



Kings Meadow, Brecon

Powys

Flood Consequences Assessment & Drainage Strategy

October 2026

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Introduction

Waterco has been instructed to prepare a Flood Consequences Assessment (FCA) and Drainage Strategy in respect of a proposed Lidl store at land south of the A470, Kings Meadow, Brecon, LD3 8LQ.

The purpose of this report is to outline the potential flood risk to the site, the impact of the proposed development on flood risk elsewhere, and the proposed measures which could be incorporated to mitigate the identified flood risk. This report has been prepared in accordance with the guidance contained in Planning Policy Wales (PPW) and Technical Advice Note 15 (TAN15): Development, Flooding and Coastal Erosion.

This report also includes a Drainage Strategy. The aim of the Drainage Strategy is to identify water management measures, including Sustainable Drainage Systems (SuDS), to provide surface water runoff reduction and treatment. This report has been prepared in accordance with the Welsh Government 'Statutory standards for sustainable drainage systems – designing, constructing, operating and maintaining surface water drainage systems' (2018) – herein referred to as 'the Statutory Standards for SuDS'.

Existing Conditions

The site covers an area of approximately 1.18 hectares (ha) and is located at National Grid Reference (NGR): 303189, 228268. A location plan and an aerial image are included in Appendix A.

Online mapping (including Google Maps / Google Streetview imagery, accessed October 2026) shows that the site comprises undeveloped land and a wooded strip in the south adjacent to the Afon Tarell (watercourse). The site is triangular in shape and is bordered by the A470 to the north and north-west, the A40 to the east and the Afon Tarell to the south. Access to the site is provided off the A470.

Local Topography

A topographical survey has been undertaken by Cube Surveys in March 2026. The topographical survey shows that the site slopes from 142.40metres Above Ordnance Datum (m AOD) in the south-west to 139.97m AOD in the east. The topographical survey does not identify site levels in the southernmost extent adjacent to the Afon Tarell.

Topographic levels to m AOD have also been derived from a 1m resolution NRW composite 'Light Detecting and Ranging' (LiDAR) Digital Terrain Model (DTM). The LiDAR data generally corroborates with the topographical survey. The LiDAR data shows that site levels slope steeply towards the Afon Tarell on the southern boundary. The Afon Tarell is situated at approximately 135m AOD.

Topographical information is provided as Appendix B.

Ground Conditions

Published Geology & Hydrogeology

The British Geological Survey (BGS) online mapping (1:50,000 scale) indicates that the site is underlain by

superficial Glaciofluvial Sheet deposits, generally comprising sand and gravel. The superficial deposits are identified as being underlain by bedrock of the Freshwater West Formation consisting of interbedded argillaceous rocks and sandstone.

The geological mapping is available at a scale of 1:50,000 and as such may not be accurate on a site-specific basis.

According to NRW's Aquifer Designation data, obtained from the BGS GeoIndex online mapping [accessed October 2026], the superficial Glaciofluvial Sheet deposits and underlying Freshwater West Formation are classified as Secondary A Aquifers. Secondary A Aquifers are 'permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers'.

Ground Investigations

A Phase 2 Ground Investigation was undertaken by Remada Geo Consultants in May 2026. The intrusive ground investigation comprised 3no. cable tool boreholes (BH01, BH02 and BH02A), 5no. window sample boreholes (WS01 – WS05) and 4no. trial pits (SA01 – SA04). The locations of all boreholes and trial pits are shown on the 'Exploratory Hole Plan – Proposed Site Layout', included in Appendix C.

Made Ground (gravelly sand / sandy gravel) was identified in WS02 and BH01 up to 0.5 metres below ground level (m.bgl). Possible Made Ground was present in BH02 between 0.30 – 1.20m.bgl. Topsoil was encountered across the site to depths between 0.10 – 0.30m.bgl. The topsoil was underlain by superficial deposits of gravelly clayey silty sand, clayey silty cobbly gravel, and soft to stiff clay to depths of up to 7.0m.bgl. Gravels comprised mudstone, sandstone, and quartzite. A very stiff sandy clay with mudstone lithorelics was encountered between 6.45m.bgl - 7.45m.bgl, interpreted as weathered bedrock of the St Andrews Formation.

Soil chemical analysis identified one exceedance of PAHs (Polycyclic Aromatic Hydrocarbons) at BH01. This location will be covered by a new retail building therefore the associated human health risk is considered low. The affected material forms part of a former road subbase, and once covered or removed during development, any residual risk will be negligible.

Infiltration Testing

Infiltration testing in accordance with BRE365 specification was undertaken within the 4no. trial pits (SA01 – SA04). The infiltration tests were repeated three times in each trial pit. A summary of the infiltration test results is provided in Table 1. The infiltration test results together with the trial pit and borehole logs are also included in Appendix C.

Table 1 – Infiltration Rates

Trial Pit Reference and Infiltration Testing Range	Infiltration Rate - Test 1	Infiltration Rate - Test 2	Infiltration Rate - Test 3
SA01: 0.5m.bgl – 1.94m.bgl	1.50×10^{-4} m/s	1.16×10^{-4} m/s	7.62×10^{-5} m/s
SA02: 0.41m.bgl - 1.8m.bgl	2.82×10^{-4} m/s	1.67×10^{-4} m/s	1.50×10^{-4} m/s
SA03: 0.32m.bgl - 1.32m.bgl	2.17×10^{-3} m/s	4.97×10^{-4} m/s	5.98×10^{-4} m/s
SA04: 0.66m.bgl - 1.96m.bgl	1.21×10^{-4} m/s	1.43×10^{-4} m/s	6.89×10^{-5} m/s

Based on the infiltration test results, infiltration drainage techniques appear feasible on site. No groundwater was encountered in any of the boreholes which were advanced to a maximum depth of 7.45m.bgl.

Local Drainage

Public sewer records have been obtained from Dŵr Cymru Welsh Water (DCWW) and are included in Appendix D. The DCWW sewer records identify a 225mm private surface water sewer which crosses the south-western extent of the site and discharges to the Afon Tarell. There is also a 100mm public combined rising main flowing north-east within the A470, although its ultimate destination is unknown. The 100mm public combined rising main originates from a DCWW foul pumping station located approximately 30m west of the site. The foul pumping station serves the commercial units within Brecon Enterprise Park.

Development Proposals

The proposed development is for a Lidl store with associated car park, soft landscaping and a new access off the A470. The proposed Lidl store will have a finished floor level (FFL) of 141.3m AOD. Proposed development plans are included in Appendix E.

The proposed development will introduce hardstanding areas in the form of the Lidl store and car park. Hardstanding will comprise approximately 7,010m² or 59.4% of the total site area. The remaining site area will comprise soft landscaping and the retained slope down to the Afon Tarell.

All measurements have been taken from a PDF copy of the 'Proposed Setting Out Site Plan' (dwg no. P410) and are approximate only.

Flood Zone Category and Policy Context

Flood Zone Category

The NRW 'Flood Map for Planning (Rivers and Sea)', included in Appendix F, shows that the majority of site is located within Flood Zone 1 - an area outside of the extreme flood extent, meaning it has a less than 0.1% annual probability of flooding, including the effects of climate change. The southern extent of the site, comprising the river corridor adjacent to the River Tarell, is located within Flood Zone 3 - an area considered to be at flood risk with a 1% (1 in 100) or greater annual probability of fluvial flooding, including the effects of climate change. All development (including access) will be located outside of the Flood Zone 3 extent.

Development Vulnerability Classification

The proposed commercial development is considered to be 'less vulnerable' development in accordance with Figure 4 of the Welsh Government's TAN15. TAN15 states that applications for all types of development are acceptable in principle in Flood Zone 1.

