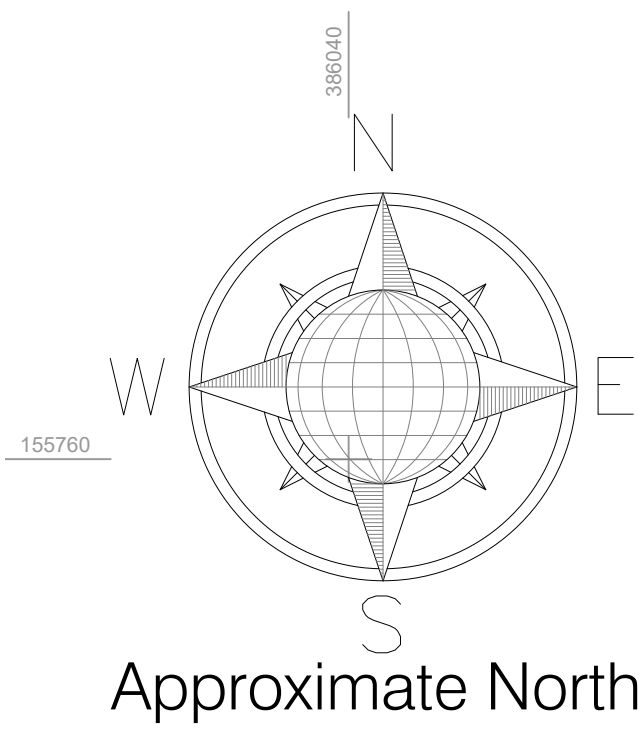
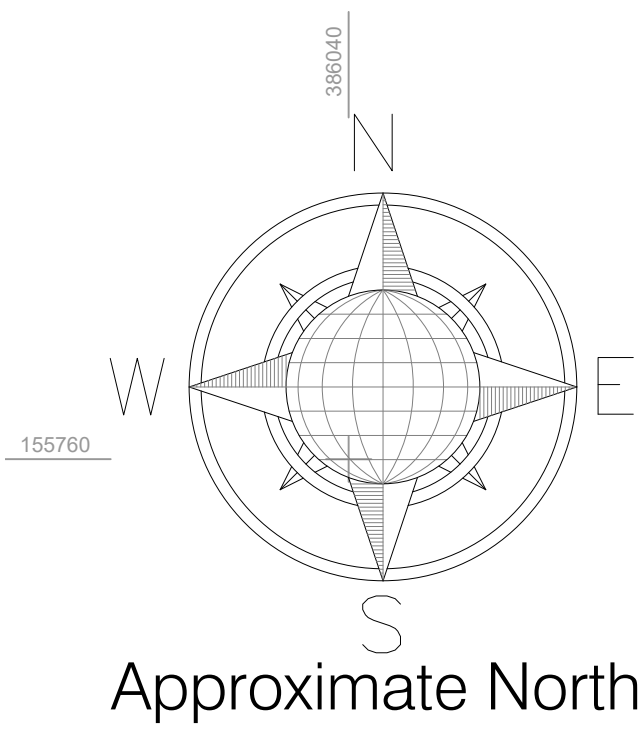
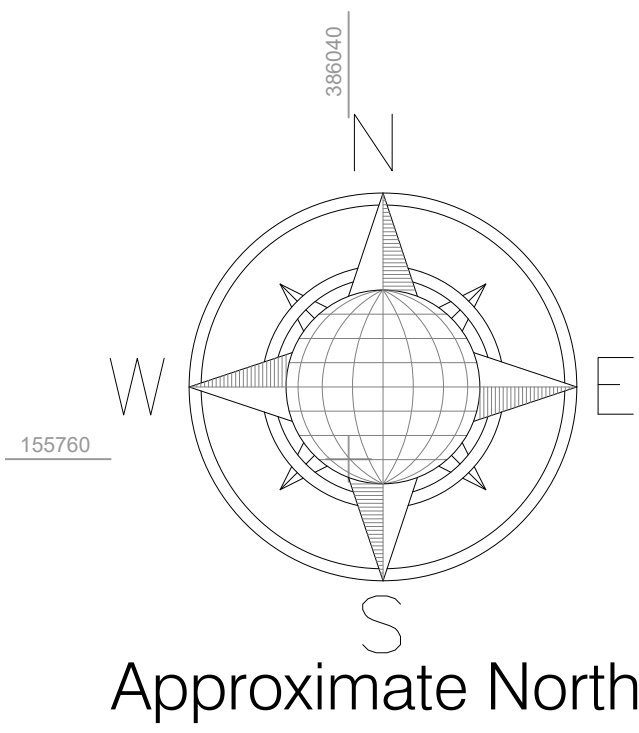
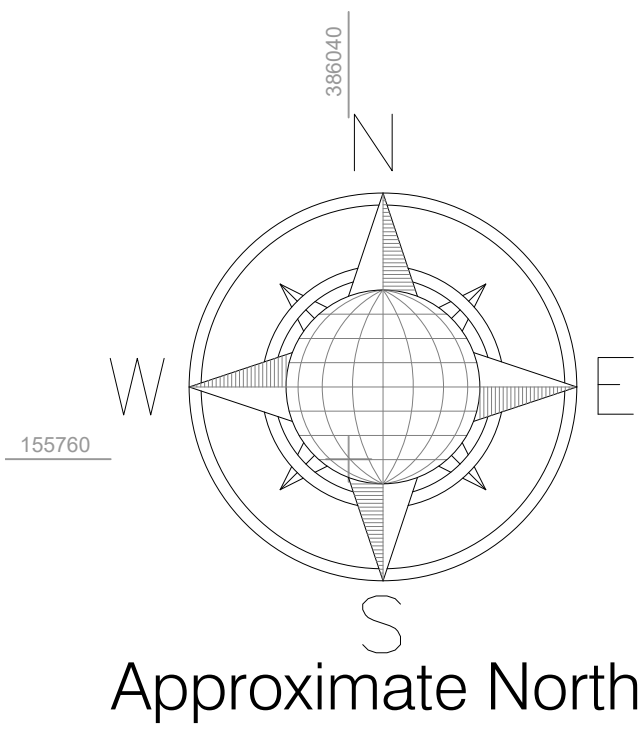
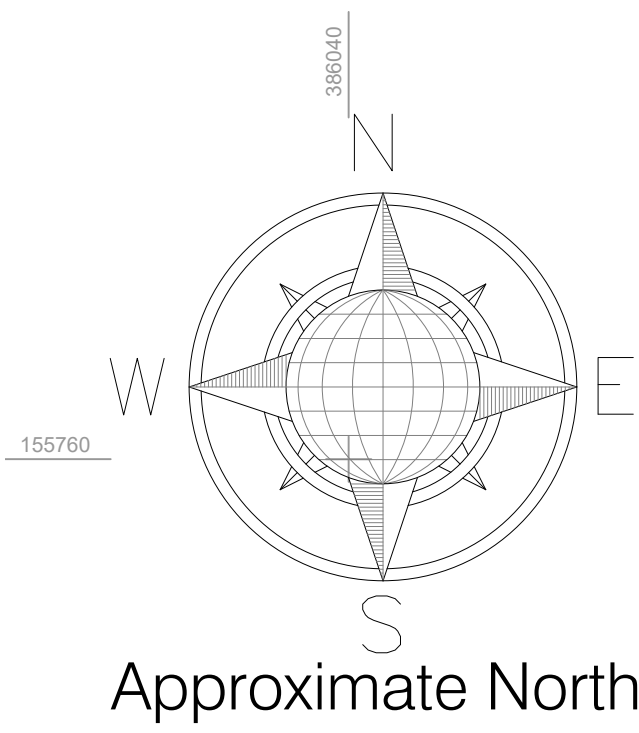
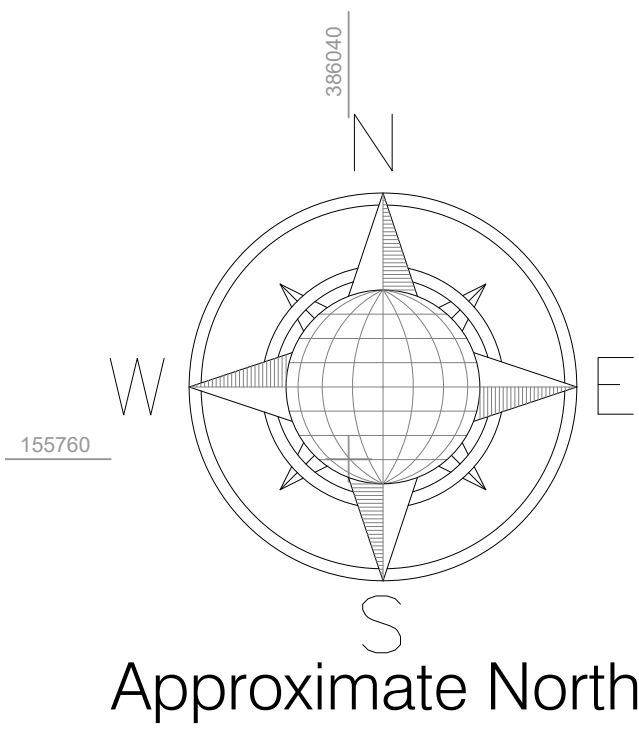
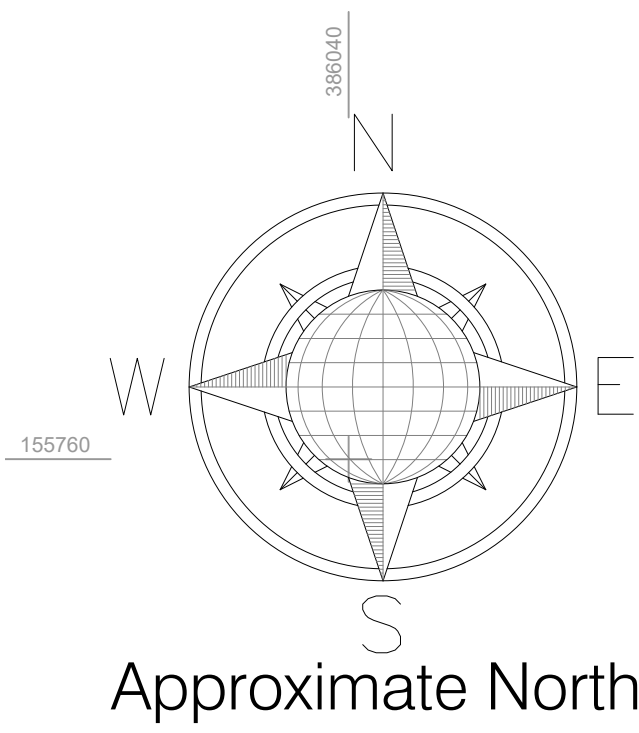
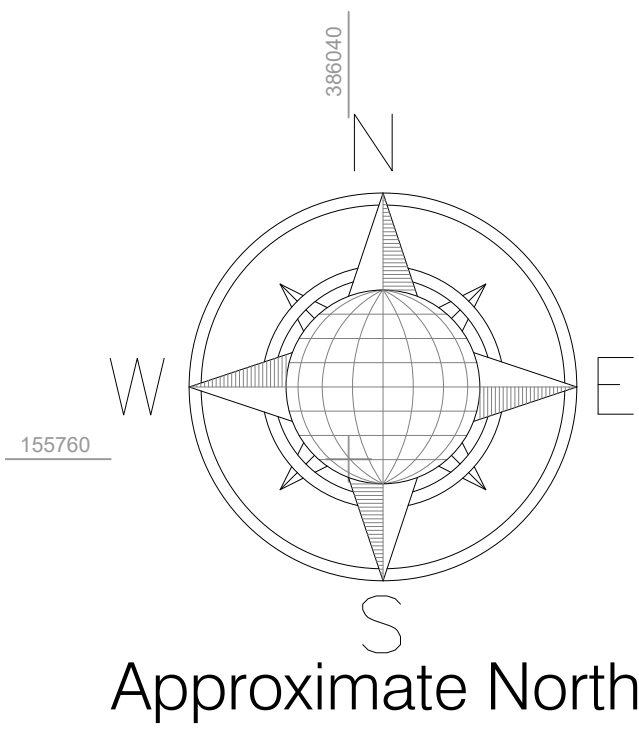
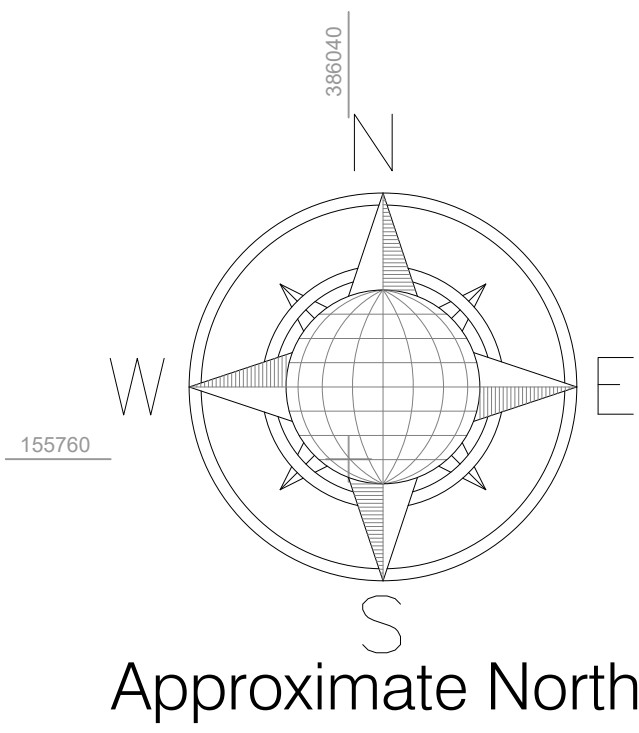
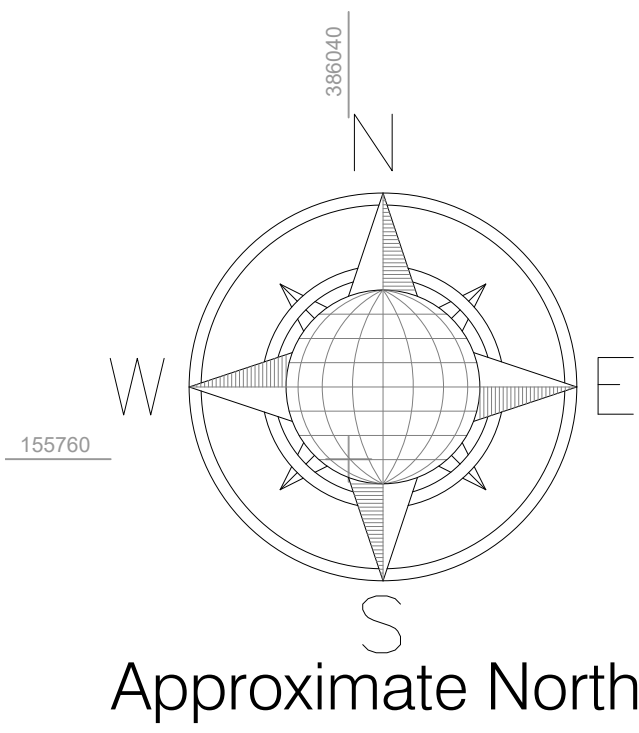
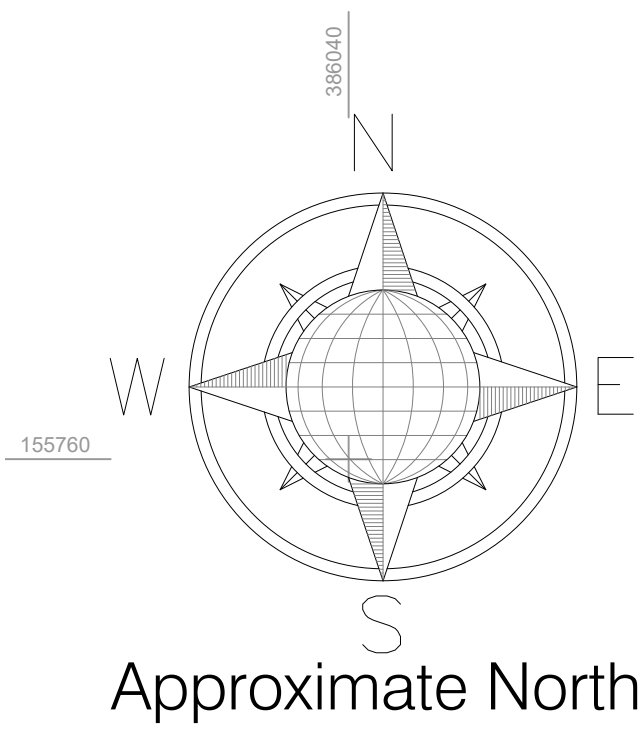
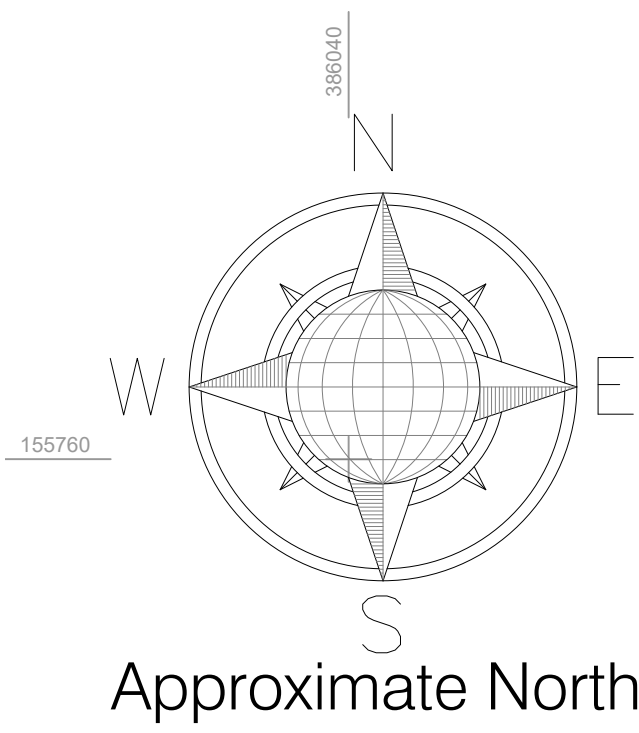
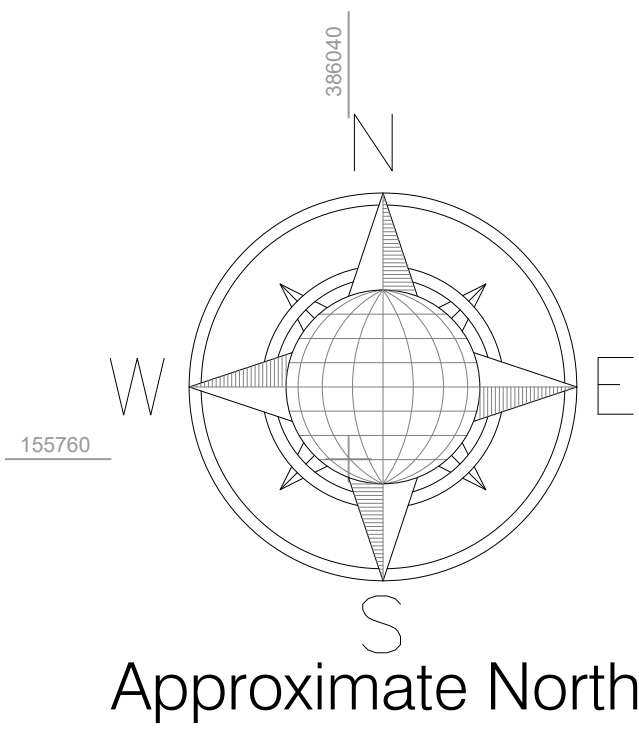