Local Policy

The Brecon Beacons National Park (2007 – 2022) Local development Plan contains the following policy relating to drainage:

'Policy 10

Water Quality

Development Proposals will only be permitted where:

- a) They do not have unacceptable adverse impact upon the water environment, and*
- b) Where they would not pose an unacceptable risk to the quality and quantity of controlled waters (including groundwater and surface water).*

Policy 11

Sustainable Use of Water

The NPA will seek to ensure that all future development proposals consider the incorporation of the highest standards for water management.

Policy 58

Sustainable Drainage Systems

All proposals for new development will be required to consider the incorporation of appropriate Sustainable Drainage Systems. Where relevant it must be demonstrated that the SUDS proposed within the development and procedures for adoption and maintenance have been approved by the relevant drainage body. This will be tied by a condition and/or S106 arrangement where necessary.'

Local guidance documents including the Stage 1 Mid Wales Strategic Flood Consequences Assessment (SFCA) (November 2022) and the Severn Preliminary Flood Risk Assessment (PFRA) (December 2018) have been reviewed and inform this report.

Consultation

A pre-development enquiry request was submitted to Dŵr Cymru Welsh Water (DCWW) in July 2026 to determine a suitable connection point for development foul flows. In their response (included in Appendix G), DCWW have stated:

'FOUL WATER DRAINAGE – SEWERAGE NETWORK

We have considered the impact of foul flows generated by the proposed development and concluded that flows can be accommodated within the public sewerage system. We advise that the flows should be connected to the foul sewer between manholes SO03270901 and SO03270904 located road to the south.

DRAINAGE – SEWAGE TREATMENT

No problems are envisaged with the Waste Water Treatment Works for the treatment of domestic discharges from this site.'

Further correspondence with DCWW is ongoing to determine whether closer point of connection for development foul flows is feasible.

Sources of Flooding and Probability

Fluvial

The Afon Tarell is located along the southern site boundary and flows north-east to join the River Usk approximately 820m north-east of the site. There is also a ditch identified on the site layout plan (Appendix E) within the southern extent of the site. The ditch is located south of the developable site area and is not identified by the topographical survey.

The NRW 'Recorded Flood Extents' map (Appendix F) indicates that there are no records of fluvial flooding affecting the site.

The NRW 'Flood Map for Planning (Rivers and Sea)' identifies that the majority of the site (including all proposed development) is located within Flood Zone 1 - an area outside of the extreme flood extent, meaning it has a less than 0.1% annual probability of flooding.

NRW Model – River Usk at Brecon

Modelled outputs for the River Usk and its tributaries have been obtained from NRW. The modelled outputs have been taken from the 2010 River Usk at Brecon model which includes data for the Afon Tarell. The

modelled outputs have been processed by Waterco to create flood depth and water level mapping, included as Appendix G.

As shown in Figure 1 and Appendix H, during the 0.1% Annual Exceedance Probability (AEP) event, the majority of the site (including all development) is flood free. A maximum water level of 136.37m AOD is estimated in the south-western extent of the site (upstream), reducing to 135.13m AOD in the south-eastern extent of the site (downstream). As shown on the 'Proposed Levels Strategy' plan (Appendix E), all development will be situated on ground above 140.93m AOD and over 4.5m above the undefended 0.1% AEP flood level.

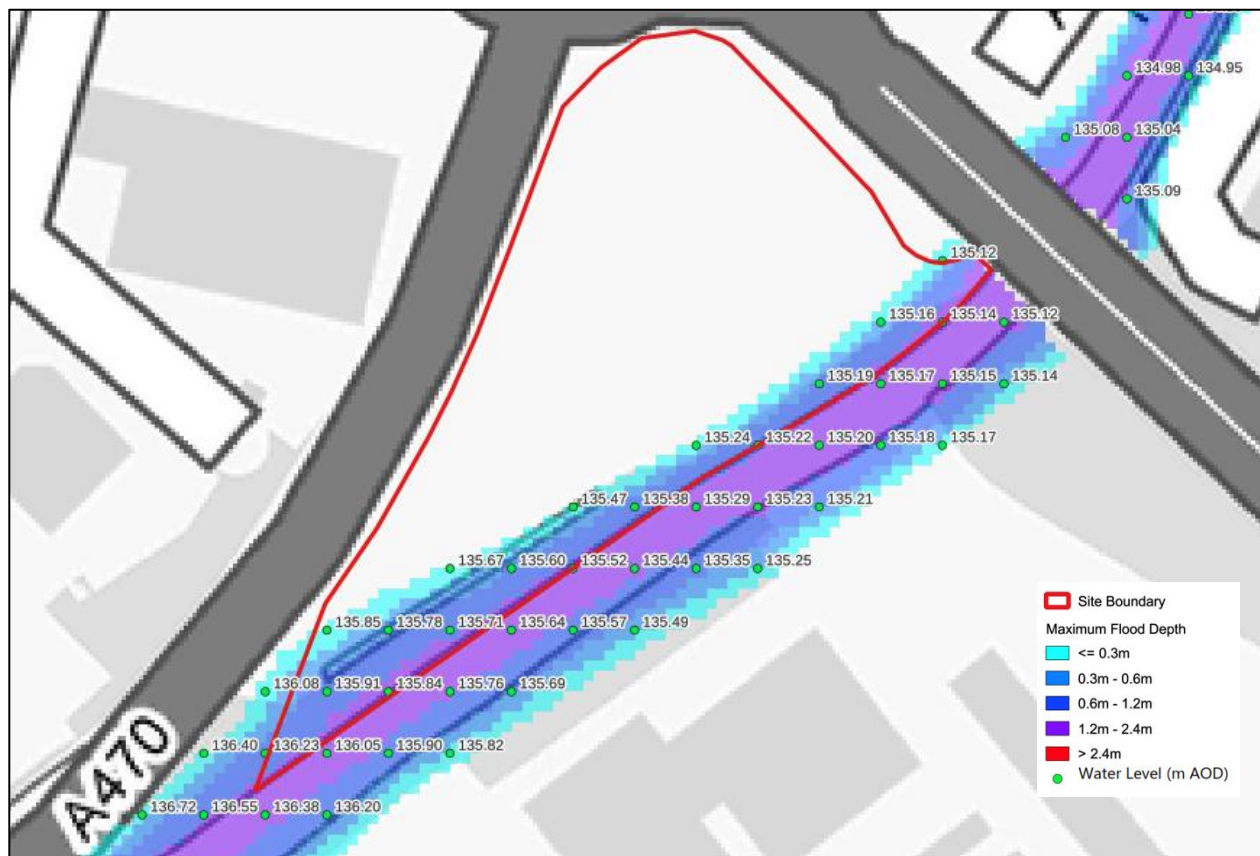


Figure 1 - 0.1% AEP Event - Undefended

The modelling shows that the A40 road bridge does not restrict flood flows (the NRW modelling report confirms that the bridge is not surcharged at highest flows). This is due to the large bridge span. The A40 road level in the location of the road bridge is approximately 141.17m AOD and 6.05m above the 0.1% AEP flood level. The bridge soffit level has not been surveyed, however based on the level of the bridge deck, the soffit is assumed to be significantly above the 0.1% AEP flood level.

As shown on the model outputs (Appendix H), during the 1% AEP plus 20% climate change (CC) event, a maximum water level of 136.18m AOD is estimated in the south-western extent of the site (upstream), reducing to 135.02m AOD in the south-eastern extent of the site (downstream). Water levels in the 1% AEP plus 20% CC event are 100mm lower than during the 0.1% AEP event in the south-eastern extent of the site.

NRW climate change allowances, updated in March 2026, state that a 35% climate change allowance applies for the River Severn catchment. No modelled data is available to assess 35% climate change on the 1% AEP and 0.1% AEP events. However, peak flow data for the Afon Tarell, derived from the Environment Agency Wales (now NRW) 'Velocity Depth Mapping Study – River Usk at Brecon' (November 2010) report (obtained from NRW through a Product 5 data request), can be used to make a qualitative analysis of 35% climate change.

The 1% AEP design peak flow for the Afon Tarell is 33.5m³/s. The 0.1% AEP design peak flow for the Afon Tarell is 57.3m³/s. Applying a 35% climate change on the 1% AEP peak flow derives a peak flow of 45.225m³/s. The peak flow during the 1% AEP plus 35% CC event is less than that during the 0.1% AEP event. As the development site area is flood free during the 0.1% AEP event (development is 4.5m above flood levels), it will also be flood free during the 1% AEP plus 35% CC event.

To establish an approximate flood level for the 0.1% AEP plus 35% CC event, the peak flow data has been processed to create a trendline. Applying 35% climate change on the 0.1% AEP peak flow derives a peak flow of 77.4m³/s for the 0.1% AEP plus 35% CC event. As shown in Figure 2, using a trendline approach, a 0.1% AEP plus 35% CC flood level of 135.35m AOD is estimated (applicable for the south-eastern extent of the site). The developable area of the site would therefore be flood free during the 0.1% AEP plus 35% CC event.

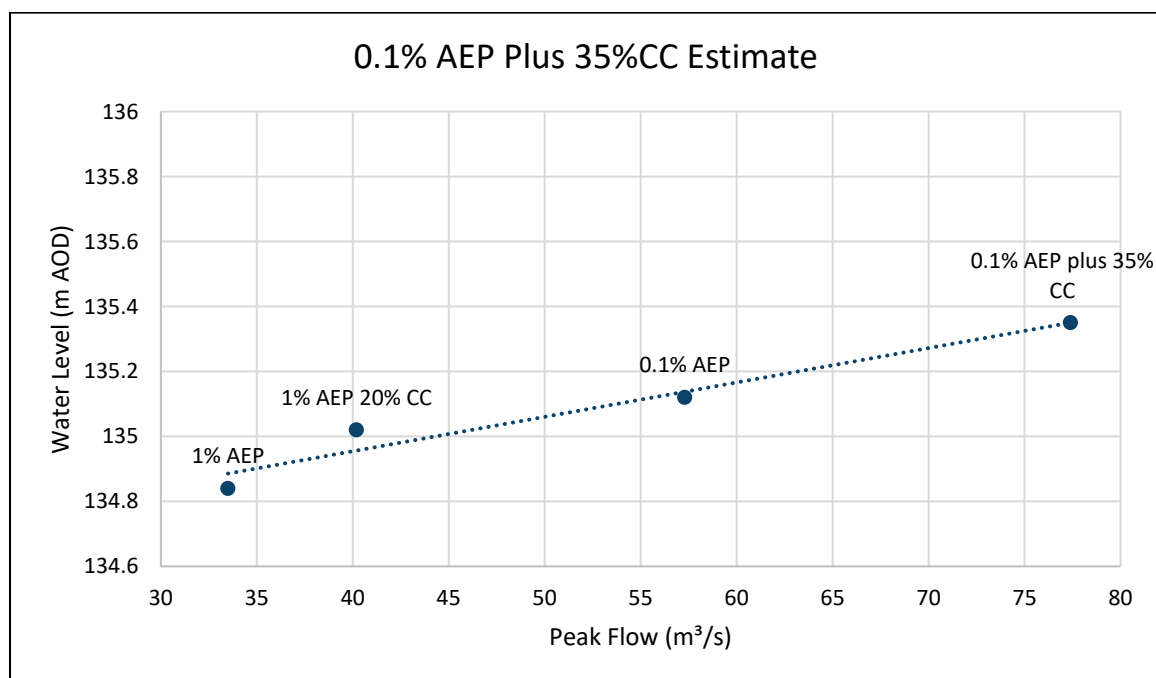


Figure 2 - 0.1% AEP Plus 35% CC Trend Line Analysis

It can therefore be concluded that the risk of fluvial flooding to the developable area of the site is very low.

Tidal

The developable area of the site is situated at a minimum of 139.97m AOD and is significantly above sea level. The site is therefore not at risk of tidal flooding.

Surface Water

Surface water flooding occurs when rainwater does not drain away through the normal drainage system or soak into the ground. It is usually associated with high intensity rainfall events but can also occur with lower intensity rainfall or melting snow where the ground is saturated, frozen or developed, resulting in overland flow and ponding in depressions in topography. Surface water flooding can occur anywhere without warning. However, flow paths can be determined by consideration of contours and relative levels.

The NRW 'Flood Zones – Surface Water & Small Watercourses' map (Appendix F) shows that the majority of the site is located within Flood Zone 1, meaning it has a less than 0.1% annual probability of flooding from surface water and small watercourses, including the effects of climate change. A small area within the northern extent of the site is located within Flood Zones 2 and 3. Flood Zone 2 is defined as having between a 1% and 0.1% annual probability of flooding, including the effects of climate change. Flood Zone 3 is defined as having a greater than 1% annual probability of flooding, including climate change.

The surface water flooding identified on the NRW 'Flood Zones – Surface Water & Small Watercourses' map is associated with surface water ponding within an isolated topographical low point. The risk of surface water flooding will be removed by ground reprofiling (removing the isolated low point). Furthermore, the proposed drainage system will accommodate surface water runoff during all events up to and including the 1 in 100 year plus 40% CC event.

There are no distinct flow routes in the area which would direct any potential surface water flooding towards the site.

There are no records of surface water flooding affecting the site. It can therefore be concluded that the risk of surface water flooding is very low.

Sewer

Flooding from sewers can occur when a sewer is overwhelmed by heavy rainfall, becomes blocked, is damaged, or is of inadequate capacity. Flooding is mostly applicable to combined and surface water sewers.

The DCWW sewer records identify a 225mm private surface water sewer which crosses the south-western extent of the site and discharges to the Afon Tarell. There is also a 100mm public combined rising main flowing north-east within the A470, although its ultimate destination is unknown. The 100mm public combined rising main originates from a DCWW foul pumping station located approximately 30m west of the site.

Any potential flooding arising from the 225mm private surface water sewer crossing the south-western extent of the site would be directed south-east into the Afon Tarell. Flows within the 100mm public combined rising main will be controlled by the upstream pumping station and as such, the associated flood risk is low.

There are no records of sewer flooding affecting the site. It can therefore be concluded that the risk of sewer flooding is very low.

Groundwater

Groundwater flooding occurs when water levels underneath the ground rise above normal levels. Prolonged heavy rainfall soaks into the ground and can cause the ground to become saturated. This results in rising groundwater levels which leads to flooding above ground.

No groundwater was encountered in any of the trial pits or boreholes advanced on site during the intrusive ground investigation (to depths of up to 7.45m.bgl).

There are no records of groundwater flooding affecting the site. It can therefore be concluded that the risk of groundwater flooding is very low.

Artificial Sources

There are no canals within the vicinity of the site. The NRW online 'Flood Risk from Reservoirs' map shows that the site is not at risk of flooding from reservoirs. It can therefore be concluded that the risk of flooding from artificial sources is very low.

Summary of Potential Flooding

It can be concluded that the risk of flooding from all sources is very low. Therefore, no site-specific flood risk mitigation measures are considered necessary.

Surface Water Management

The proposed development will introduce approximately 7,010m² of hardstanding in the form of the Lidl store and car park.

In order to comply with the Statutory Standards for SuDS, and ensure that the proposed development will not increase flood risk elsewhere, surface water runoff will be managed through the use of sustainable drainage systems.

Discharge Method

Standard S1 of the Statutory Standards for SuDS sets out the following hierarchy of drainage options:

Priority Level 1: Surface water runoff is collected for use;

Priority Level 2: Surface water runoff is infiltrated to ground;

Priority Level 3: Surface water runoff is discharged to a surface water body;

Priority Level 4: Surface water runoff is discharged to a surface water sewer, highway drain, or another drainage system;

Priority Level 5: Surface water runoff is discharged to a combined sewer.