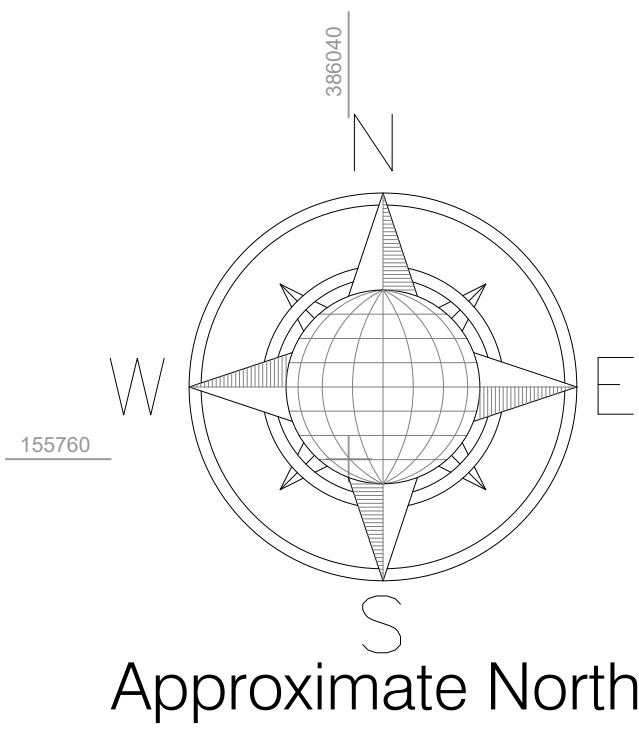
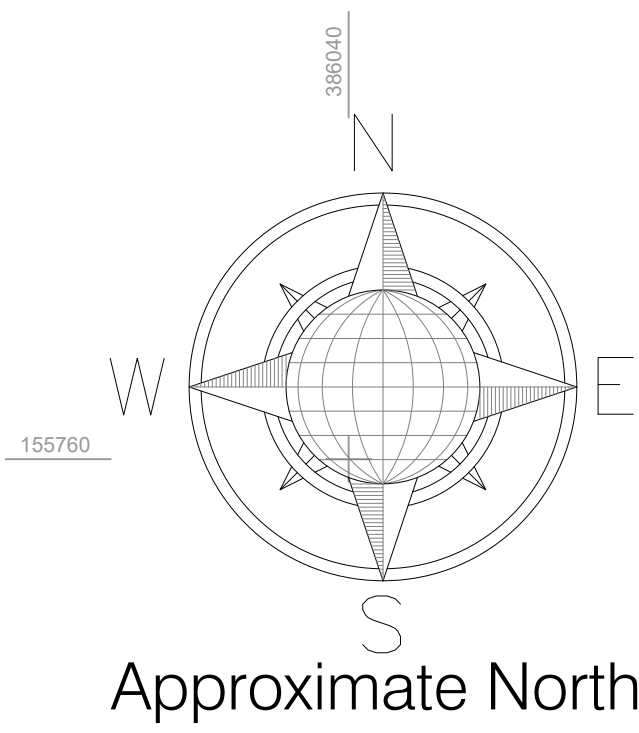
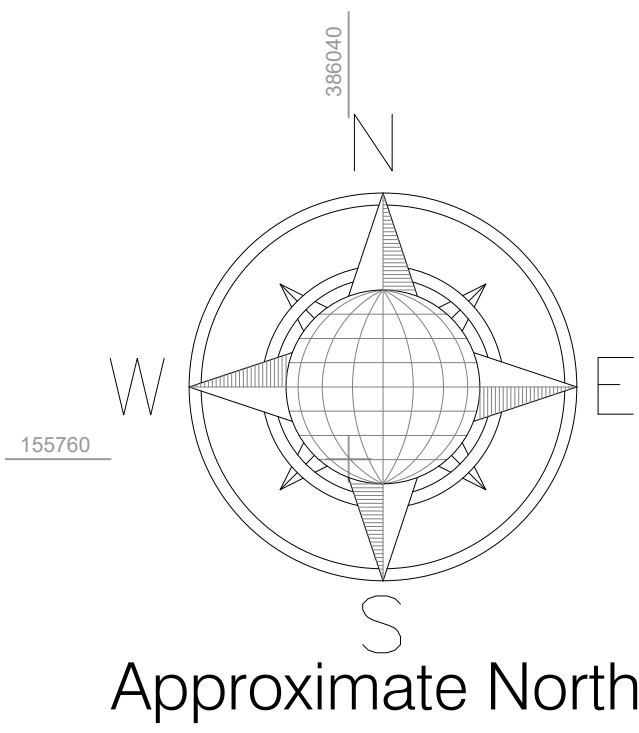
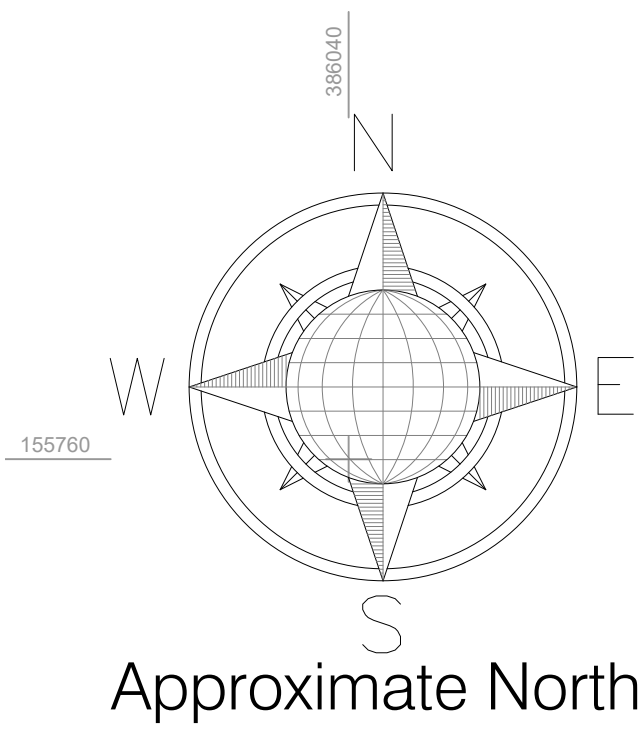
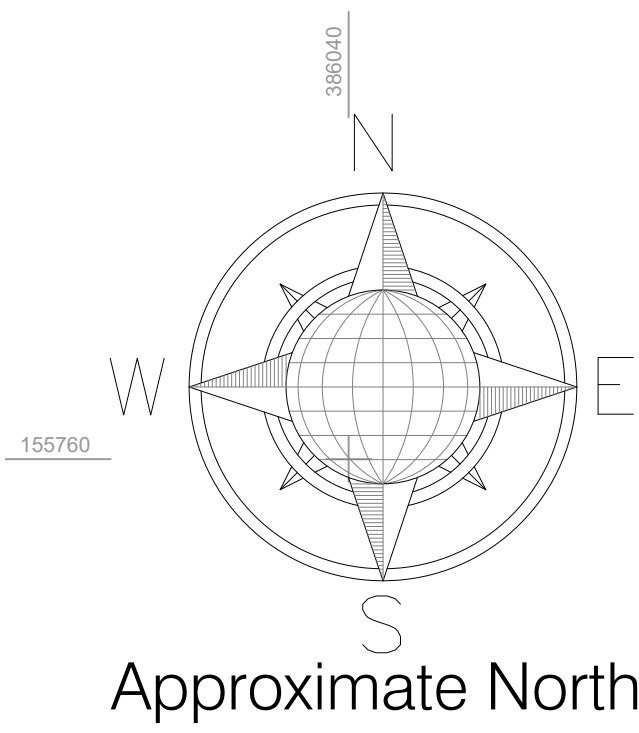
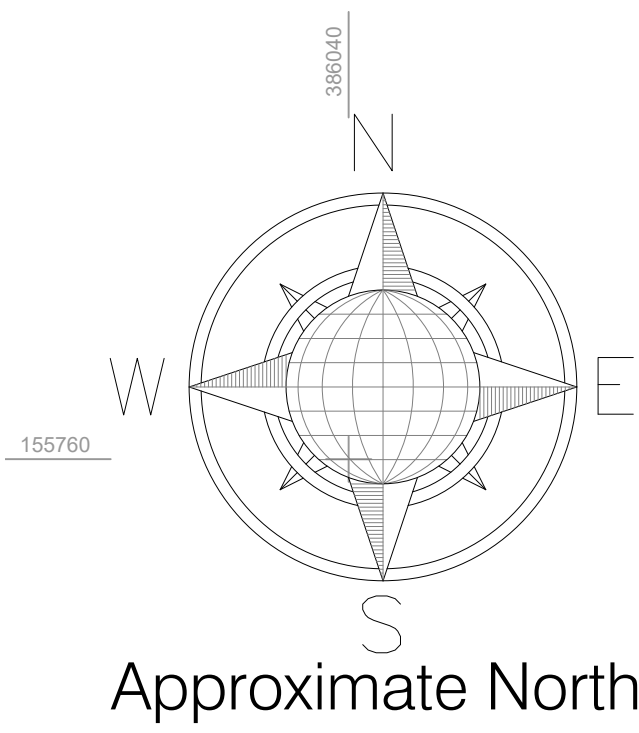
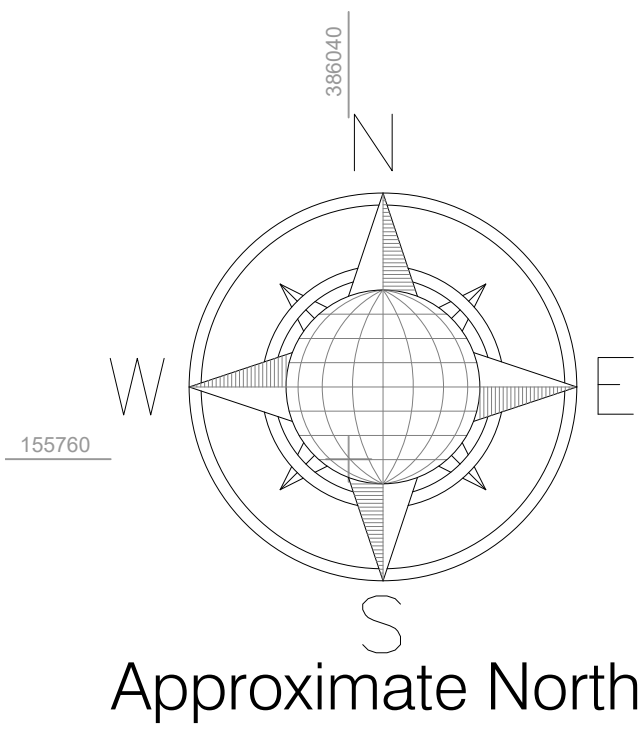
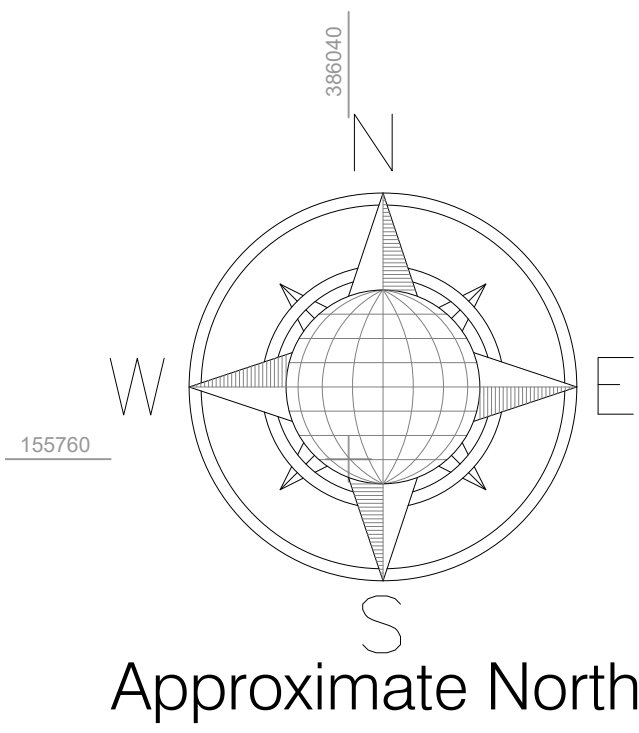
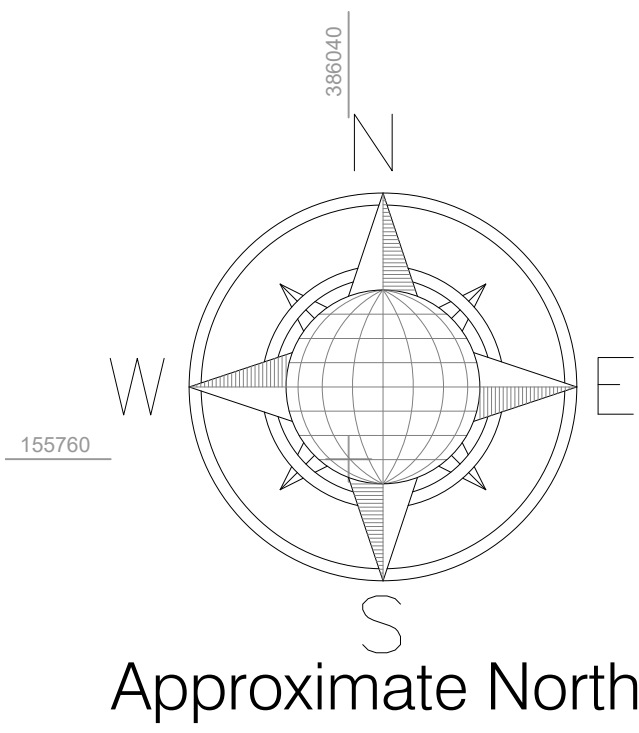
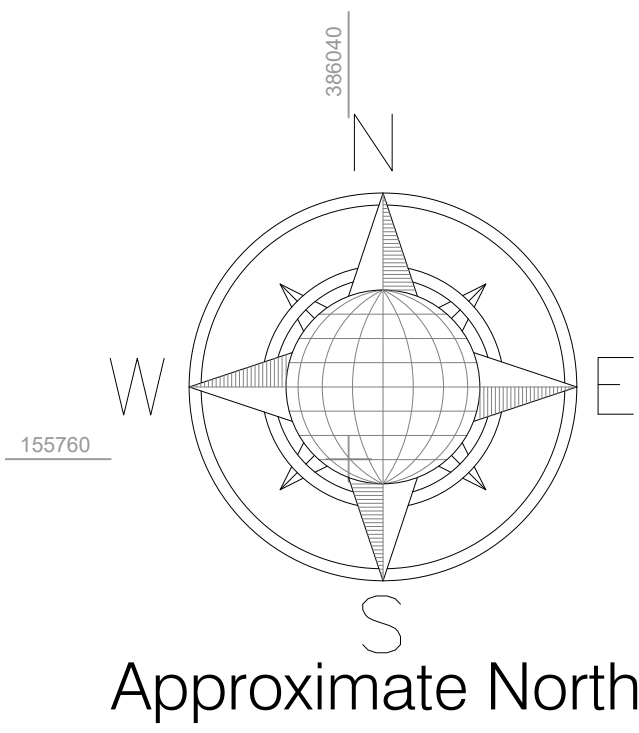
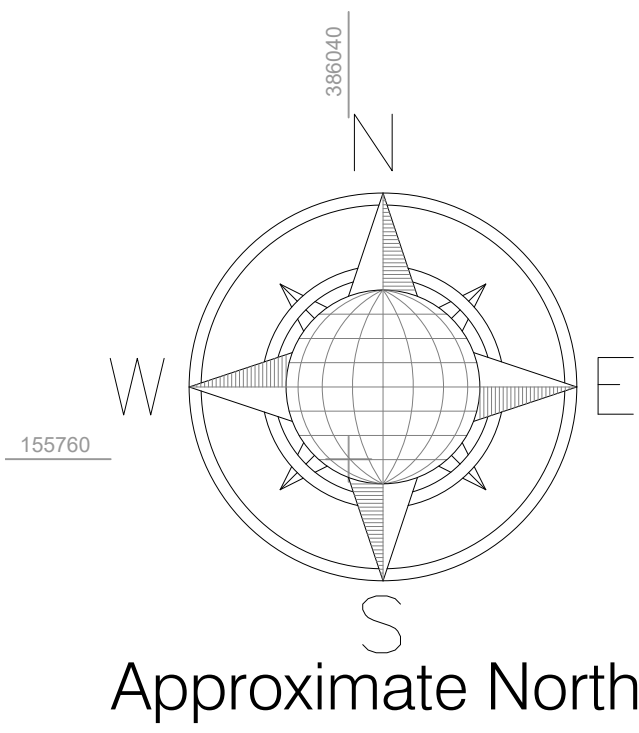
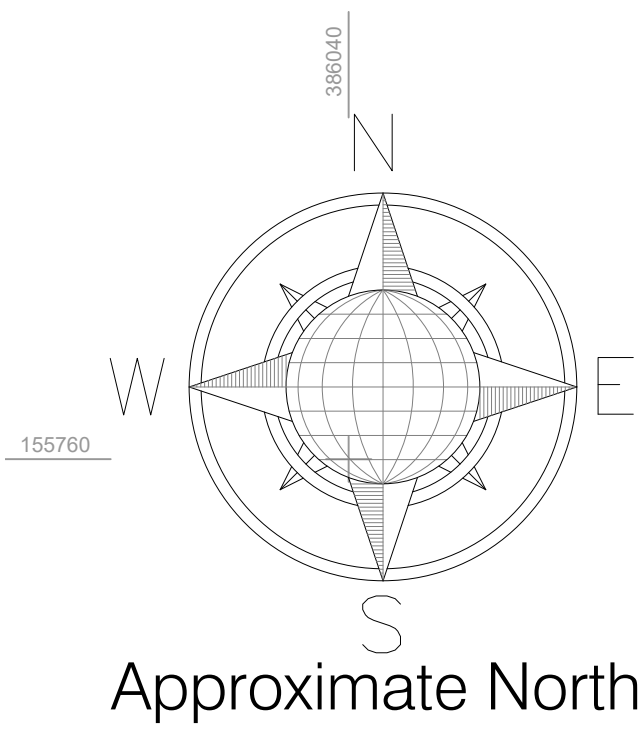
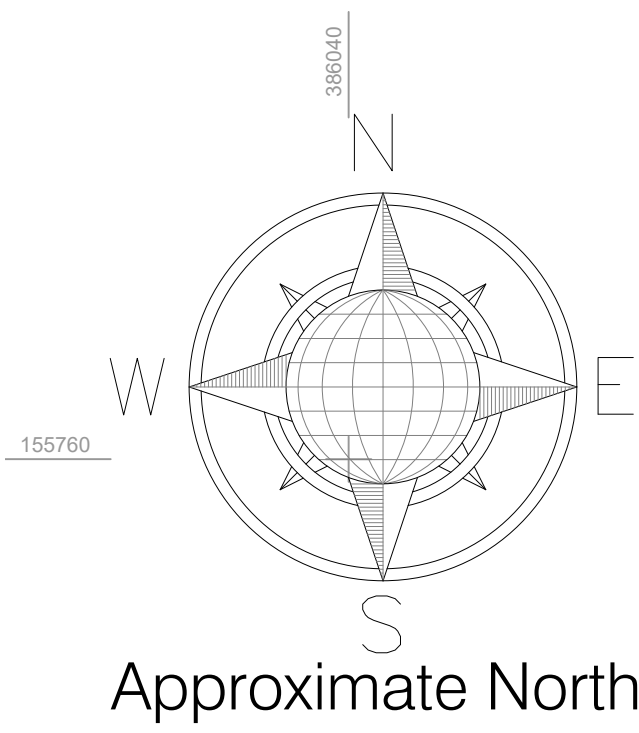
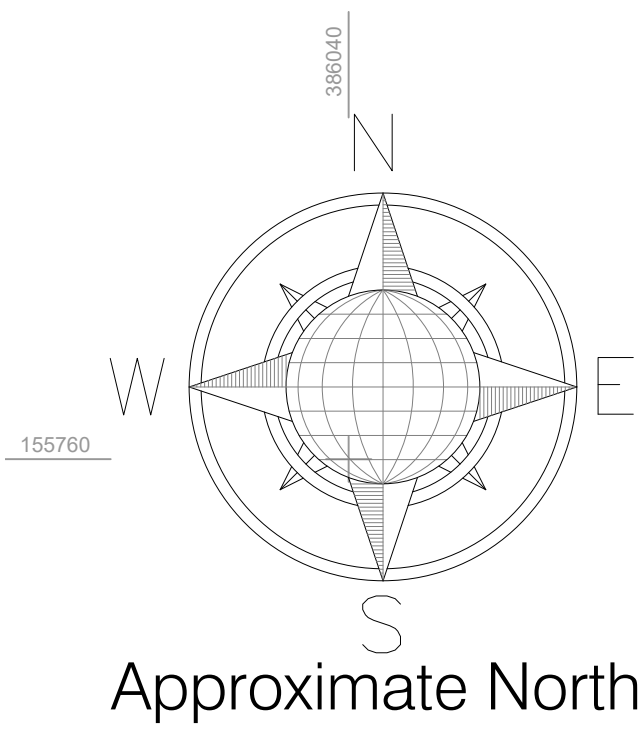
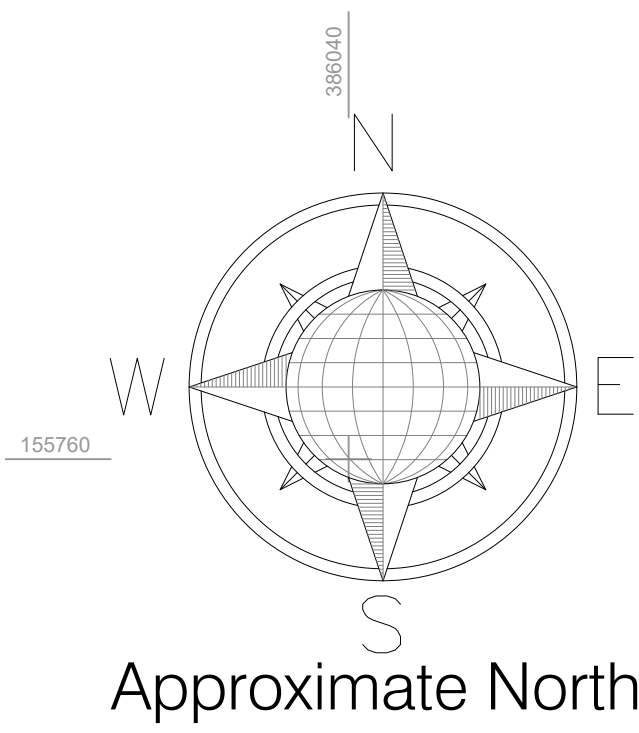
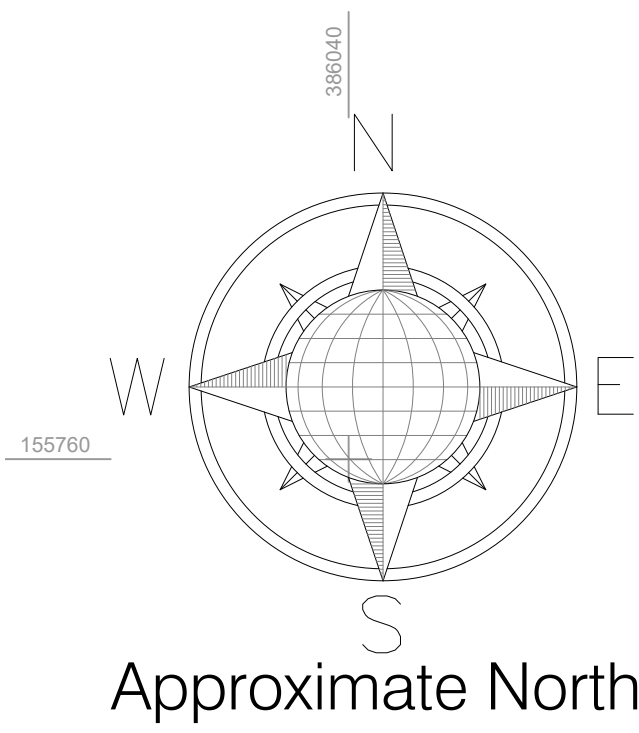
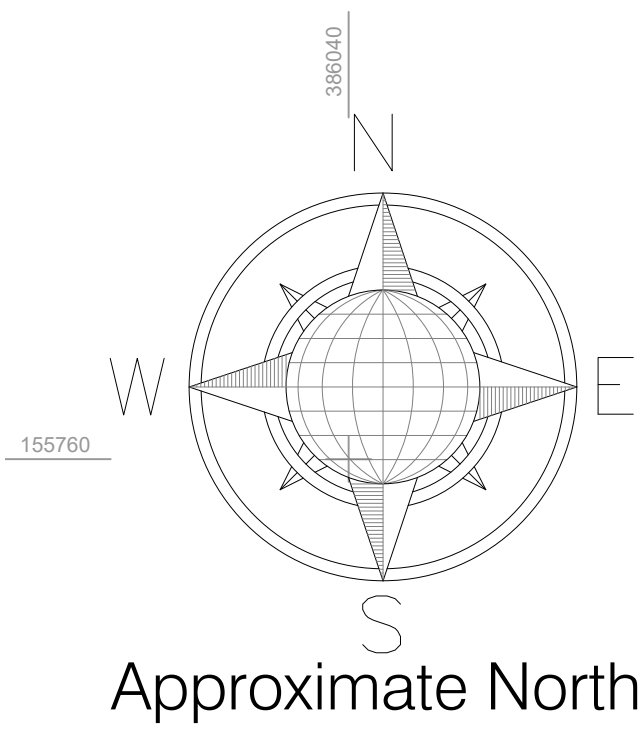
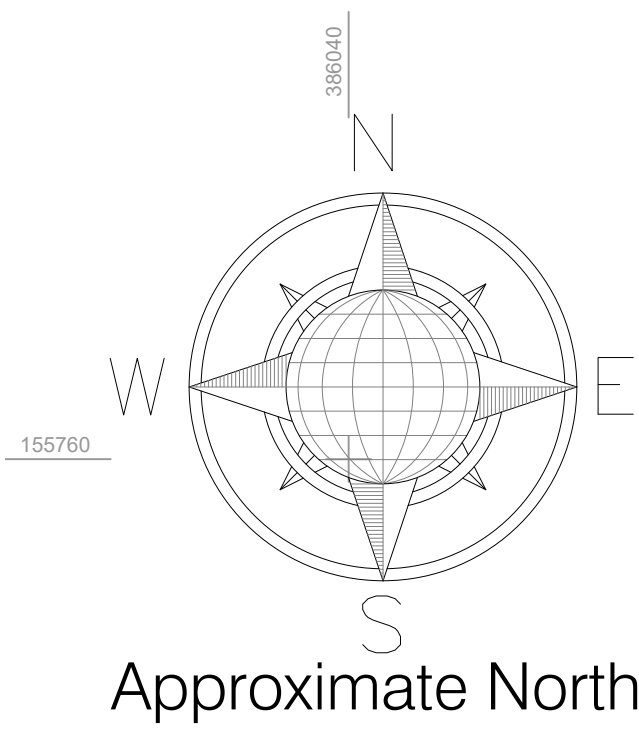
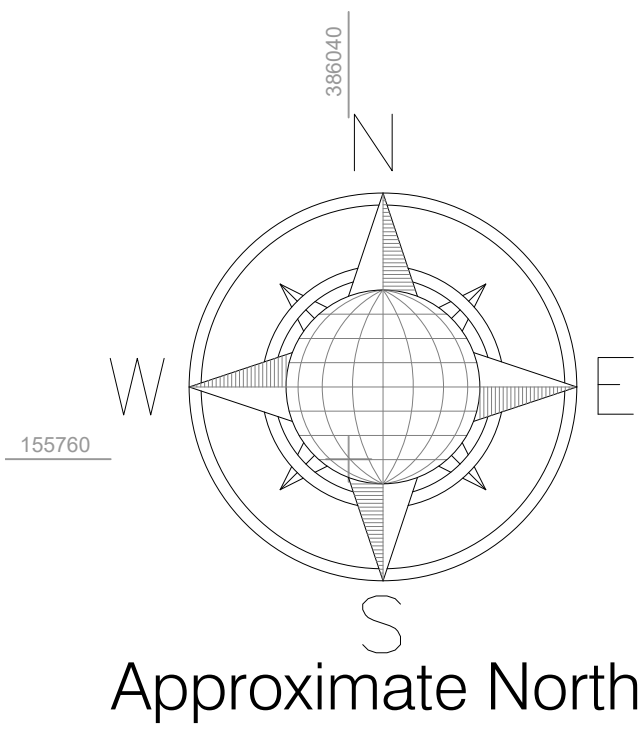
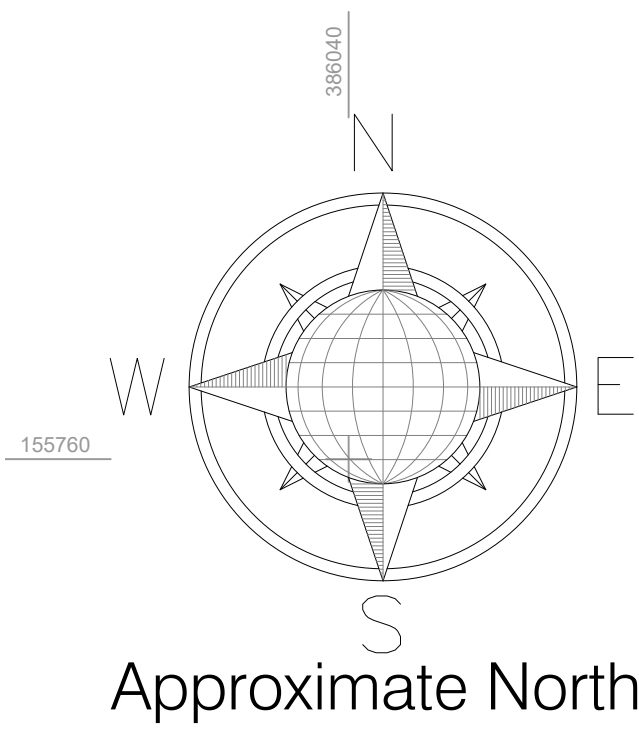
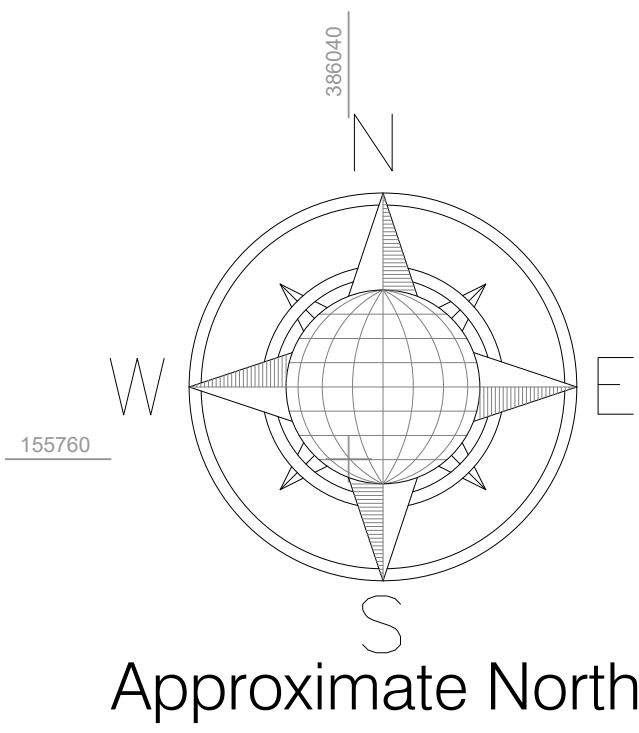
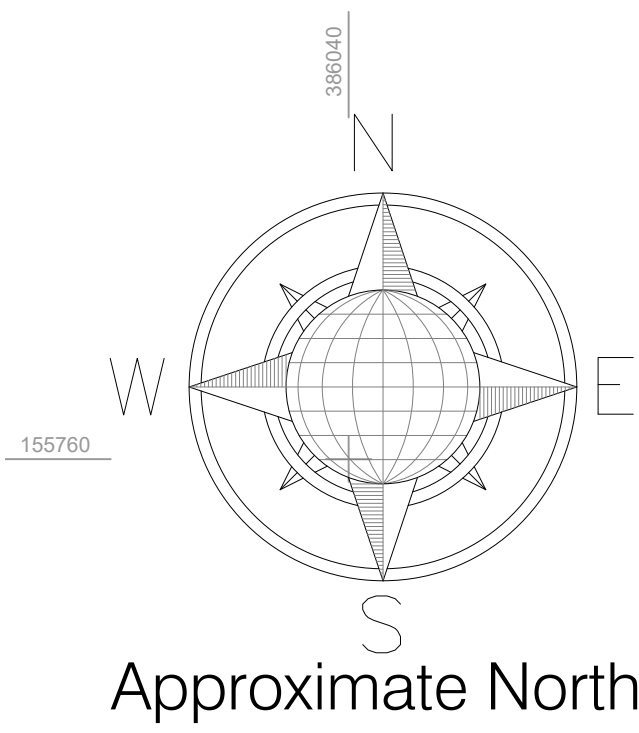
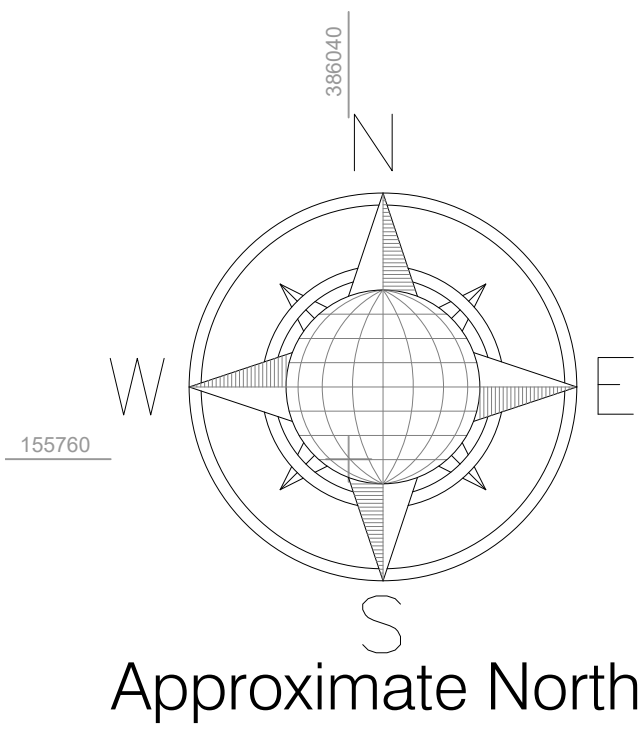
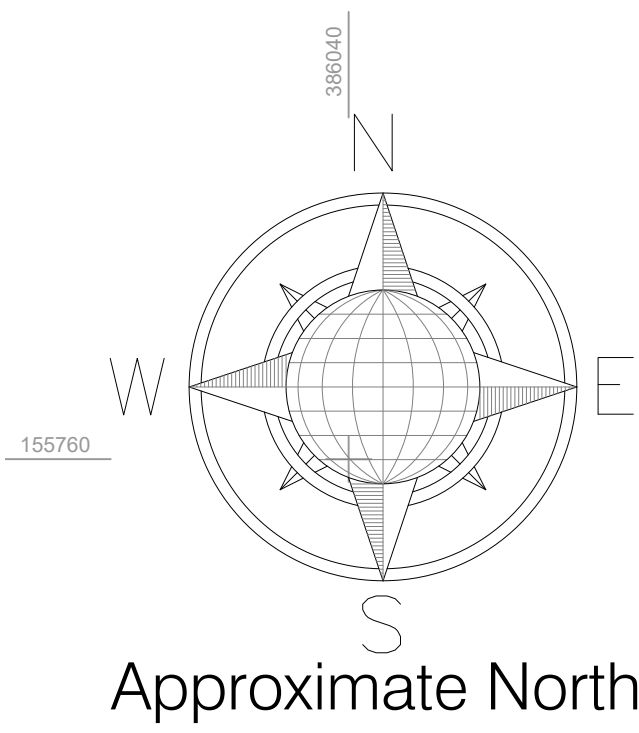
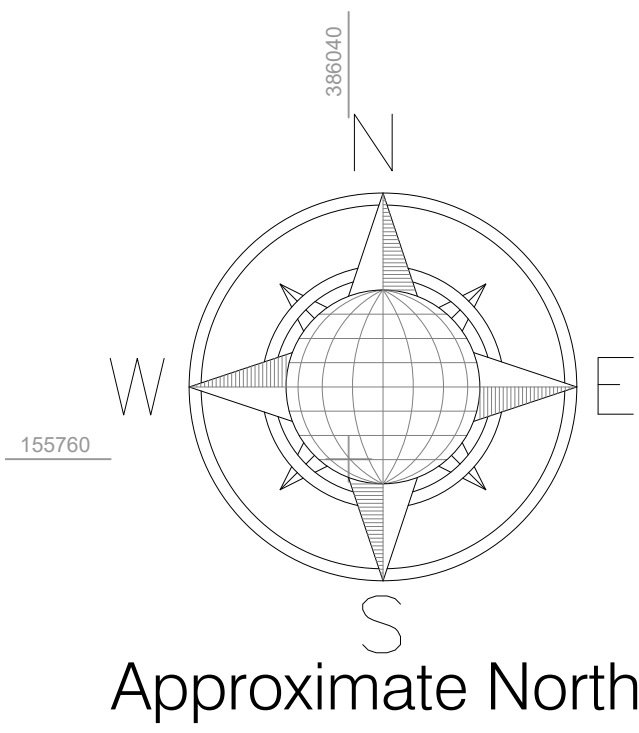
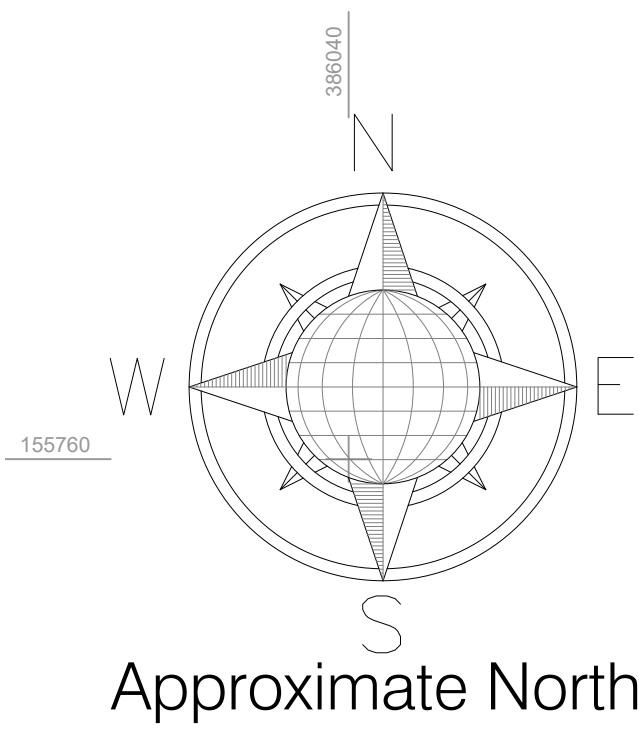
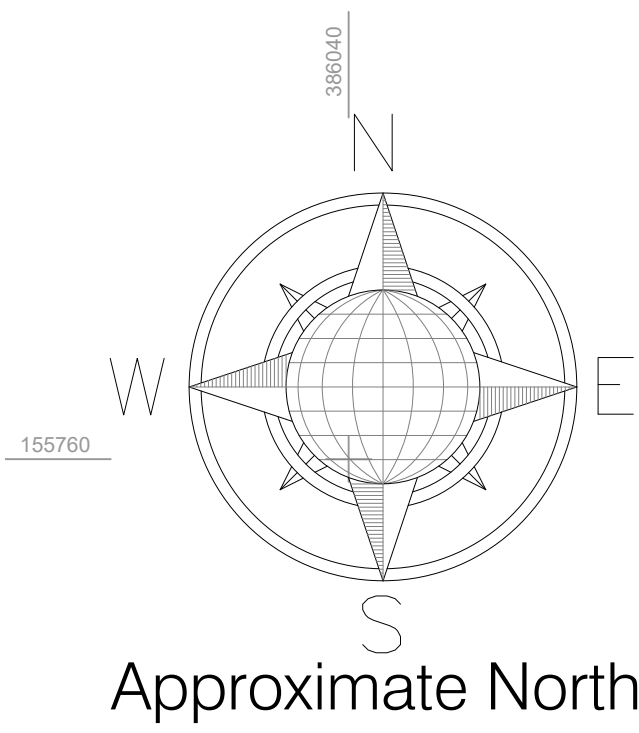