Priority Level 1: Surface water runoff collected for use

In line with section G1.4 of the Statutory Standards for SuDS, rainwater harvesting is not proposed for this site as:

1. There is no foreseeable need to harvest water at the site as DCWW water resources and drought management plans do not identify potential stresses on mains water supplies;
2. The use of rainwater harvesting is not a viable/ cost-effective part of the solution for managing surface water runoff on the site, taking account of the potential water supply benefits of such a system.

With regards to point 2 above, section G1.6 of the Statutory Standards for SuDS states that; in most cases, rainwater harvesting alone will not be adequate to deal with the site drainage and provision will be required for an overflow to a Level 2 or lower priority runoff destination. As downstream provision of a soakaway will be required to accommodate for rainwater harvesting system overflows, rainwater harvesting is not considered a cost-effective solution for managing surface water runoff.

Priority Level 2: Surface water runoff is infiltrated to ground

Infiltration tests have been carried out by Remada Geo Consultants in May 2026. The infiltration test results show that infiltration techniques are feasible at the site. The slowest infiltration rate recorded on site across 4no. trial pits is 6.89×10^{-5} m/s (0.24804 m/h) recorded at SA04.

Proposed Drainage System

As infiltration techniques are feasible, the following infiltration-based drainage system is proposed:

- Based on the proposed site levels, with a 0.8m variance in levels across the car park, surface water from the car park and Lidl store roof will be discharged to soakaways located beneath the car park. The soakaways will be sized to accommodate the 1 in 100 year plus 40% climate change event.
- All runoff from the car park will pass through permeable surfaced parking bays which will provide amenity and water quality benefits. The permeable surfaced parking bays will have piped links to the soakaways. A raingarden will be incorporated to provide amenity, biodiversity and water quality benefits. A rain garden is proposed in the landscaped areas peripheral to the car park.

Soakaway Sizing

An infiltration rate of 6.89×10^{-5} m/s (0.24804 m/hr) has been used to inform the soakaway sizing. The soakaways have been sized using MicroDrainage with outputs included in Appendix I. In accordance with table G1.1 of the Statutory Standards for Sustainable Drainage Systems, a safety factor of 5 has been used in the sizing of all infiltration features (applicable for contributing drainage areas over 1000m² with the consequences of failure being minor inconvenience i.e. surface water on car park) as an allowance has been made for soakage through the base of the soakaways.

Two soakaways are proposed to distribute infiltration across the site. A catchment area plan showing the contributing drainage area to each soakaway is provided as Appendix J. Table 2 defines the catchment areas

Table 2 – Soakaway Catchment Areas

Drainage Area 1	Covers an area of 3,170m ² and comprises the Lidl store roof, plant area, loading bay and pathways peripheral to the store
Drainage Area 2	Covers an area of 3,840m ² and comprises the car park.

Drainage Area 1

Based on an infiltration rate of 6.89×10^{-5} m/s, a contributing drainage area of 3,170m², a geo-cellular soakaway measuring 9m wide x 35m long x 0.8m deep with a 95% void ratio will be sufficient to accommodate the 1 in 100 year plus 40% CC event. A storage volume of 239m³ is required.

Drainage Area 2

Based on an infiltration rate of 6.89×10^{-5} m/s, a contributing drainage area of 3,840m², a geo-cellular soakaway measuring 10m wide x 39m long x 0.8m deep with a 95% void ratio will be sufficient to accommodate the 1 in 100 year plus 40% CC event. A storage volume of 288.4m³ is required.

A Concept Drainage Sketch is included as Appendix K.

Exceedance Event

Storage will be provided for the 1 in 100 year plus 40% CC event. Storm events in excess of the 1 in 100 year plus 40% CC event should be permitted to produce temporary shallow depth flooding within the car park. The proposed car park will gradually slope away from the store, ensuring exceedance flows will not be directed towards the building.

Surface Water Treatment

The Statutory Standards for SuDS sets out the following guidance for surface water treatment:

S3 - Surface water quality management

Treatment for surface water runoff should be provided to prevent negative impacts on the receiving water quality and/or protect downstream drainage systems, including sewers.

In accordance with the CIRIA C753 publication 'The SuDS Manual' (2015), commercial roofs have a 'low' pollution hazard level, with non-residential car parking classified as having a 'medium' pollution hazard level. Table 3 shows the pollution hazard indices for each land use.

Table 3 – Pollution Hazard Indices

Land Use	Pollution Hazard Level	Total Suspended Solids (TSS)	Metals	Hydrocarbons
Commercial Roofs	Low	0.3	0.2	0.05
Non-residential car parking	Medium	0.7	0.6	0.7

Table extract taken from the CIRIA C753 publication 'The SuDS Manual' – Table 26.2

* Indices values range from 0-1.

Runoff from the car park will be conveyed to a soakaway via permeable surfacing. Table 4 shows that permeable surfacing provides sufficient treatment. Runoff from the HGV loading bay will be directed to a proprietary treatment system (separator), prior to discharge to a soakaway. The separator will provide sufficient treatment.

Table 4 – SuDS Mitigation Indices

Type of SuDS	Mitigation Indices		
	Total Suspended Solids (TSS)	Metals	Hydrocarbons
Permeable Pavement	0.7	0.6	0.7

Table extract taken from the CIRIA C753 publication 'The SuDS Manual' – Table 26.3

Amenity

The Statutory Standards for SuDS provide the following guidance in relation to Standard S4 – Amenity:

'The design of the surface water management system should maximise amenity benefits.'

The proposed development will include permeable surfacing and a rain garden which will maximise the amenity value of the proposed drainage system.

Biodiversity

The Statutory Standards for SuDS provide the following guidance in relation to Standard S5 – Biodiversity:

'The design of the surface water management system should maximise biodiversity benefits.'

The proposed permeable paving and rain garden will maximise the biodiversity value of the proposed drainage system.

Construction, Operation and Maintenance

Standard S6 of the Statutory Standards for SuDS states;

S6 – Design of drainage for Construction, Operation and Maintenance

- 1) All elements of the surface water drainage system should be designed so that they can be constructed easily, safely, cost-effectively, in a timely manner, and with the aim of minimising the use of scarce resources and embedded carbon (energy).
- 2) All elements of the surface water drainage system should be designed to ensure maintenance and operation can be undertaken (by the relevant responsible body) easily, safely, cost-effectively, in a timely manner, and with the aim of minimising the use of scarce resources and embedded carbon (energy).
- 3) The surface water drainage system should be designed to ensure structural integrity of all elements under anticipated loading conditions over the design life of the development site, taking into account the requirement for reasonable levels of maintenance.

All drainage systems will be readily accessible for maintenance access.

The development will be in private ownership and as such the drainage system will not be adopted by the SAB. Maintenance of the drainage system will be the responsibility of the site owner (Lidl Great Britain Limited).

Maintenance schedules for soakaways, bioretention systems (applicable to the raingarden) and permeable surfacing are included in Appendix L.

Foul Drainage

A pre-development enquiry request was submitted to Dŵr Cymru Welsh Water in July 2026. In their response, DCWW stated:

‘We have considered the impact of foul flows generated by the proposed development and concluded that flows can be accommodated within the public sewerage system. We advise that the flows should be connected to the foul sewer between manholes SO03270901 and SO03270904 located road to the south.’

Manholes SO03270901 and SO03270904 are located approximately 370m south-west of the site beyond the Afon Tarell. Manholes SO03270901 or SO03270904 are located at a similar elevation to the site, and a connection would require a pumped solution.

Storage will be required to accommodate pump failure. A pumping station with duty and standby pumps, telemetry and high-level alarms, with emergency storage for at least 24 hours will be required.