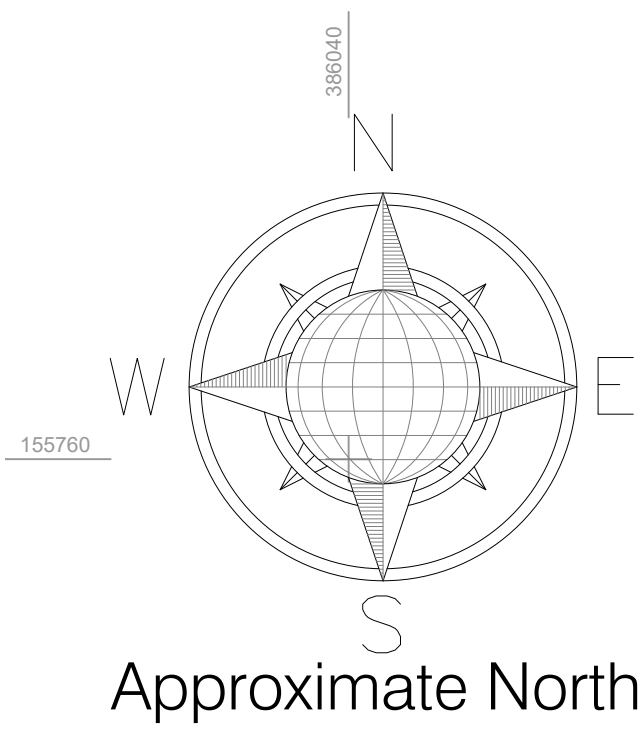
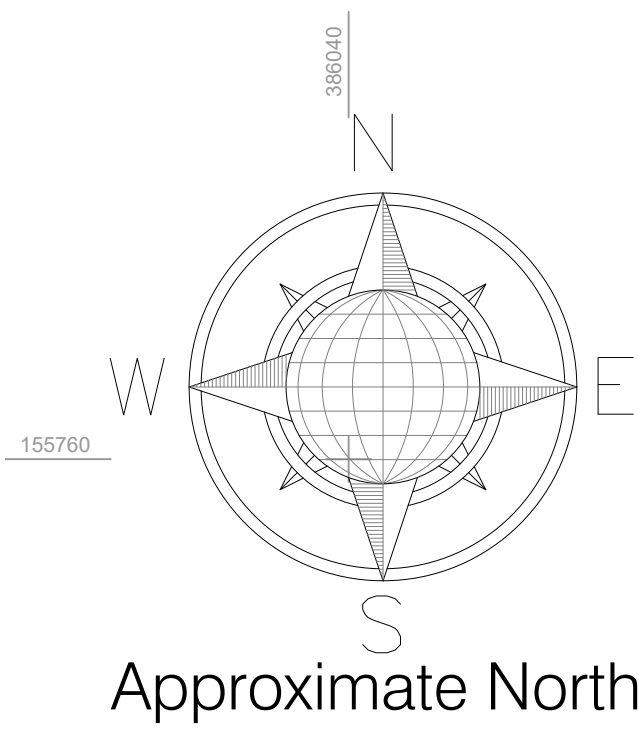
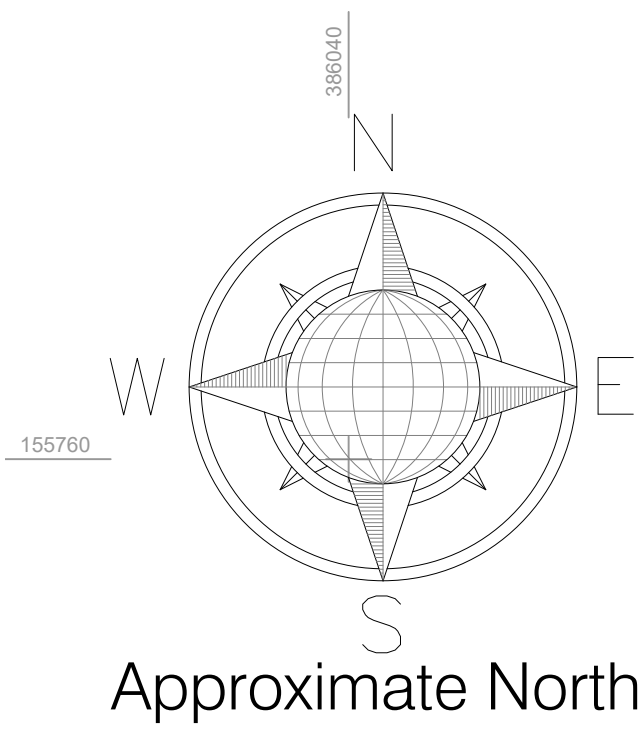
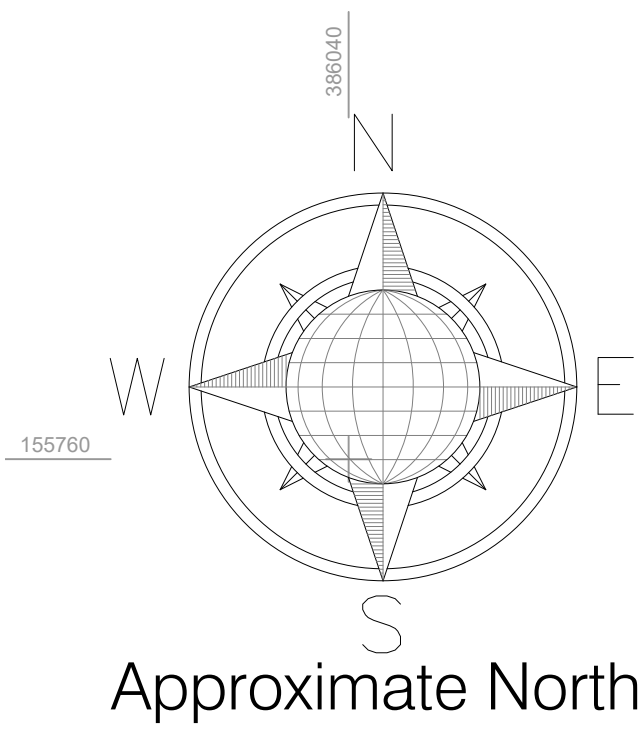
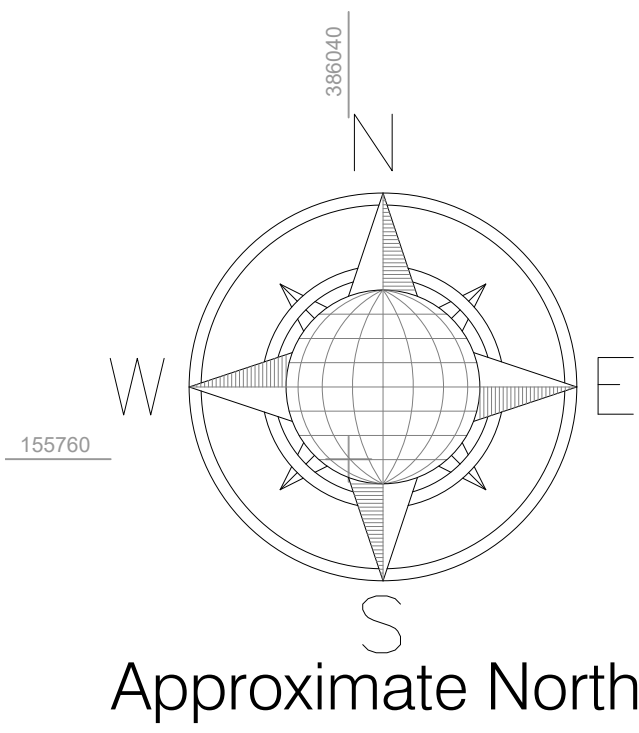
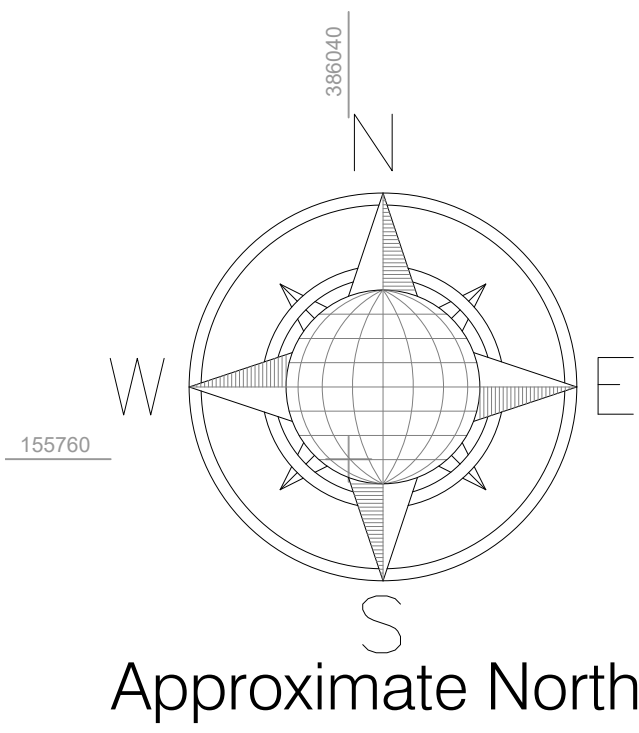
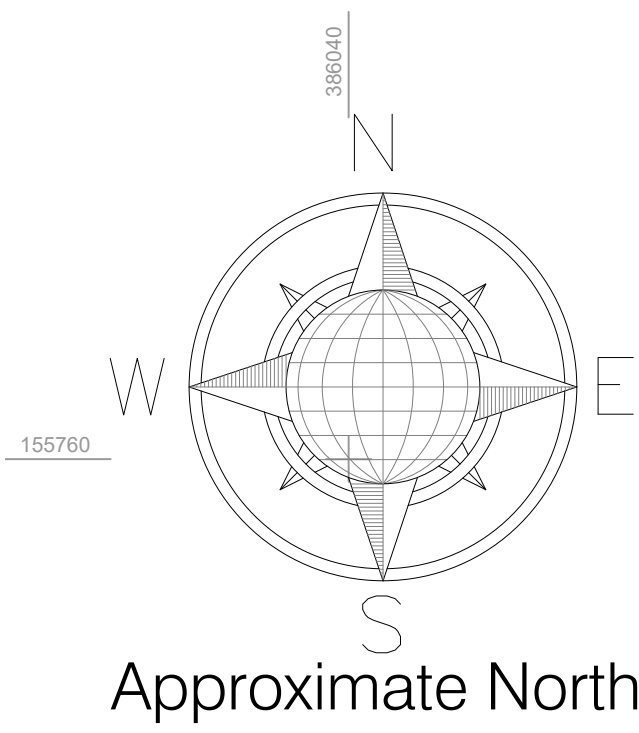
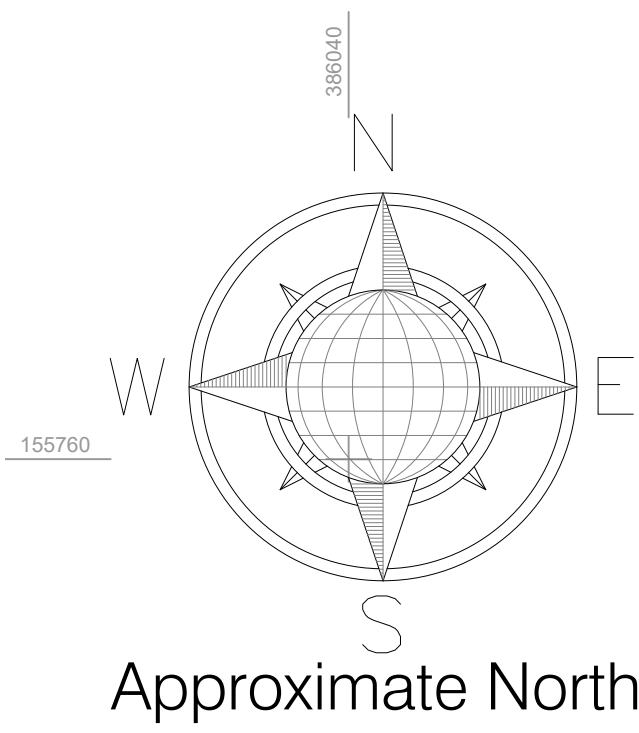
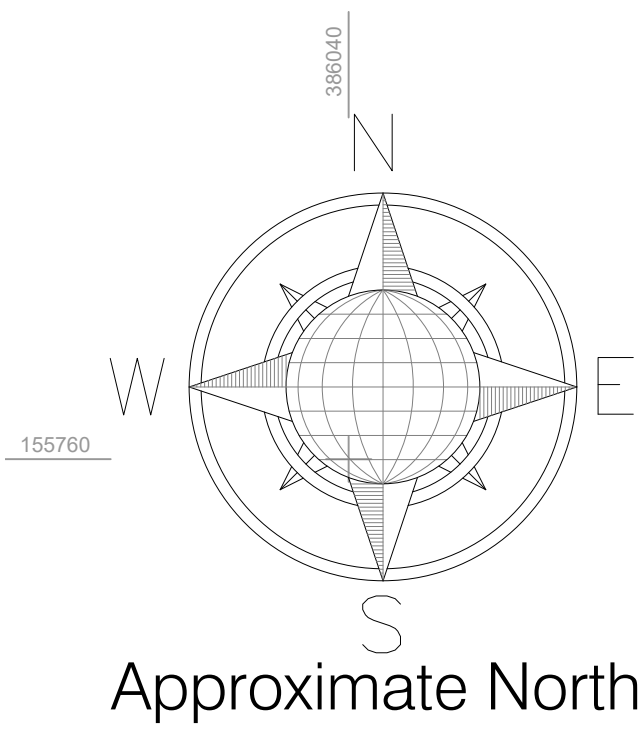
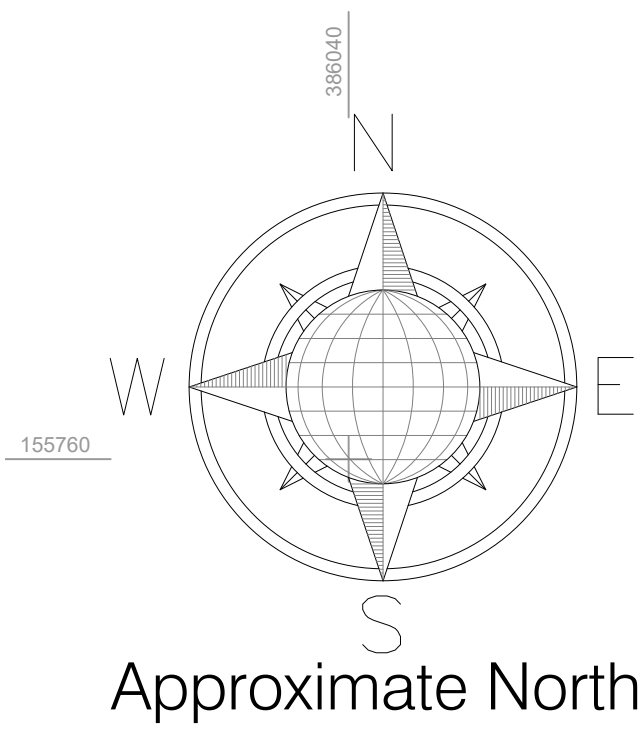
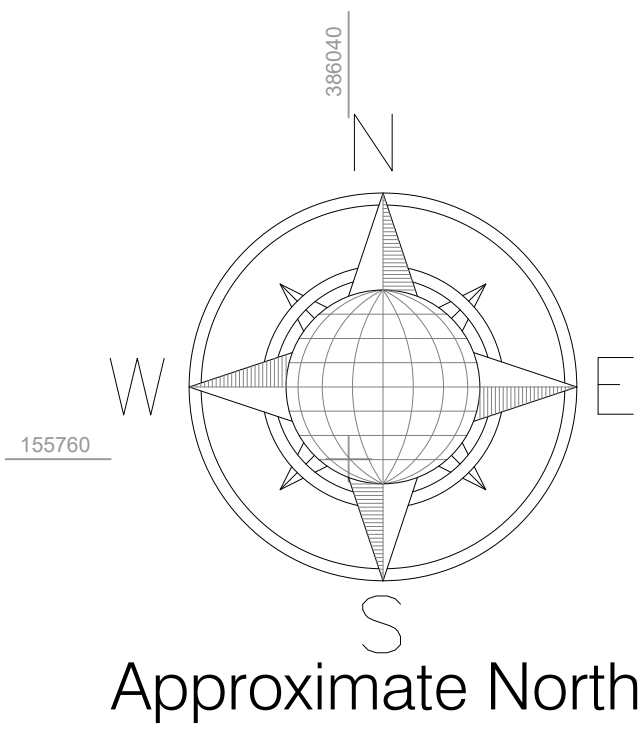
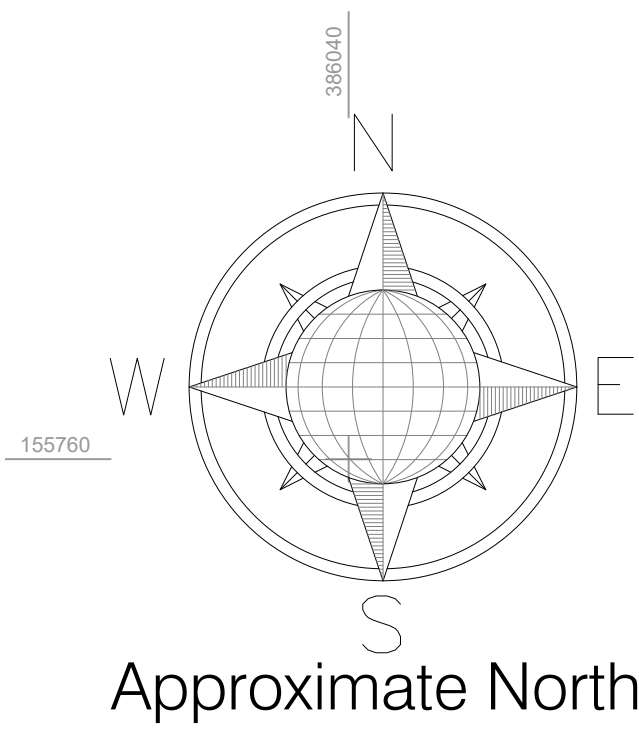
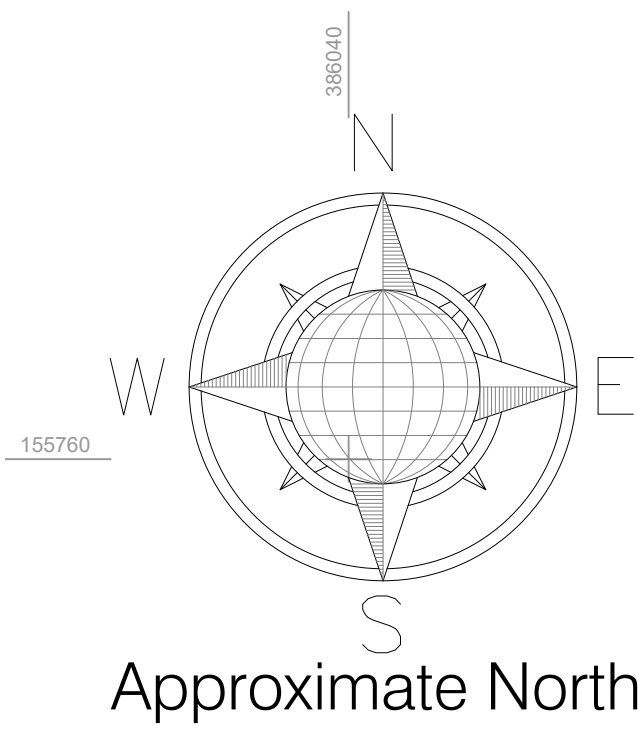
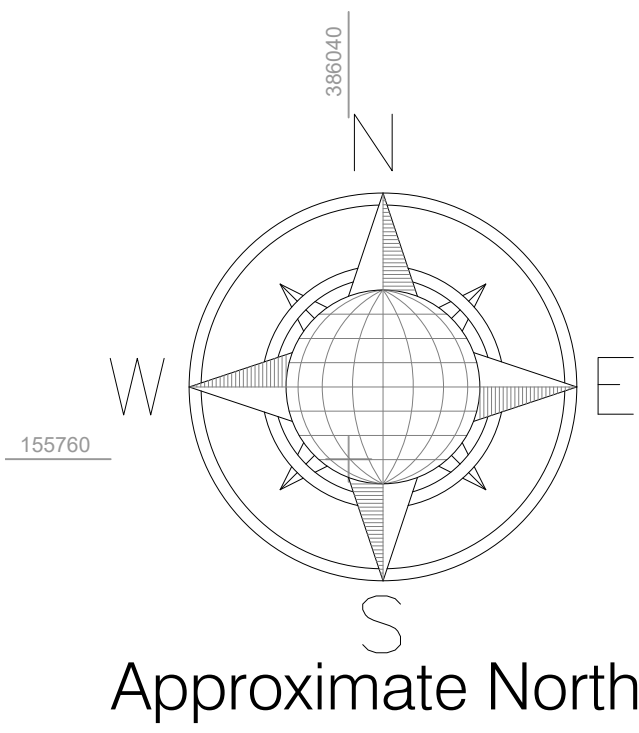
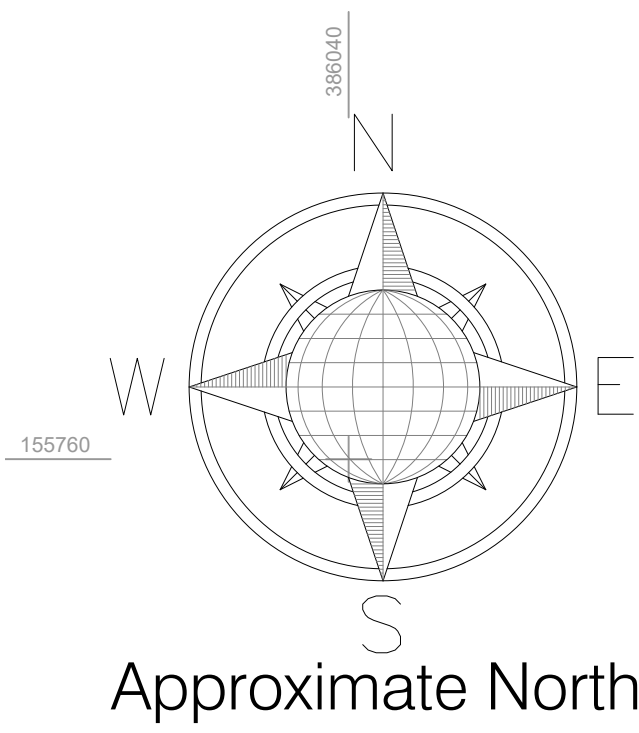
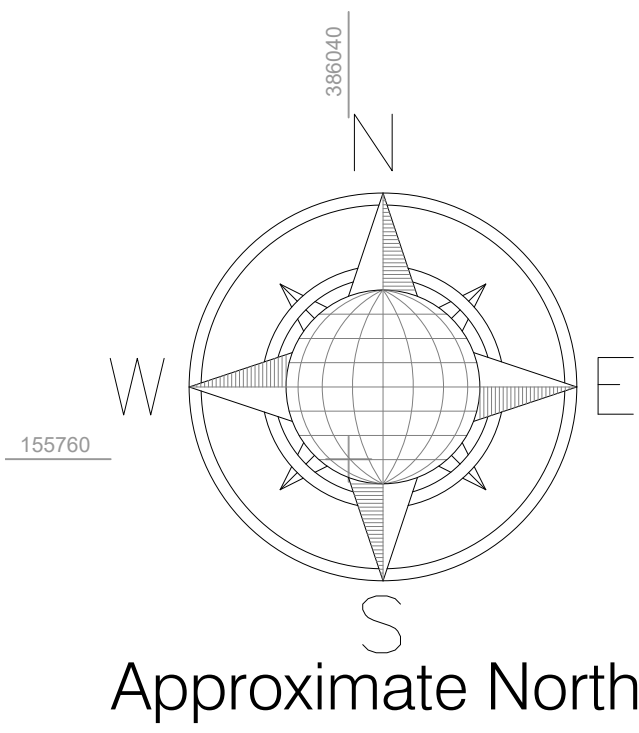
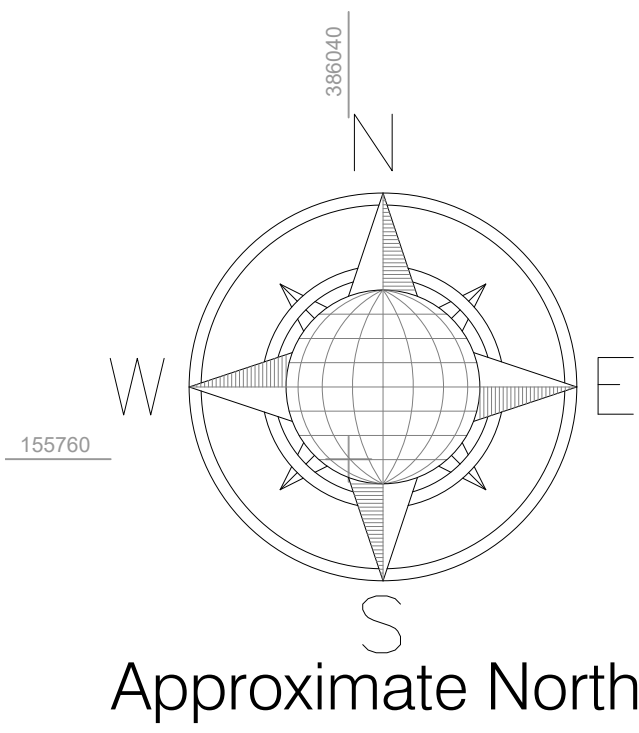
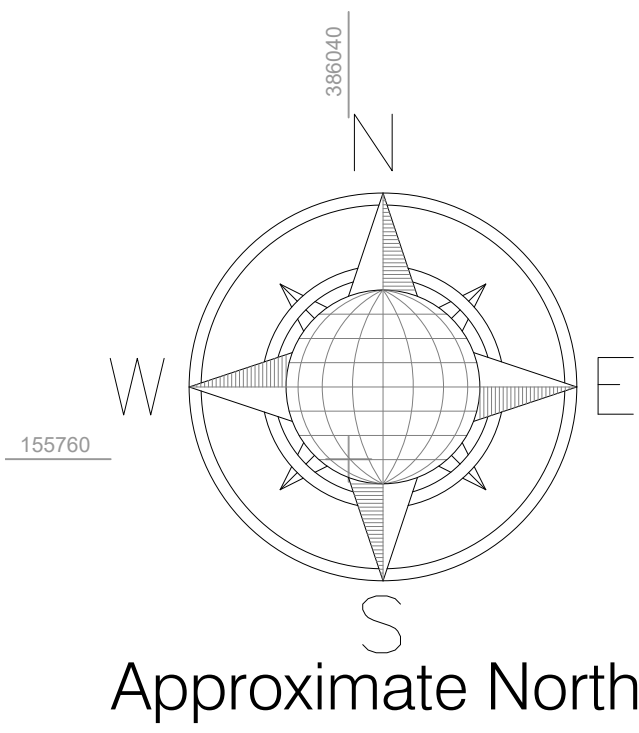
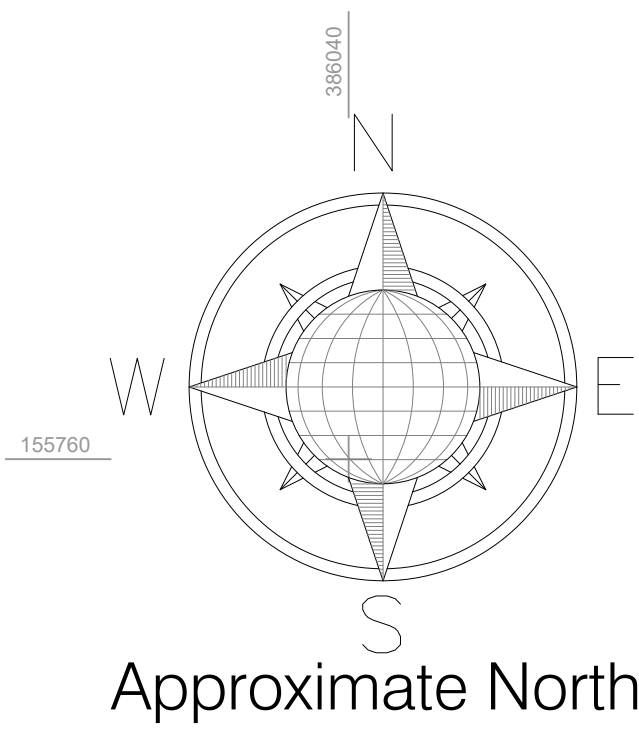
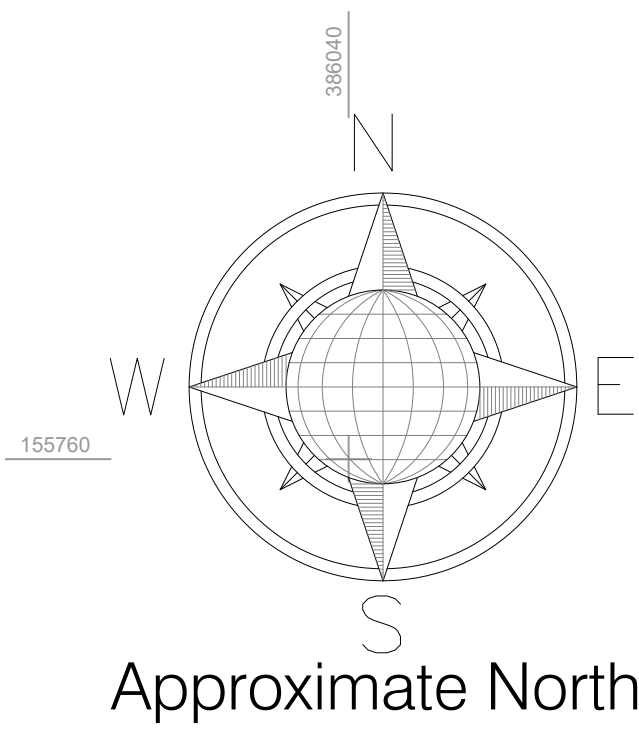
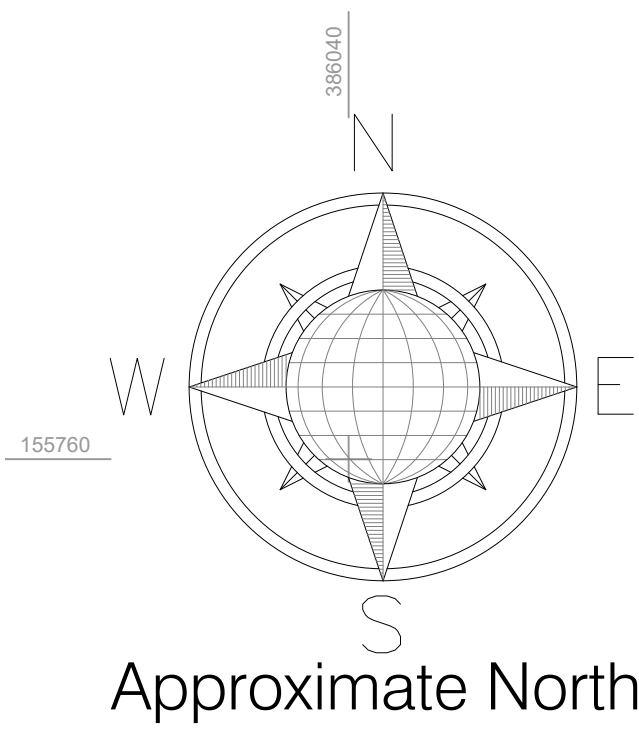
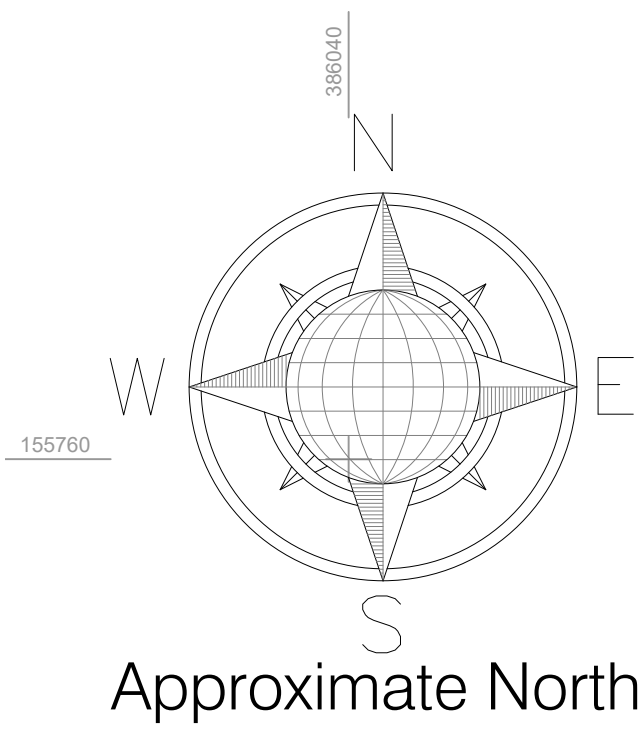
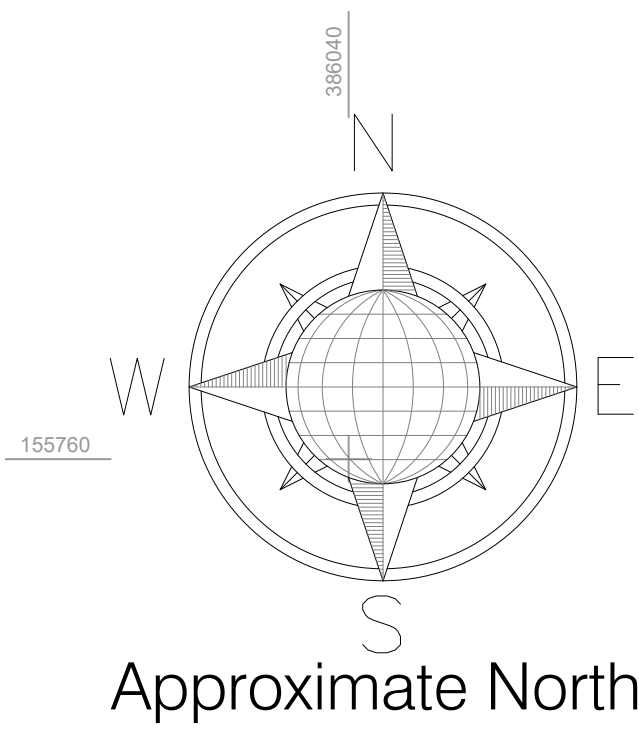
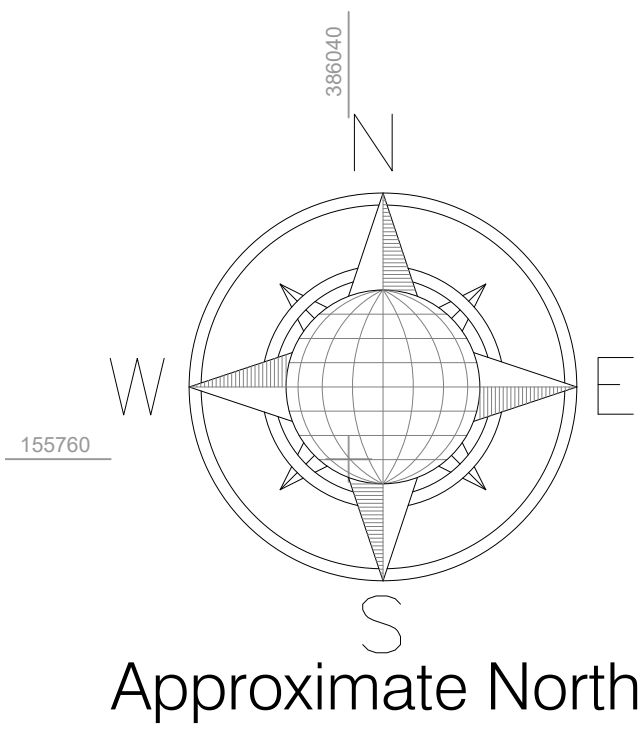
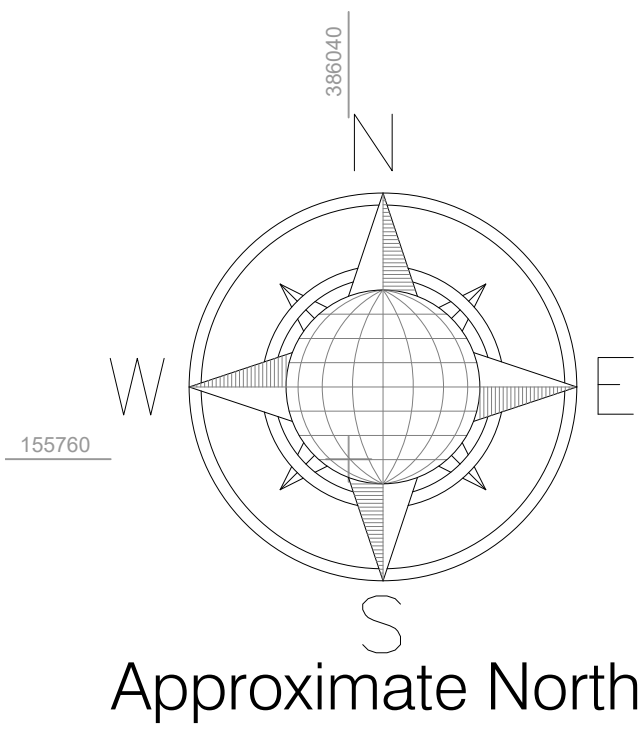
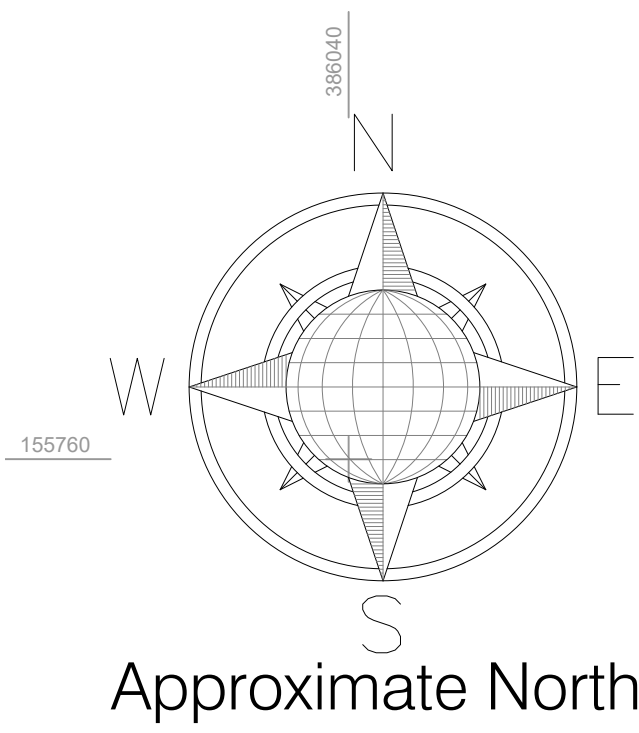
PLEASE NOTE:

Utility Asset Records and
Topographical plan provided by Client.

Please refer to frozen layers for
desktop survey.



Approximate North



Project Number
Project Name

26-0109
Windsor Road, Trowbridge



Appendix E

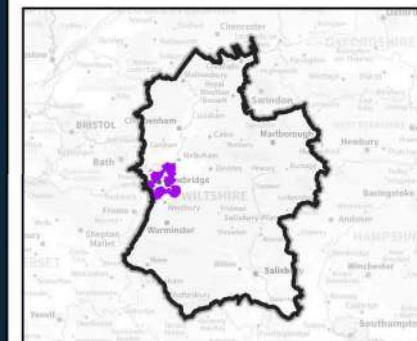
Wiltshire Council Level 1 SFRA Groundwater Emergence Map Extract



Arlington House
Park Five
Harrier Way
Sowton
Exeter
EX2 7HU
+44 (0)1392 706050
info@jbaconsulting.com

JBA
consulting

Wiltshire Council



Groundwater Emergence: Trowbridge

Legend

- Wiltshire boundary
- Community Partnership Area

Groundwater Emergence

- This zone is deemed as having a negligible risk from groundwater flooding due to the nature of the local geological deposits.
- Flooding from groundwater is not likely.
- There is a risk of flooding to subsurface assets but surface manifestation of groundwater is unlikely.
- Within this zone there is a risk of groundwater flooding to surface and subsurface assets. There is the possibility of groundwater emerging at the surface locally.
- Within this zone there is a risk of groundwater flooding to both surface and subsurface assets. Groundwater may emerge at significant rates and has the capacity to flow overland and/or pond within any topographic low spots.

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www.jbaconsulting.com

0 1 2 km



Appendix F

Wessex Water Pre-Development Enquiry Response and Sewer Record Plan

Response to: Developer e-mail: [REDACTED]			
Planning Ref:		Our Ref: ST85NE/ 446	Our Email: planning.liaison@wessexwater.co.uk
Proposal:	Care home		
Location:	Land adjacent to Pavilions Court, Towcester Road, Trowbridge, BA14 0FY	DATE	10/03/2026

Thank you for your pre-development enquiry. Extracts from our records showing the approximate location of our apparatus within the vicinity of the site are attached.

We have reviewed documents submitted in support of the enquiry. We have following comments to make:

Existing Services

- 525mm diameter surface water sewer- min 3.5m standoff either side of the outer edge of the pipe
- 450mm diameter surface water sewer -min 3.5m standoff either side of the outer edge of the pipe
- 150mm diameter public foul water sewer- min 3m standoff either side of the outer edge of the pipe

Standoff Around Foul & Surface Water Sewers

Wessex Water requires access to undertake our statutory duties as set out in the Water Industry Act 1991 to maintain and repair our assets. Therefore, there must be no buildings within a minimum of :

- 3.5m either side of the outer edge of the 525mm dia and 450mm dia public surface water sewers
- 3m either side of the outer edge of the 150mm diameter public foul water sewer

and no tree planting within a minimum of 6m. This includes no surface water attenuation features and associated earthworks in the standoff strip, changes in ground levels resulting in additional loading or excavation can lead to instability in the pipe. The Surface water / foul sewer must not run through enclosed private rear gardens. Wessex Water require unrestricted access to maintain and repair our apparatus.

Protection Measures

Developer will need to agree protection arrangements for the existing apparatus which cross the site (standoff details as given above). Any damage to our apparatus by third parties will result in a compensation claim. All existing apparatus must be accurately located on site and marked on deposited drawings. A map showing all known Wessex Water Assets within the area of the proposed site is attached Additional maps can be obtained

Foul Water

Wessex Water will accommodate domestic type foul flows in the public foul sewer with connections made on a size for size basis, Developers fund the cost of connecting to the nearest 'size for size' sewer. The minimum diameter receiving sewer to meet size for size principles for a development of this magnitude is 225mm.

The nearest public foul sewer of suitable diameter or greater is the 150mm diameter public foul sewer in A363 Windsor Road.

The points of connections for foul water could be via manholes: (FWMH 9804 and FWMH 1601)

The point of connection to the public network is by application and agreement with Wessex Water and subject to satisfactory engineering proposals constructed to current adoptable standards. The developer should contact the local development team development.west@wessexwater.co.uk to agree proposals for the Section 104 adoption and submit details for technical review prior to construction.

Please Note: No surface water runoff, land drainage or ground water will be accepted into the public foul sewer either directly or indirectly.

Surface Water Drainage (rainwater falling onto, and running off, impermeable surfaces)

Surface water must be disposed of via the SuDS Hierarchy which is subject to Building Regulations and NPPF.

No surface water runoff, land drainage or ground water will be accepted into a public sewer that carries sewerage, either directly or indirectly.

The National Planning Policy Framework (NPPF) mandates that Sustainable Drainage Systems (SuDS) must be incorporated into new developments to manage surface water runoff, mitigate flood risks, and provide additional benefits, including enhanced water quality and green spaces.

In line with the drainage hierarchy outlined in Approved Document H of the Building Regulations, Planning Practice Guidance, and the necessity to address water scarcity, all surface water runoff should aim to be discharged as high up the following hierarchy as feasible:

- Rainwater reuse through harvesting or greywater recycling
- An adequate soakaway or other infiltration system
- A hybrid solution involving infiltration and discharge to a surface water body
- Discharge directly to a surface water body (e.g., an ordinary watercourse)
- Discharge to a surface water sewer, highway drain, or other drainage system

Wessex Water statement on surface water discharge can be accessed via the following link: :

<https://developerservices.wessexwater.co.uk/media/m4rjrfmg/wwds-dev063p-rainwater-drainage-policy.pdf>

Adoption

Wessex Water can adopt SuDS features as part of a surface water sewer network, SuDS schemes will be required to have full S104 technical approval and full planning approval before construction work begins. All drainage design requirements for the site (discharge rates, attenuation, climate change etc.) must be agreed, in consultation with the Local Planning Authority / Lead Local Flood Authority, prior to the submission of a formal S104 application. Adoption is by agreement with Wessex Water. More detailed information and guidance for adoptable standards can be found on our Developer Services Web Pages Sector guidance on sewerage and water adoption agreements (wessexwater.co.uk)

Water Supply

Wessex Water will provide a point of connection for new water mains to be laid into the development site, either through a Section 41 agreement or a self-lay arrangement.

Developers may connect to our water network on a size for size basis at their cost and Wessex Water will undertake any network reinforcement that may be required to accommodate granted development, this is funded through our infrastructure charging arrangements.

The nearest suitable point of connection is 8" PVC Main in Windsor Road.

For more details and guidance for applying to connect to our networks please see our website:

<https://www.wessexwater.co.uk/services/building-and-developing/building-multiple-properties-or-large-developments>

Please note: On site private storage and pump systems will be required for buildings greater than 2 storeys high. No guarantee can be given on a specific pressure or to maintaining that pressure. Normally it will be no less than 10m head of water. (1 bar pressure at 9 litres a minute) on the property boundary.

New Appointments and Variations (NAVs)

The NAV Market enables developers to choose their water or sewerage undertaker for a specific geographic area. For developers wishing to consider an alternative supplier or seeking further information, a full list of appointees and further guidance can be found on the Developing a new site (wessexwater.co.uk) and Ofwat website.