Considering the distance between the site and Manholes SO03270901 and SO03270904, an alternative connection is being explored to the foul sewer upstream of the Welsh Water foul pumping station located 30m west of the site. A connection to the nearest chamber upstream of the foul pumping station would require land owner permission (as the sewer is privately owned). Based on proposed site levels, a pumped solution would also likely be required to connect to the sewer upstream of the Welsh Water pumping station.

Consultation with DCWW is ongoing and confirmation of the final foul drainage connection point has not yet been agreed. As such, this report presents the feasible connection options currently under consideration. The final FCA and Drainage Strategy will identify a single preferred foul drainage solution following agreement with DCWW.

Conclusions

The proposed development is for a Lidl store with associated car park and soft landscaping at Kings Meadow, Brecon, LD3 8LQ.

Flood Risk

The NRW 'Flood Map for Planning' shows that the majority of site (including all proposed development) is located within Flood Zone 1 - an area outside of the extreme flood extent, meaning it has a less than 0.1% annual probability of flooding, including the effects of climate change. The southern extent of the site (comprising the wooded slope leading down to the Afon Tarell) is located within Flood Zone 3 - an area considered to be at flood risk with a 1% (1 in 100) or greater annual probability of fluvial flooding, including the effects of climate change.

All development will be situated on ground above 139.79m AOD and over 4.5m above the 0.1% AEP flood level. The development will also be over 4.5m above the 1% AEP plus 35% CC flood level and 4.44m above the 0.1% AEP plus 35% CC flood level. It can therefore be concluded that the risk of fluvial flooding is very low.

The risk of flooding from all other sources has been assessed and the flood risk is considered to be very low.

Drainage Strategy

The proposed development will introduce approximately 7,010m² of hardstanding in the form of the Lidl store and the car park. In order to comply with the Statutory Standards for SuDS and ensure that the proposed development will not increase flood risk elsewhere, surface water runoff will be managed through the use of sustainable drainage systems.

Infiltration tests have been carried out by Remada Geo Consultants in May 2026. The infiltration test results show that infiltration techniques are feasible at the site. The slowest infiltration rate recorded on site is 6.89×10^{-5} m/s (0.24804 m/h).

As infiltration techniques appear to be feasible, the following infiltration-based drainage system is proposed:

- Based on the proposed site levels, with a 0.8m variance in levels across the car park, surface water from the car park and Lidl store roof will be discharged to soakaways located beneath the car park. The soakaways will be sized to accommodate the 1 in 100 year plus 40% climate change event.
- All runoff from the car park will pass through permeable surfaced parking bays which will provide amenity and water quality benefits. The permeable surfaced parking bays will have piped links to the soakaways. A raingarden will be incorporated to provide amenity, biodiversity and water quality benefits. A rain garden is proposed in the landscaped areas peripheral to the car park.

A Concept Designer's Risk Assessment (cDRA) has been prepared to inform future designers of any identified hazards associated with the scheme. The cDRA has been included in Appendix M.

Recommendations

1. Submit this Flood Consequences Assessment and Drainage Strategy to the Planning Authority in support of the Planning Application.
2. Verify the attenuation volumes included in this report when undertaking detailed drainage design.

Appendix A Location & Aerial Plan



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

- Site Boundary
- Watercourses
- Waterbodies

CLIENT:

www.waterco.co.uk

SCHEME:

Kings Meadow, Brecon

PLOT TITLE:

Location Plan

PLOT STATUS:		FINAL		DATE:		24-09-2026	
DRAWN:	LH	CHECKED:	JP	APPROVED:	AW	PLOT SCALE AT A3:	1:1500

PLOT NAME:		17891_Location_Plan		REVISION:		-	
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Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

Site Boundary

CLIENT:

www.waterco.co.uk

SCHEME:

Kings Meadow, Brecon

PLOT TITLE:

Aerial Plan

PLOT STATUS:		FINAL		DATE:	24-09-2026			
DRAWN:	LH	CHECKED:	JP	APPROVED:	AW	PLOT SCALE AT A3:	1:1500	
PLOT NAME:						17891_Aerial_Plan	REVISION:	-

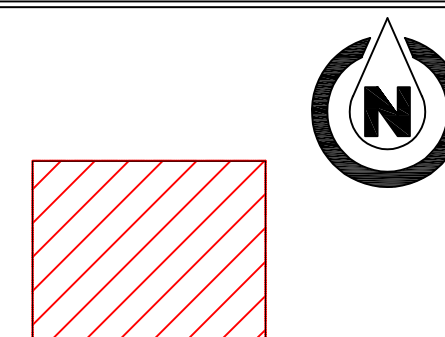
Appendix B Topographical Information

[illegible]

GENERAL NOTES

PLEASE STATE WHERE THE SURVEY CONTROL CAME FROM:

SITE MAP



LEGEND

ELECTRIC	ELEC
ELECTRIC FROM RECORDS	ELEC (R)
WATER	WTR
WATER FROM RECORDS	WTR (R)
GAS	GAS
GAS FROM RECORDS	GAS (R)
BT	BT
BT FROM RECORDS	BT (R)
COMMS	COMMS
COMMS FROM RECORDS	COMMS (R)
STREET LIGHTING	SL
STREET LIGHTING FROM RECORDS	SL (R)
CCTV	CCTV
CCTV FROM RECORDS	CCTV (R)
TRAFFIC MANAGEMENT	TM
TRAFFIC MANAGEMENT FROM RECORDS	TM (R)
OIL PIPELINE	OL
OIL PIPELINE FROM RECORDS	OL (R)
UNKNOWN	UNK
MISCELLANEOUS	MISC
DRAINAGE	DRA
DRAINAGE FROM RECORDS	DRA (R)
OVERHEAD BT	BT (O)
OVERHEAD ELECTRIC	ELEC (O)
EXTRA HIGH VOLTAGE ELECTRIC	ELEC (EHV)
HIGH VOLTAGE ELECTRIC	ELEC (HV)
LOW VOLTAGE ELECTRIC	ELEC (LV)
HIGH PRESSURE GAS	GAS (HP)
LOW PRESSURE GAS	GAS (LP)
INTERMEDIATE PRESSURE GAS	GAS (IP)
ASSUMED DRAINAGE	ADR
SURVEY AREA	
TEXT BOX	TEXT
END OF TRACE	
NO	NO DEPTH RECORDS
d	DEPTH OF UTILITY
Ø	DIAMETER OF PIPE
GPR	GROUND PENETRATING RADAR

Always Exercise Caution When Excavating

A range of detection methods are used to obtain the underground information produced in this drawing. Variations in ground conditions can affect the quality of the data and therefore an absolute affirmation cannot be guaranteed.

IF IN ANY DOUBT ASK

-	00/00/00	Add Description	XX
-	00/00/00	Add Description	XX
-	00/00/00	Add Description	XX
-	00/00/00	Add Description	XX
-	00/00/00	Add Description	XX
REV	DATE	DESCRIPTION	INITIALS

TITLE: Utility Survey
PAS-128B
Land off A470/A40

CLIENT:	LIDL GB
ADDRESS:	Waterton Industrial Estate Off Cowbridge Road Bridgend CF31 3PH

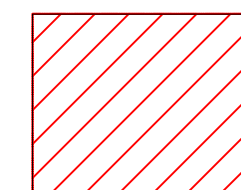
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DRAWING NAME:	CUB-L-050-Brecon
SURVEYED BY:	DRLT 05/03/26
DRAWN BY:	VM 09/03/26
APPROVED BY:	DRLT 09/03/26
DRAWING NUMBER:	CUB-L-050-Brecon
SHEET NUMBER:	1 OF 2
SCALE @ A1:	1:200 DRAWING IN METRES

[illegible]

GENERAL NOTES

PLEASE STATE WHERE THE SURVEY CONTROL CAME FROM

SITE MAP



LEGEND

ELECTRIC	ELEC
ELECTRIC FROM RECORDS	ELEC (R)
WATER	WTR
WATER FROM RECORDS	WTR (R)
GAS	GAS
GAS FROM RECORDS	GAS (R)
BT	BT
BT FROM RECORDS	BT (R)
COMMS	COMMS
COMMS FROM RECORDS	COMMS (R)
STREET LIGHTING	SL
STREET LIGHTING FROM RECORDS	SL (R)
CCTV	CCTV
CCTV FROM RECORDS	CCTV (R)
TRAFFIC MANAGEMENT	TM
TRAFFIC MANAGEMENT FROM RECORDS	TM (R)
OL PIPELINE	OL (R)
OIL PIPELINE FROM RECORDS	OL (R)
UNKNOWN	UNK
MISCELLANEOUS	MISC
DRAINAGE	DRA
DRAINAGE FROM RECORDS	DRA (R)
OVERHEAD BT	BT (O)
OVERHEAD ELECTRIC	ELEC (O)
EXTRA HIGH VOLTAGE ELECTRIC	ELEC (HV)
HIGH VOLTAGE ELECTRIC	ELEC (HV)
LOW VOLTAGE ELECTRIC	ELEC (LV)
HIGH PRESSURE GAS	GAS (HP)
LOW PRESSURE GAS	GAS (LP)
INTERMEDIATE PRESSURE GAS	GAS (IP)
ASSUMED DRAINAGE	ADR
SURVEY AREA	
TEXT BOX	
END OF TRACHE	
NO	NO DEPTH RECORDS
Ø	DEPTH OF UTILITY
Ø	DIAMETER OF PIPE
GPR	GROUND PENETRATING RADAR

Always Exercise Caution When Excavating

A range of detection methods are used to obtain the underground information produced in this drawing. Variations in ground conditions can affect the quality of the data and therefore an absolute affirmation cannot be guaranteed.

IF IN ANY DOUBT ASK

-	00/00/00	Add Description	XXX
-	00/00/00	Add Description	XXX
-	00/00/00	Add Description	XXX
-	00/00/00	Add Description	XXX
-	00/00/00	Add Description	XXX
REV	DATE	DESCRIPTION	INITIAL

TITLE: Utility Survey
PAS-128B
Land off A470/A40

CLIENT:	LIDL GB
ADDRESS:	Waterton Industrial Estate Off Cowbridge Road Bridgend CF31 3PH

PROJECT NAME:	Land off A470/A40
DRAWING NAME:	CUB-L-050-Brecon
SURVEYED BY:	DRLT 05/03/26
DRAWN BY:	VM 09/03/26
APPROVED BY:	DRLT 09/03/26
DRAWING NUMBER:	CUB-L-050-Brecon
SHEET NUMBER:	2 OF 2
SCALE @ A1:	1:200 DRAWING IN METRE



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

Site Boundary

Site Levels (m AOD)

Ground Elevation (m AOD)

- <= 140
- 140 - 145
- 145 - 150
- 150 - 155
- > 155

CLIENT:

www.waterco.co.uk

SCHEME:

Kings Meadow, Brecon

PLOT TITLE:

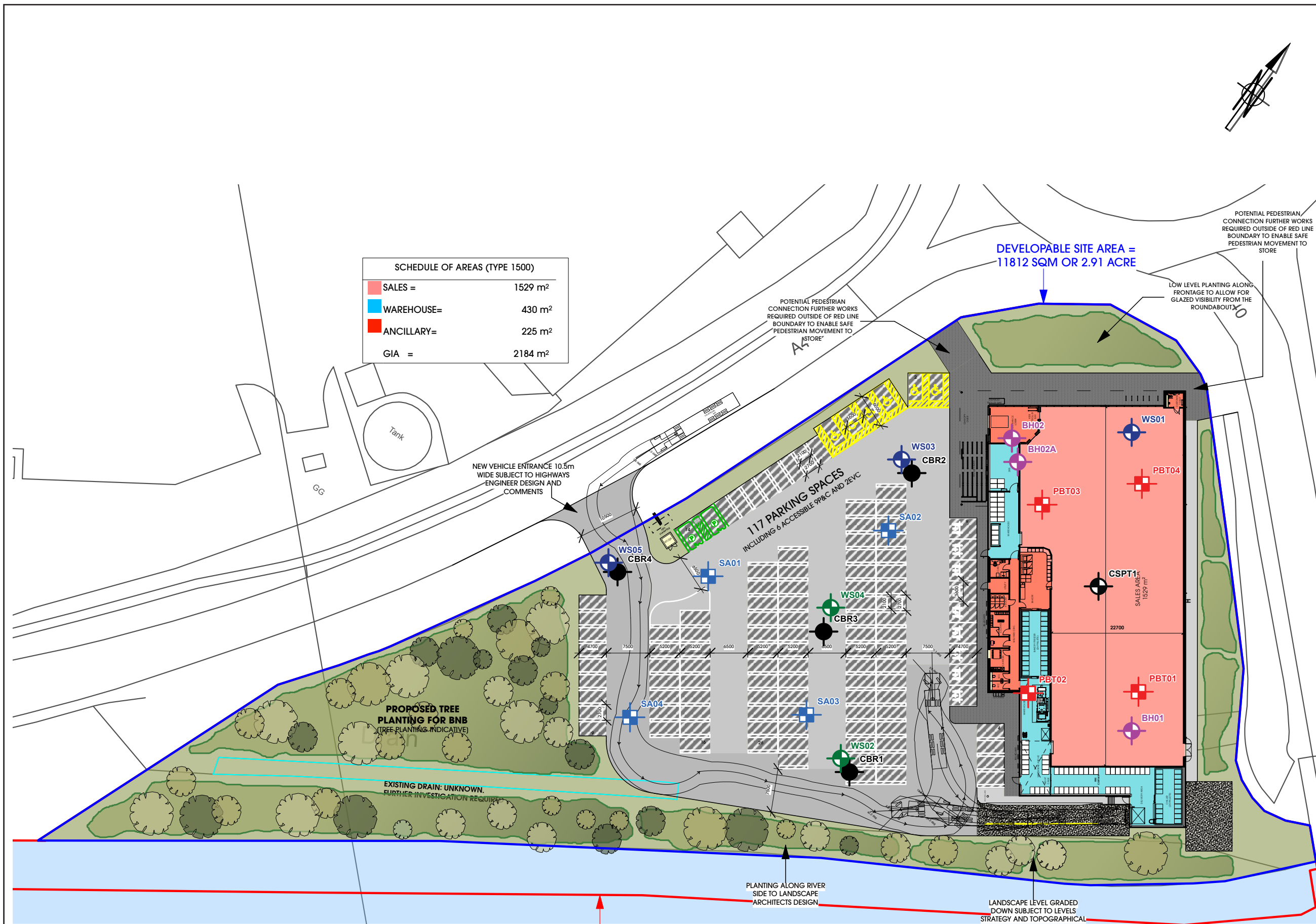
LiDAR Plan
1m Resolution
Data from Natural Resources Wales (July 2026)

PLOT STATUS:		FINAL		DATE:	24-09-2026
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DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:	
LH	JP	AW	1:1500	

PLOT NAME:	17891_LiDAR_Plan	REVISION:	-
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Appendix C Ground Investigation Results



SCHEDULE OF AREAS (TYPE 1500)	
SALES =	1529 m ²
WAREHOUSE=	430 m ²
ANCILLARY=	225 m ²
GIA =	2184 m ²

- Legend
- WSxx Window Sample & Installation
 - WSxx Window Sample
 - BHxx Cable tool hole
 - CBRxx CBR Test
 - CSPTxx Continuous SPT
 - PBTxx Plate Bearing Test
 - SAxx Soakaway Test

Notes

Proposed layout plan reproduced from HTC Architects Proposed Site Plan - Option 4 T15 (No Tree), drawing ref: 3223 F406 rev E dated June 2023.

The proposed site layout is indicative only and subject to change.