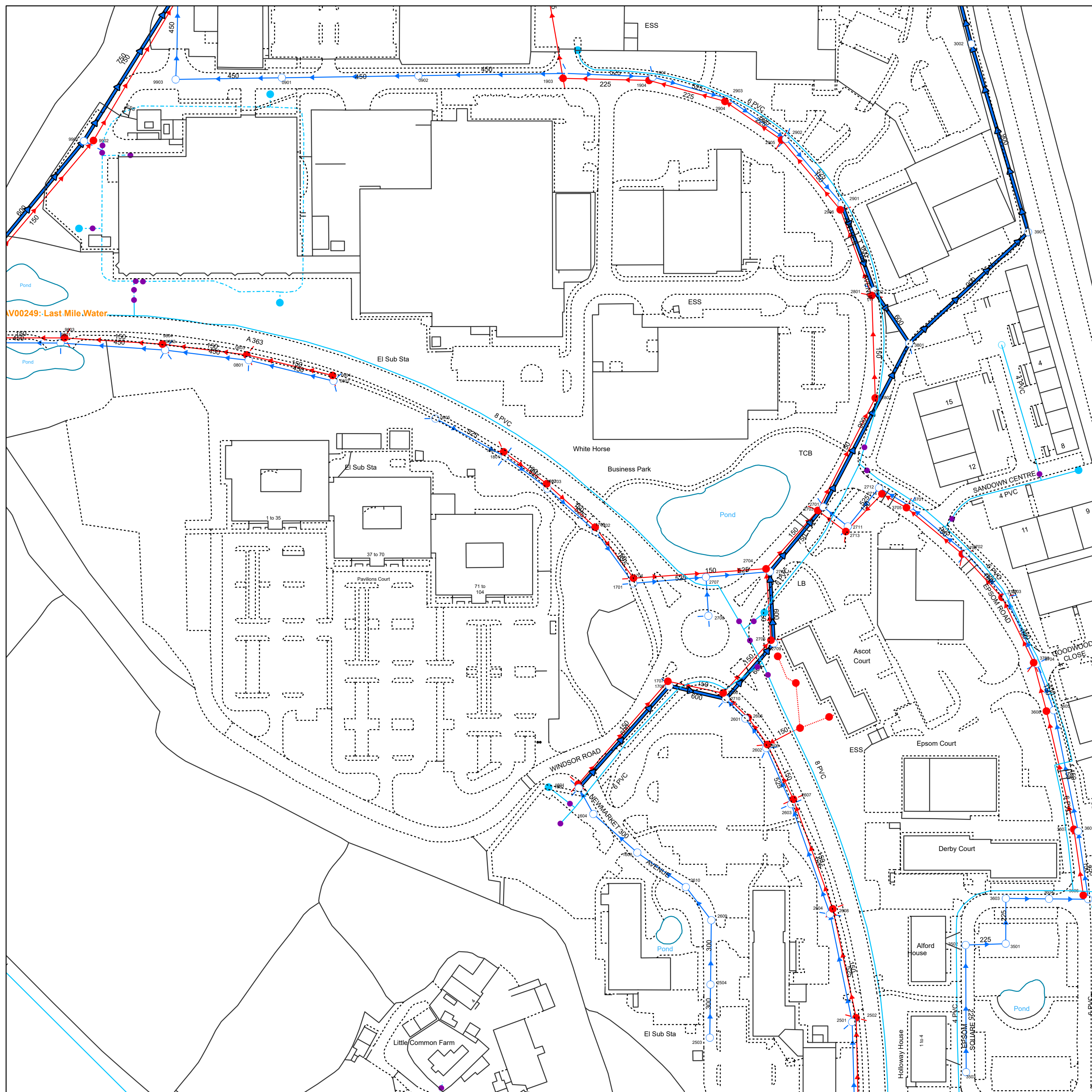
If you are making a NAV enquiry, there is a Wessex Water dedicated wholesale team that deal with NAV enquiries. Full details are on our website including guidance notes, our policy and contact details

<https://developerservices.wessexwater.co.uk/new-appointments-and-variations>

I trust that you will find the mapping and initial comments of use.

Note: These comments are based upon known circumstances prevailing at the time of writing. A review of the contents of this email is required where 18 months or more have elapsed since issue or in the light of significant changes likely to impact upon the response (e.g. changes in development numbers or phasing). Please email review requests to planning.liaison@wessexwater.co.uk

ST85NE_446 Land adjacent to Pavilions Court, Windsor Road, Trowbridge



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WATER MAINS	SEWERS	STRATEGIC	PUBLIC	PRIVATE	SECTION 104	OTHER WESSEX PIPES	NON-WESSEX / UNKNOWN
Distribution	Foul					Rising Mains	Private Rising Mains
Washout	Surface					Standby Rising Mains	Culverted Watercourse
Raw Water	Combined					Effluent Disposal	Highway Drain
Abandoned	Abandoned					Overflow	Use Unknown
Private						Syphon	Status Unknown
FITTINGS	STRUCTURES						
Hydrant	Manhole - Foul		Pumping Station - Surface				
Other	Manhole - Surface		Pumping Stn - Foul/Combined				
	Manhole - Combined		Gully				
	Inlet	Outfall	Vent Column				
	Lamphole		Rodding Eye				
	Bifurcation - Foul		Catchpit				
	Bifurcation - Surface		Flushing Chamber				
	Bifurcation - Combined		Soakaway				
	Combined Sewage Overflow		Non Return Valve				
			Air Valve	Hatch Box	Washout		
Colours generally indicate the use of the sewer/drain (i.e Red - Foul, Dark Blue - Surface, Magenta - Combined/Dual Use, Light Green - Highway Drain, Mid Green - Overflow). Some styles of line and symbol are shown on the key in sample/typical colours.							
						OTHER STRUCTURES Attenuation Tank Storage Tank	Chamber Tunnel Interceptor
Information in this map is provided for identification purposes only. No warranty as to accuracy is given or implied. The precise route of pipe work may not exactly match that shown. Wessex Water does not accept liability for inaccuracies. Sewers and lateral drains adopted by Wessex Water under the Water Industry (Schemes for Adoption of Private Sewers) Regulations 2011 are to be plotted over time and may not yet be shown. In carrying out any works, you accept liability for the cost of any repairs to Wessex Water apparatus damaged as a result of your works. You are advised to commence excavations using hand tools only. Mechanical digging equipment should not be used until pipe work has been precisely located. If you are considering any form of building works and pipe work is shown within the boundary of your property or a property to be purchased (or very close by) a surveyor should plot its exact position prior to commencing works or purchase. If you are proposing to build over or near Wessex Water's apparatus you should contact the Developer Services Team, tel: 01225 526333 or e-mail: developer.enquiries@wessexwater.co.uk to discuss your proposals. Details of assets within Wessex Water's land ownership are unavailable through this service.						Date: 09/02/2026 Centre: 386143E, 155771N Scale: 1:1,250 (when printed at A2 size)	

Project Number
Project Name

26-0109
Windsor Road, Trowbridge



Appendix G

Drainage Strategy

KEY

Proposed Private Surface Water Drain (Rodding eye, Mini access chamber, PPIC with 1000 pipework)



Proposed Private Surface Water Drain (PPIC with 1500 main runs, reduced access chamber PPIC, PCCIC)



Proposed Private Foul Water Drain (Mini access chamber, PPIC with 1000 pipework)



Proposed Private Foul Water Drain (PPIC with 1500 main runs, reduced access chamber PPIC, PCCIC)



Proposed private surface water drain



Proposed private foul water drain



Proposed private surface water gully



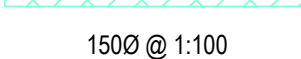
Proposed private geocellular storage crates



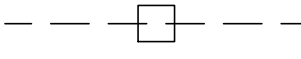
Proposed private permeable paving



Existing adopted public surface water sewer



Existing adopted public foul water sewer



Proposed site boundary



Proposed overland flood flow route



Proposed private package foul pump station - To provide 24hr emergency storage



Proposed private foul water pump main



Existing private drain abandoned and grubbed out



Existing private surface water drain



Pre-development discharge

Site Makeup	Greenfield
Greenfield Method	IH124
Positively Drained Area (ha)	0.347
SAAR (mm)	731
Soil Index	4
SPR	0.47
Region	8
Betterment (%)	0
QBar (l/s)	1.6
Calc.	

Return Period (years)	Growth Factor	Q (l/s)
1	0.78	1.4
2	0.88	1.6
30	1.98	3.5
100	2.42	4.3

Brownfield Runoff Rate (Existing site Imp. area)
Using Modified Rational Method
5,051m² x 50mm/hr / 3600 = 70.15 l/s
24 l/s (Proposed discharge rate) = 66% reduction



NOTES

1. DO NOT SCALE.
2. All dimensions are in millimetres unless otherwise stated.

Manhole positions moved to suite site constraints

Site layout updated and client comments incorporated

First Issue

CLN 29.04.26 CLN 29.04.26

COMMENT

DRAWN BY DATE CHECKED BY DATE

PROJECT NUMBER SCALE @ A1

26-0109 1:250

PURPOSE OF ISSUE

PRELIMINARY

NOONAN ENGINEERING LTD

Pure Offices, Lake View Drive

Sherwood Business Park, Nottingham, NG15 0DT

Tel: 07775 437749

e-mail: craig@noonanengineering.com

PROJECT

Proposed Care Home,

Towcaster Road, Trowbridge

BA14 0GB

TITLE

Proposed Drainage Strategy

CLIENT

LNT CARE DEVELOPMENTS

PROJECT ORIGINATOR FUNCTIONAL SPATIAL FORM DISCIPLINE NUMBER

TRTB-NEL-ZZ-ZZ-DR-C-0240

REV

P03

Appendix H

Surface Water Drainage Calculations

Design Settings												
Rainfall Methodology	FSR			Maximum Time of Concentration (mins)	30.00							
Return Period (years)	2			Maximum Rainfall (mm/hr)	50.0							
Additional Flow (%)	0			Minimum Velocity (m/s)	1.00							
FSR Region	England and Wales			Connection Type	Level Soffits							
M5-60 (mm)	20.000			Minimum Backdrop Height (m)	0.200							
Ratio-R	0.400			Preferred Cover Depth (m)	1.200							
CV	0.750			Include Intermediate Ground	✓							
Time of Entry (mins)	5.00			Enforce best practice design rules	✓							
Nodes												
	Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Depth (m)						
	1	0.066	5.00	44.630	900	0.640						
	2			44.630	900	1.120						
	3	0.018	5.00	44.630	900	1.216						
	4	0.015	5.00	44.630	900	1.445						
	5	0.028	5.00	44.630	450	0.590						
	6	0.011	5.00	44.630	900	0.824						
	7	0.016	5.00	44.630	900	0.953						
	8	0.101	5.00	44.700	900	0.990						
	9	0.006	5.00	44.630	900	1.105						
	10			44.630	900	1.179						
	11			44.630	900	1.328						
	G1	0.014	5.00	44.700	450	0.450						
	G2	0.013	5.00	44.650	450	0.450						
	G3	0.010	5.00	44.580	450	0.450						
	SUDS BASIN 1	0.005	5.00	44.600	450	0.600						
	SUDS BASIN 2	0.016	5.00	44.500	450	0.600						
	TANK	0.004	5.00	44.300	300	1.600						
	12 FC			44.300	1500	1.700						
	SWD3			44.200	1500	1.950						
Links												
Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)	
1.000	1	2	48.035	0.600	43.990	43.510	0.480	100.0	225	5.61	50.0	
1.001	2	3	9.628	0.600	43.510	43.414	0.096	100.0	225	5.74	50.0	
1.002	3	4	22.909	0.600	43.414	43.185	0.229	100.0	225	6.03	50.0	
1.003	4	TANK	1.599	0.600	43.185	43.169	0.016	100.0	225	6.05	50.0	
2.000	5	6	28.117	0.600	44.040	43.806	0.234	120.0	150	5.51	50.0	
2.001	6	7	6.458	0.600	43.806	43.752	0.054	120.0	150	5.63	50.0	
2.002	7	9	9.265	0.600	43.677	43.600	0.077	120.0	225	5.76	50.0	
3.000	8	9	17.412	0.600	43.710	43.600	0.110	158.3	225	5.28	50.0	
2.003	9	10	11.153	0.600	43.525	43.451	0.074	150.0	300	5.90	50.0	
2.004	10	11	22.306	0.600	43.451	43.302	0.149	150.0	300	6.19	50.0	
4.000	G1	SUDS BASIN 1	10.140	0.600	44.250	44.100	0.150	67.6	150	5.14	50.0	
5.000	G2	SUDS BASIN 1	7.453	0.600	44.200	44.100	0.100	74.5	150	5.11	50.0	
6.000	G3	SUDS BASIN 1	4.703	0.600	44.130	44.100	0.030	156.8	150	5.10	50.0	
4.001	SUDS BASIN 1	SUDS BASIN 2	9.337	0.600	44.000	43.938	0.062	150.0	150	5.33	50.0	
4.002	SUDS BASIN 2	11	4.921	0.600	43.900	43.400	0.500	9.8	150	5.35	50.0	
2.005	11	TANK	1.588	0.600	43.302	43.230	0.072	22.1	300	6.20	50.0	
1.004	TANK	12 FC	3.041	0.600	42.700	42.600	0.100	30.4	375	6.22	50.0	
1.005	12 FC	SWD3	3.099	0.600	42.600	42.250	0.350	8.9	375	6.23	50.0	
Name	US Node	DS Node	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Minimum Depth (m)	Maximum Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	
1.000	1	2	1.307	52.0	8.9	0.415	0.895	0.415	0.895	0.066	0.0	
1.001	2	3	1.307	52.0	8.9	0.895	0.991	0.895	0.991	0.066	0.0	
1.002	3	4	1.307	52.0	11.4	0.991	1.220	0.991	1.220	0.084	0.0	
1.003	4	TANK	1.307	52.0	13.4	1.220	0.906	0.906	1.220	0.099	0.0	
2.000	5	6	0.916	16.2	3.8	0.440	0.674	0.440	0.674	0.028	0.0	
2.001	6	7	0.916	16.2	5.3	0.674	0.728	0.674	0.728	0.039	0.0	
2.002	7	9	1.192	47.4	7.5	0.728	0.805	0.728	0.805	0.055	0.0	
3.000	8	9	1.036	41.2	13.7	0.765	0.805	0.765	0.805	0.101	0.0	
2.003	9	10	1.281	90.6	22.0	0.805	0.879	0.805	0.879	0.162	0.0	
2.004	10	11	1.281	90.6	22.0	0.879	1.028	0.879	1.028	0.162	0.0	
4.000	G1	SUDS BASIN 1	1.225	21.6	1.9	0.300	0.350	0.300	0.350	0.014	0.0	
5.000	G2	SUDS BASIN 1	1.166	20.6	1.8	0.300	0.350	0.300	0.350	0.013	0.0	
6.000	G3	SUDS BASIN 1	0.800	14.1	1.4	0.300	0.350	0.300	0.350	0.010	0.0	
4.001	SUDS BASIN 1	SUDS BASIN 2	0.818	14.5	5.7	0.450	0.412	0.412	0.450	0.042	0.0	
4.002	SUDS BASIN 2	11	3.230	57.1	7.9	0.450	1.080	0.450	1.080	0.058	0.0	
2.005	11	TANK	3.362	237.6	29.8	1.028	0.770	0.770	1.028	0.220	0.0	
1.004	TANK	12 FC	3.296	364.0	43.8	1.225	1.325	1.225	1.325	0.323	0.0	
1.005	12 FC	SWD3	6.119	675.8	43.8	1.325	1.575	1.325	1.575	0.323	0.0	

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**Pipeline Schedule**

Link	Length (m)	Slope (1:X)	Dia (mm)	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	48.035	100.0	225	44.630	43.990	0.415	44.630	43.510	0.895
1.001	9.628	100.0	225	44.630	43.510	0.895	44.630	43.414	0.991
1.002	22.909	100.0	225	44.630	43.414	0.991	44.630	43.185	1.220
1.003	1.599	100.0	225	44.630	43.185	1.220	44.300	43.169	0.906
2.000	28.117	120.0	150	44.630	44.040	0.440	44.630	43.806	0.674
2.001	6.458	120.0	150	44.630	43.806	0.674	44.630	43.752	0.728
2.002	9.265	120.0	225	44.630	43.677	0.728	44.630	43.600	0.805
3.000	17.412	158.3	225	44.700	43.710	0.765	44.630	43.600	0.805
2.003	11.153	150.0	300	44.630	43.525	0.805	44.630	43.451	0.879
2.004	22.306	150.0	300	44.630	43.451	0.879	44.630	43.302	1.028
4.000	10.140	67.6	150	44.700	44.250	0.300	44.600	44.100	0.350
5.000	7.453	74.5	150	44.650	44.200	0.300	44.600	44.100	0.350
6.000	4.703	156.8	150	44.580	44.130	0.300	44.600	44.100	0.350
4.001	9.337	150.0	150	44.600	44.000	0.450	44.500	43.938	0.412
4.002	4.921	9.8	150	44.500	43.900	0.450	44.630	43.400	1.080
2.005	1.588	22.1	300	44.630	43.302	1.028	44.300	43.230	0.770
1.004	3.041	30.4	375	44.300	42.700	1.225	44.300	42.600	1.325
1.005	3.099	8.9	375	44.300	42.600	1.325	44.200	42.250	1.575

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	900	Manhole	Adoptable	2	900	Manhole	Adoptable
1.001	2	900	Manhole	Adoptable	3	900	Manhole	Adoptable
1.002	3	900	Manhole	Adoptable	4	900	Manhole	Adoptable
1.003	4	900	Manhole	Adoptable	TANK	300	Manhole	Adoptable
2.000	5	450	Manhole	Adoptable	6	900	Manhole	Adoptable
2.001	6	900	Manhole	Adoptable	7	900	Manhole	Adoptable
2.002	7	900	Manhole	Adoptable	9	900	Manhole	Adoptable
3.000	8	900	Manhole	Adoptable	9	900	Manhole	Adoptable
2.003	9	900	Manhole	Adoptable	10	900	Manhole	Adoptable
2.004	10	900	Manhole	Adoptable	11	900	Manhole	Adoptable
4.000	G1	450	Manhole	Adoptable	SUDS BASIN 1	450	Manhole	Adoptable
5.000	G2	450	Manhole	Adoptable	SUDS BASIN 1	450	Manhole	Adoptable
6.000	G3	450	Manhole	Adoptable	SUDS BASIN 1	450	Manhole	Adoptable
4.001	SUDS BASIN 1	450	Manhole	Adoptable	SUDS BASIN 2	450	Manhole	Adoptable
4.002	SUDS BASIN 2	450	Manhole	Adoptable	11	900	Manhole	Adoptable
2.005	11	900	Manhole	Adoptable	TANK	300	Manhole	Adoptable
1.004	TANK	300	Manhole	Adoptable	12 FC	1500	Manhole	Adoptable
1.005	12 FC	1500	Manhole	Adoptable	SWD3	1500	Manhole	Adoptable