Revision	Approved	Date
Project Title		
A470/A40 Brecon		
Drawing Title		
Exploratory Hole Plan - Proposed Site Layout		
Client		
Lidl Great Britain Ltd 		
Scale	Drawn	Size
NTS	MB	A4
Date	Job No.	Figure No.
20.04.26	1522	03
		



EXPLORATORY HOLE LOGS

Key to exploratory hole symbols and abbreviations

SAMPLE TYPES

ACM - Asbestos sample
BLK - Block sample
D - Disturbed sample
G - Gas sample
TW - Pushed thin wall sample
W - Water sample

AMAL - Amalgamated sample
C - Core sample
ES - Environmental sample
J - Jar sample
U - Undisturbed sample

B - Bulk disturbed sample
CBR - CBR test sample
EW - Environmental water sample
L - Liner sample
UT - Undisturbed thin wall sample

IN-SITU TESTS

HV - Hand shear vane
PP - Hand penetrometer

HV(r) - Hand shear vane residual
SPT - Standard penetration test

PID - Photo ionisation detector
SPT(C) - SPT using cone

GROUNDWATER



Groundwater strike



Groundwater rest level

ROTARY CORE DETAILS

TCR - Total core recovery (%)
FI - Fracture index

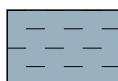
SCR - Solid core recovery (%)
NI - Non-intact core

RQD - Rock quality designation (%)
AZCL - Assumed zone of core loss

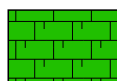
LEGEND



Topsoil



Clay



Chalk



Sand backfill



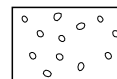
Peat



Silt



Breccia



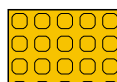
Gravel backfill



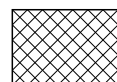
Made ground
[cohesive]



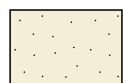
Sand



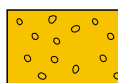
Conglomerate



Arising



Concrete



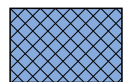
Gravel



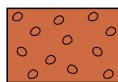
Metamorphic



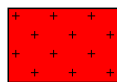
Bentonite



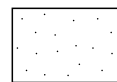
Wood



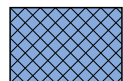
Cobbles



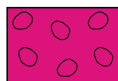
Igneous



Concrete



Brick



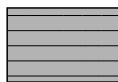
Boulders



Grout



Bituminous
material



Mudstone



Plain pipe



Gypsum



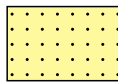
Siltstone



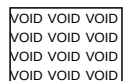
Slotted pipe



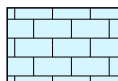
Coal



Sandstone



Void



Limestone



Trial Pit

SA01
Sheet 1 of 1

Hole Type TP	Easting 303163.00	Northing 228241.00	Ground Level (m) 141.43	Scale 1:25
Project Name Brecon	Project No. 1522.02	Start Date 2026-04-16	End Date 2026-04-17	

Client Lidl Great Britain Ltd	Consultant Remada Ltd	Contractor
----------------------------------	--------------------------	------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
					141.28	(0.15) 0.15		Grass over TOPSOIL: Soft reddish brown sandy gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse sandstone and quartzite.	
						(1.45)		Reddish brown gravelly very clayey SAND with occasional cobbles. Gravel is subangular to subrounded fine to coarse sandstone, mudstone and quartzite. Cobbles are subangular to rounded sandstone and mudstone.	0.5 1.0 1.5
					139.83	1.60 (0.50)		Reddish brown sandy cobbly silty GRAVEL. Gravel is subangular to rounded fine to coarse sandstone, mudstone and quartzite. Cobbles are subangular to rounded mudstone and sandstone.	2.0
					139.33	2.10	End of Trial Pit at 2.10m		
									2.5 3.0 3.5 4.0 4.5 5.0

Remarks 1) Trial pit utilised as a soakaway; see separate sheet for details. 2) Groundwater not encountered. 3) Backfilled with arisings upon completion	Method, Plant, Stability, Dimensions 0.00 - 2.10m TP JCB 3CX Unstable along all sides and at 1.7m bgl. L = 3.00m W = 0.60m	Logger MB
---	---	--------------



Trial Pit

SA02
Sheet 1 of 1

Hole Type TP	Easting 303177.00	Northing 228271.00	Ground Level (m) 141.04	Scale 1:25
Project Name Brecon	Project No. 1522.02	Start Date 2026-04-16	End Date 2026-04-17	

Client Lidl Great Britain Ltd	Consultant Remada Ltd	Contractor
----------------------------------	--------------------------	------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata	
		Depth (m)	Type/ Ref	Results			Legend	Description
					140.84	(0.20) 0.20		Grass over TOPSOIL: Reddish brown gravelly clayey silty SAND. Gravel is subangular to subrounded fine to coarse sandstone and quartzite.
						(0.50) 0.50		Reddish brown gravelly clayey silty SAND with occasional cobbles. Gravel is subangular to subrounded fine to coarse sandstone, mudstone and quartzite. Cobbles are subangular to rounded sandstone and mudstone.
					140.34	0.70 (1.10) 1.80		Reddish brown sandy cobbly silty GRAVEL. Gravel is subangular to rounded fine to coarse mudstone, sandstone and quartzite. Cobbles are subangular to rounded mudstone and sandstone.
					139.24	1.80	End of Trial Pit at 1.80m	

Remarks 1) Trial pit utilised as a soakaway; see separate sheet for details. 2) Groundwater not encountered. 3) Backfilled with arisings upon completion	Method, Plant, Stability, Dimensions 0.00 - 1.80m TP JCB 3CX Unstable along all sides and at 0.9m bgl. L = 3.00m W = 0.60m	Logger MB
---	---	--------------



Trial Pit

SA03
Sheet 1 of 1

Hole Type TP	Easting 303188.00	Northing 228230.00	Ground Level (m) 140.94	Scale 1:25
Project Name Brecon	Project No. 1522.02		Start Date 2026-04-16	End Date 2026-04-17

Client Lidl Great Britain Ltd	Consultant Remada Ltd	Contractor
----------------------------------	--------------------------	------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
					140.79	(0.15) 0.15		Grass over TOPSOIL: Soft reddish brown gravelly very sandy silty CLAY. Gravel is subangular to subrounded fine to coarse sandstone and quartzite.	
					140.44	(0.35) 0.50		Reddish brown gravelly clayey silty SAND with occasional cobbles. Gravel is subangular to subrounded fine to coarse sandstone, mudstone and quartzite. Cobbles are subangular to rounded sandstone and mudstone.	0.5
						(1.00)		Reddish brown sandy cobbly silty GRAVEL. Gravel is subangular to rounded fine to coarse mudstone, sandstone and quartzite. Cobbles are subangular to rounded mudstone and sandstone.	1.0
					139.44	1.50		End of Trial Pit at 1.50m	1.5
									2.0
									2.5
									3.0
									3.5
									4.0
									4.5
									5.0

Remarks 1) Trial pit utilised as a soakaway; see separate sheet for details. 2) Groundwater not encountered. 3) Backfilled with arisings upon completion	Method, Plant, Stability, Dimensions 0.00 - 1.50m TP JCB 3CX Unstable along all sides and at 0.6m bgl. L = 3.00m W = 0.60m	Logger MB
---	---	--------------

[illegible]

Method, Plant, Stability, Dimensions
0.00 - 2.00m TP JCB 3CX
 Unstable along western side and at 1.0m bgl.
 $L = 3.00m$

 $W = 0.60m$

Logger
MB

Key to exploratory hole symbols and abbreviations

SAMPLE TYPES

ACM - Asbestos sample	AMAL - Amalgamated sample	B - Bulk disturbed sample
BLK - Block sample	C - Core sample	CBR - CBR test sample
D - Disturbed sample	ES - Environmental sample	EW - Environmental water sample
G - Gas sample	J - Jar sample	L - Liner sample
TW - Pushed thin wall sample	U - Undisturbed sample	UT - Undisturbed thin wall sample
W - Water sample	T - Tub sample	JT - Jar and Tub sample