Manhole Schedule

Node	CL (m)	Depth (m)	Dia (mm)	MH Type	Connections	Link	IL (m)	Dia (mm)	
1	44.630	0.640	900	Adoptable		0	1.000	43.990	225
2	44.630	1.120	900	Adoptable		1	1.000	43.510	225
						0	1.001	43.510	225
3	44.630	1.216	900	Adoptable		1	1.001	43.414	225
						0	1.002	43.414	225
4	44.630	1.445	900	Adoptable		1	1.002	43.185	225
						0	1.003	43.185	225
5	44.630	0.590	450	Adoptable					
						0	2.000	44.040	150
6	44.630	0.824	900	Adoptable		1	2.000	43.806	150
						0	2.001	43.806	150
7	44.630	0.953	900	Adoptable		1	2.001	43.752	150
						0	2.002	43.677	225
8	44.700	0.990	900	Adoptable					
						0	3.000	43.710	225

**Manhole Schedule**

Node	CL (m)	Depth (m)	Dia (mm)	MH Type	Connections	Link	IL (m)	Dia (mm)
9	44.630	1.105	900	Adoptable		1	3.000	43.600
						2	2.002	43.600
						0	2.003	43.525
10	44.630	1.179	900	Adoptable		1	2.003	43.451
						0	2.004	43.451
						1	4.002	43.400
11	44.630	1.328	900	Adoptable		2	2.004	43.302
						0	2.005	43.302
						1	4.002	43.400
G1	44.700	0.450	450	Adoptable		0	4.000	44.250
G2	44.650	0.450	450	Adoptable		0	5.000	44.200
G3	44.580	0.450	450	Adoptable		0	6.000	44.130
SUDS BASIN 1	44.600	0.600	450	Adoptable		1	6.000	44.100
						2	5.000	44.100
						3	4.000	44.100
						0	4.001	44.000
SUDS BASIN 2	44.500	0.600	450	Adoptable		1	4.001	43.938
						0	4.002	43.900
						1	2.005	43.230
TANK	44.300	1.600	300	Adoptable		2	1.003	43.169
						0	1.004	42.700
						1	1.004	42.600
12 FC	44.300	1.700	1500	Adoptable		0	1.005	42.600
SWD3	44.200	1.950	1500	Adoptable		1	1.005	42.250
						0	1.005	42.600

Simulation Settings

Rainfall Methodology	FSR	Summer CV	0.750	Additional Storage (m³/ha)	0.0
Rainfall Events	Singular	Winter CV	0.840	Starting Level (m)	
FSR Region	England and Wales	Analysis Speed	Normal	Check Discharge Rate(s)	x
M5-60 (mm)	20.000	Skip Steady State	x	Check Discharge Volume	x
Ratio-R	0.400	Drain Down Time (mins)	1440		

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0	30	40	0	0
2	0	0	0	100	45	0	0

Node 12 FC Online Orifice Control

Flap Valve	x	Invert Level (m)	42.600	Design Flow (l/s)	24.0	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Depth (m)	0.900	Diameter (m)	0.111		

Node TANK Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	42.700
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	53

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	140.0	140.0	0.200	140.0	148.4	0.400	140.0	156.8	0.600	140.0	165.2	0.800	140.0	173.6
												0.801	0.0	173.6



Node SUDS BASIN 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	44.000
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	3

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	5.0	5.0	0.333	23.8	24.3	0.600	50.2	51.3

Node SUDS BASIN 2 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	43.900
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	0

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	3.8	3.8	0.333	27.6	28.0	0.600	62.9	63.8

Other (defaults)

Entry Loss (manhole)	0.250	Entry Loss (junction)	0.000	Apply Recommended Losses	x
Exit Loss (manhole)	0.250	Exit Loss (junction)	0.000	Flood Risk (m)	0.300

Results for 1 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	10	44.054	0.064	9.3	0.0408	0.0000	OK
15 minute winter	2	11	43.578	0.068	9.2	0.0430	0.0000	OK
15 minute winter	3	11	43.486	0.072	11.5	0.0460	0.0000	OK
15 minute winter	4	11	43.278	0.093	13.6	0.0593	0.0000	OK
15 minute winter	5	10	44.090	0.050	3.9	0.0079	0.0000	OK
15 minute winter	6	11	43.869	0.063	5.4	0.0404	0.0000	OK
15 minute winter	7	10	43.741	0.064	7.6	0.0407	0.0000	OK
15 minute winter	8	10	43.805	0.095	14.2	0.0602	0.0000	OK
15 minute winter	9	10	43.635	0.110	22.2	0.0697	0.0000	OK
15 minute winter	10	11	43.556	0.105	22.1	0.0670	0.0000	OK
15 minute winter	11	11	43.400	0.098	29.8	0.0623	0.0000	OK
15 minute winter	G1	10	44.282	0.032	2.0	0.0050	0.0000	OK
15 minute winter	G2	10	44.231	0.031	1.8	0.0049	0.0000	OK
15 minute winter	G3	10	44.163	0.033	1.4	0.0053	0.0000	OK
15 minute winter	SUDS BASIN 1	11	44.067	0.067	5.8	0.4758	0.0000	OK
15 minute winter	SUDS BASIN 2	11	43.940	0.040	7.5	0.2123	0.0000	OK
30 minute winter	TANK	27	42.821	0.121	40.2	16.1427	0.0000	OK
30 minute winter	12 FC	31	42.875	0.275	33.9	0.4860	0.0000	OK
30 minute winter	SWD3	26	42.285	0.035	12.3	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	1.000	2	9.2	0.957	0.176	0.4599	
15 minute winter	2	1.001	3	9.1	0.869	0.176	0.1012	
15 minute winter	3	1.002	4	11.6	0.875	0.223	0.3039	
15 minute winter	4	1.003	TANK	13.6	0.981	0.261	0.0222	
15 minute winter	5	2.000	6	3.8	0.634	0.238	0.1709	
15 minute winter	6	2.001	7	5.3	0.790	0.330	0.0437	
15 minute winter	7	2.002	9	7.5	0.846	0.159	0.0823	
15 minute winter	8	3.000	9	14.0	0.915	0.339	0.2658	
15 minute winter	9	2.003	10	22.1	0.979	0.244	0.2516	
15 minute winter	10	2.004	11	22.4	1.065	0.247	0.4683	
15 minute winter	11	2.005	TANK	29.9	1.833	0.126	0.0260	
15 minute winter	G1	4.000	SUDS BASIN 1	2.0	0.752	0.092	0.0267	
15 minute winter	G2	5.000	SUDS BASIN 1	1.8	0.701	0.087	0.0190	
15 minute winter	G3	6.000	SUDS BASIN 1	1.4	0.495	0.098	0.0131	
15 minute winter	SUDS BASIN 1	4.001	SUDS BASIN 2	5.4	0.736	0.376	0.0689	
15 minute winter	SUDS BASIN 2	4.002	11	7.5	2.122	0.131	0.0173	
30 minute winter	TANK	1.004	12 FC	33.9	0.728	0.093	0.1752	
30 minute winter	12 FC	1.005	SWD3	12.3	2.201	0.018	0.0173	26.9

**Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	10	44.063	0.073	12.0	0.0466	0.0000	OK
15 minute winter	2	11	43.588	0.078	11.8	0.0496	0.0000	OK
15 minute winter	3	11	43.498	0.084	14.9	0.0531	0.0000	OK
15 minute winter	4	11	43.293	0.108	17.6	0.0687	0.0000	OK
15 minute winter	5	10	44.097	0.057	5.1	0.0091	0.0000	OK
15 minute winter	6	11	43.880	0.074	7.0	0.0469	0.0000	OK
15 minute winter	7	10	43.750	0.073	9.7	0.0466	0.0000	OK
15 minute winter	8	10	43.820	0.110	18.4	0.0700	0.0000	OK
15 minute winter	9	10	43.652	0.127	28.8	0.0809	0.0000	OK
15 minute winter	10	11	43.572	0.121	28.6	0.0772	0.0000	OK
15 minute winter	11	11	43.416	0.114	38.5	0.0727	0.0000	OK
15 minute winter	G1	10	44.286	0.036	2.6	0.0057	0.0000	OK
15 minute winter	G2	10	44.236	0.036	2.4	0.0057	0.0000	OK
15 minute winter	G3	10	44.168	0.038	1.8	0.0060	0.0000	OK
15 minute winter	SUDS BASIN 1	11	44.079	0.079	7.6	0.5823	0.0000	OK
15 minute winter	SUDS BASIN 2	11	43.946	0.046	9.8	0.2553	0.0000	OK
30 minute winter	TANK	26	42.863	0.163	57.0	21.7064	0.0000	OK
30 minute winter	12 FC	28	42.926	0.326	47.8	0.5757	0.0000	OK
30 minute winter	SWD3	27	42.286	0.036	13.5	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	1.000	2	11.8	1.017	0.227	0.5577	
15 minute winter	2	1.001	3	11.8	0.918	0.226	0.1234	
15 minute winter	3	1.002	4	15.0	0.930	0.288	0.3692	
15 minute winter	4	1.003	TANK	17.6	1.049	0.338	0.0268	
15 minute winter	5	2.000	6	5.0	0.681	0.311	0.2078	
15 minute winter	6	2.001	7	6.9	0.842	0.426	0.0529	
15 minute winter	7	2.002	9	9.7	0.904	0.204	0.0992	
15 minute winter	8	3.000	9	18.1	0.976	0.439	0.3228	
15 minute winter	9	2.003	10	28.6	1.041	0.316	0.3065	
15 minute winter	10	2.004	11	28.8	1.123	0.318	0.5727	
15 minute winter	11	2.005	TANK	38.6	1.939	0.162	0.0318	
15 minute winter	G1	4.000	SUDS BASIN 1	2.6	0.807	0.118	0.0322	
15 minute winter	G2	5.000	SUDS BASIN 1	2.4	0.757	0.115	0.0233	
15 minute winter	G3	6.000	SUDS BASIN 1	1.8	0.531	0.126	0.0158	
15 minute winter	SUDS BASIN 1	4.001	SUDS BASIN 2	7.1	0.786	0.489	0.0840	
15 minute winter	SUDS BASIN 2	4.002	11	9.7	2.268	0.169	0.0210	
30 minute winter	TANK	1.004	12 FC	47.8	0.748	0.131	0.2241	
30 minute winter	12 FC	1.005	SWD3	13.5	2.262	0.020	0.0185	35.5

**Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	10	44.118	0.128	32.0	0.0815	0.0000	OK
15 minute winter	2	11	43.657	0.147	31.5	0.0934	0.0000	OK
15 minute winter	3	11	43.570	0.156	39.5	0.0993	0.0000	OK
15 minute winter	4	11	43.393	0.208	46.7	0.1323	0.0000	OK
15 minute winter	5	10	44.144	0.104	13.6	0.0165	0.0000	OK
15 minute winter	6	10	43.980	0.174	18.8	0.1104	0.0000	SURCHARGED
15 minute winter	7	10	43.819	0.142	26.0	0.0905	0.0000	OK
15 minute winter	8	10	43.974	0.264	48.9	0.1680	0.0000	SURCHARGED
15 minute winter	9	10	43.777	0.252	76.9	0.1600	0.0000	OK
15 minute winter	10	11	43.681	0.230	76.1	0.1460	0.0000	OK
15 minute winter	11	11	43.512	0.210	100.1	0.1337	0.0000	OK
15 minute winter	G1	10	44.311	0.061	6.8	0.0097	0.0000	OK
15 minute winter	G2	10	44.261	0.061	6.3	0.0097	0.0000	OK
15 minute winter	G3	11	44.195	0.065	4.8	0.0104	0.0000	OK
15 minute winter	SUDS BASIN 1	12	44.170	0.170	20.2	1.6876	0.0000	SURCHARGED
15 minute winter	SUDS BASIN 2	11	43.972	0.072	23.8	0.4661	0.0000	OK
60 minute winter	TANK	49	43.244	0.544	82.6	72.3359	0.0000	SURCHARGED
60 minute winter	12 FC	49	43.242	0.642	52.2	1.1353	0.0000	SURCHARGED
60 minute winter	SWD3	49	42.294	0.044	19.7	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	1.000	2	31.5	1.247	0.607	1.2143	
15 minute winter	2	1.001	3	31.3	1.101	0.602	0.2737	
15 minute winter	3	1.002	4	39.9	1.158	0.767	0.7765	
15 minute winter	4	1.003	TANK	46.8	1.331	0.901	0.0556	
15 minute winter	5	2.000	6	13.5	0.820	0.831	0.4306	
15 minute winter	6	2.001	7	18.3	1.053	1.133	0.1074	
15 minute winter	7	2.002	9	25.8	0.991	0.543	0.2775	
15 minute winter	8	3.000	9	48.3	1.233	1.172	0.6476	
15 minute winter	9	2.003	10	76.1	1.261	0.840	0.6725	
15 minute winter	10	2.004	11	76.5	1.383	0.845	1.2335	
15 minute winter	11	2.005	TANK	100.3	2.393	0.422	0.0662	
15 minute winter	G1	4.000	SUDS BASIN 1	6.7	1.045	0.311	0.0694	
15 minute winter	G2	5.000	SUDS BASIN 1	6.2	0.979	0.303	0.0512	
15 minute winter	G3	6.000	SUDS BASIN 1	4.8	0.689	0.338	0.0345	
15 minute winter	SUDS BASIN 1	4.001	SUDS BASIN 2	16.8	0.973	1.163	0.1526	
15 minute winter	SUDS BASIN 2	4.002	11	23.6	2.651	0.413	0.0552	
60 minute winter	TANK	1.004	12 FC	52.2	0.746	0.143	0.3354	
60 minute winter	12 FC	1.005	SWD3	19.7	2.481	0.029	0.0246	117.0

**Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.96%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	10	44.145	0.155	43.0	0.0987	0.0000	OK
15 minute winter	2	11	43.827	0.317	43.4	0.2015	0.0000	SURCHARGED
15 minute winter	3	11	43.739	0.325	51.4	0.2070	0.0000	SURCHARGED
60 minute winter	4	51	43.480	0.295	33.3	0.1876	0.0000	SURCHARGED
15 minute winter	5	11	44.441	0.401	18.2	0.0638	0.0000	FLOOD RISK
15 minute winter	6	11	44.149	0.343	23.4	0.2180	0.0000	SURCHARGED
15 minute winter	7	11	43.985	0.308	33.0	0.1957	0.0000	SURCHARGED
15 minute winter	8	11	44.253	0.543	65.8	0.3452	0.0000	SURCHARGED
15 minute winter	9	11	43.927	0.402	99.5	0.2557	0.0000	SURCHARGED
15 minute winter	10	11	43.783	0.332	99.6	0.2110	0.0000	SURCHARGED
15 minute winter	11	11	43.554	0.252	129.1	0.1604	0.0000	OK
15 minute winter	G1	10	44.322	0.072	9.1	0.0114	0.0000	OK
15 minute winter	G2	10	44.274	0.074	8.5	0.0118	0.0000	OK
15 minute winter	G3	12	44.234	0.104	6.5	0.0165	0.0000	OK
15 minute winter	SUDS BASIN 1	12	44.229	0.229	27.1	2.6703	0.0000	SURCHARGED
15 minute winter	SUDS BASIN 2	11	43.983	0.083	29.7	0.5750	0.0000	OK
60 minute winter	TANK	51	43.478	0.778	107.9	103.5829	0.0000	SURCHARGED
60 minute winter	12 FC	51	43.477	0.877	51.2	1.5499	0.0000	SURCHARGED
60 minute winter	SWD3	51	42.297	0.047	23.3	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	1	1.000	2	43.4	1.300	0.834	1.6569	
15 minute winter	2	1.001	3	40.3	1.102	0.776	0.3829	
15 minute winter	3	1.002	4	51.1	1.286	0.984	0.9111	
60 minute winter	4	1.003	TANK	33.2	1.237	0.640	0.0636	
15 minute winter	5	2.000	6	16.7	0.950	1.033	0.4950	
15 minute winter	6	2.001	7	23.9	1.355	1.474	0.1137	
15 minute winter	7	2.002	9	33.5	1.012	0.708	0.3685	
15 minute winter	8	3.000	9	63.8	1.604	1.548	0.6925	
15 minute winter	9	2.003	10	99.6	1.415	1.100	0.7854	
15 minute winter	10	2.004	11	99.7	1.428	1.101	1.4906	
15 minute winter	11	2.005	TANK	129.1	2.528	0.543	0.0796	
15 minute winter	G1	4.000	SUDS BASIN 1	9.0	1.100	0.418	0.1149	
15 minute winter	G2	5.000	SUDS BASIN 1	8.4	1.032	0.408	0.0841	
15 minute winter	G3	6.000	SUDS BASIN 1	6.3	0.727	0.447	0.0685	
15 minute winter	SUDS BASIN 1	4.001	SUDS BASIN 2	20.6	1.173	1.424	0.1582	
15 minute winter	SUDS BASIN 2	4.002	11	29.4	2.729	0.515	0.0679	
60 minute winter	TANK	1.004	12 FC	51.2	0.725	0.141	0.3354	
60 minute winter	12 FC	1.005	SWD3	23.3	2.585	0.035	0.0280	159.6