IN-SITU TESTS

HV - Hand shear vane	HV(r) - Hand shear vane residual	PID - Photo ionisation detector
PP - Hand penetrometer	SPT - Standard penetration test	SPT(C) - SPT using cone

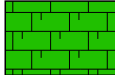
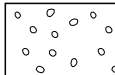
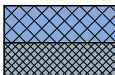
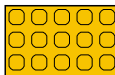
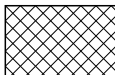
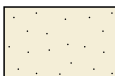
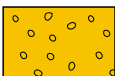
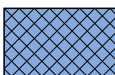
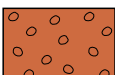
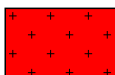
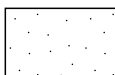
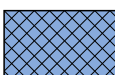
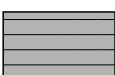
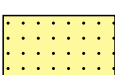
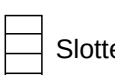
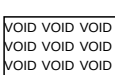
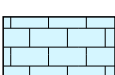
GROUNDWATER

 Groundwater strike	 Groundwater rest level
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ROTARY CORE DETAILS

TCR - Total core recovery (%)	SCR - Solid core recovery (%)	RQD - Rock quality designation (%)
FI - Fracture index	NI - Non-intact core	AZCL - Assumed zone of core loss

LEGEND

 Topsoil	 Clay	 Chalk	 Sand backfill
 Peat	 Silt	 Breccia	 Gravel backfill
 Made ground [cohesive]	 Sand	 Conglomerate	 Arisings
 Concrete	 Gravel	 Metamorphic	 Bentonite
 Wood	 Cobbles	 Igneous	 Concrete
 Brick	 Boulders		 Grout
 Bituminous material	 Mudstone		 Plain pipe
 Gypsum	 Siltstone		
 Coal	 Sandstone		 Slotted pipe
 Void	 Limestone		

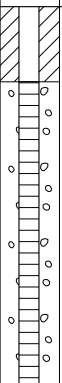
Dynamic (Windowless) Sampler

WS01

Sheet 1 of 1

Hole Type WLS	Easting 303207.00	Northing 228313.00	Ground Level (m) 140.38	Scale 1:50
Project Name Brecon	Project No. 1522.02		Start Date 2026-03-18	End Date 2026-03-18

Client Lidl Great Britain Ltd	Consultant Remada Ltd	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.10	ES		140.28	(0.10) 0.10		Grass over TOPSOIL: Soft reddish brown sandy CLAY.	
						(0.40)		Reddish brown gravelly clayey silty SAND with occasional cobbles. Gravel is subangular to rounded fine to coarse sandstone and quartzite. Cobbles are subangular to subrounded quartzite and sandstone.	0.5
		0.60	D		139.88	0.50			
						(0.30)		Rootlets to 0.2m (0.20m)	
		1.00	SPT	N=31 (7,7/7,6,8,10) N60=37	139.58	0.80		Firm reddish brown slightly gravelly sandy silty CLAY. Gravel is subangular to rounded fine to coarse sandstone and quartzite.	1.0
		1.40	D			(1.70)		Medium dense to dense reddish brown sandy silty GRAVEL with occasional cobbles. Gravel is subangular to subrounded fine to coarse mudstone, sandstone and quartzite. Cobbles are subangular to subrounded sandstone and quartzite.	1.5
		2.00	SPT	N=28 (6,9/7,7,7,7) N60=33					2.0
		2.00-2.50	B						
		2.50	SPT	N=50 for 270mm (7,11/13,14,14,9 for 45mm) N60=59	137.88	2.50		End of Borehole at 2.50m	2.5
									3.0
									3.5
									4.0
									4.5
									5.0
									5.5
									6.0
									6.5
									7.0
									7.5
									8.0
									8.5
									9.0
									9.5
									10.0

Remarks 1) Borehole CAT scanned prior to drilling. 2) No groundwater encountered during drilling. 3) Terminated due to SPT refusal (N > 50). 4) Installation to 2.5m bgl; 0.5m plain pipe, 2.0m slotted pipe.	Method, Plant, Stability, Dimensions 0.00 - 2.50m WLS Tracked rig	Logger MB
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Dynamic (Windowless) Sampler

WS02
Sheet 1 of 1

Hole Type WLS	Easting 303195.00	Northing 228236.00	Ground Level (m) 141.00	Scale 1:50
Project Name Brecon	Project No. 1522.02	Start Date 2026-03-18	End Date 2026-03-18	

Client Lidl Great Britain Ltd	Consultant Remada Ltd	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.01	J	N=50 for 295mm (7,11/12,12,14,17 for 70mm) N60=65	140.82	(0.18) 0.18		MADE GROUND: Asphalt.	
		0.40	ES		140.50	(0.32) 0.50		MADE GROUND: Light grey gravelly sand. Gravel is subangular to subrounded fine to coarse sandstone. Slight hydrocarbon odour.	0.5
		0.80	D			(0.50)		Firm reddish brown slightly gravelly sandy silty CLAY. Gravel is subangular to rounded fine to coarse sandstone and quartzite.	
		1.00	SPT		140.00	1.00		End of Borehole at 1.00m	1.0
									1.5
									2.0
									2.5
									3.0
									3.5
									4.0
									4.5
									5.0
									5.5
									6.0
									6.5
									7.0
									7.5
									8.0
									8.5
									9.0
									9.5
									10.0

Remarks 1) Borehole CAT scanned prior to drilling. 2) No groundwater encountered during drilling. 3) Terminated due to SPT refusal (N > 50). 4) Borehole backfilled with arising upon completion	Method, Plant, Stability, Dimensions 0.00 - 1.00m WLS Tracked rig	Logger MB
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Client	Consultant	Contractor
Lidl Great Britain Ltd	Remada Ltd	

[illegible]

Remarks

- 1) Borehole CAT scanned prior to drilling.
- 2) No groundwater encountered during drilling.
- 3) Terminated due to SPT refusal ($N > 50$).
- 4) Installation to 2.5m bgl; 0.5m plain pipe, 2.0m slotted pipe.

Method, Plant, Stability, Dimensions

0.00 - 2.60m WLS Tracked rig

Logger

MB



Dynamic (Windowless) Sampler

WS04
Sheet 1 of 1

Hole Type WLS	Easting 303183.00	Northing 228255.00	Ground Level (m) 141.04	Scale 1:50
Project Name Brecon	Project No. 1522.02	Start Date 2026-03-18	End Date 2026-03-18	

Client Lidl Great Britain Ltd	Consultant Remada Ltd	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m)	Strata	
		Depth (m)	Type/ Ref	Results			Legend	Description
		0.90 1.00	D SPT	N=50 for 290mm (7,9/9,13,15,13 for 65mm) N60=59	140.84	(0.20) 0.20		Grass over TOPSOIL: Soft to firm reddish brown slightly gravelly sandy silty CLAY. Gravel is subangular to rounded fine to coarse sandstone and quartzite.
					(0.80)		Rootlets to 0.15m (0.15m)	
140.04		1.00		Reddish brown gravelly clayey silty SAND with occasional cobbles. Gravel is subangular to rounded fine to coarse sandstone and quartzite. Cobbles are subangular to subrounded quartzite and sandstone.				
End of Borehole at 1.00m								

Remarks 1) Borehole CAT scanned prior to drilling. 2) No groundwater encountered during drilling. 3) Terminated due to SPT refusal (N > 50). 4) Borehole backfilled with arising upon completion	Method, Plant, Stability, Dimensions 0.00 - 1.00m WLS Tracked rig	Logger MB
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Cable Percussion Log

BH01
Sheet 1 of 1

Hole Type CP	Easting 303243.00	Northing 228272.00	Ground Level (m) 140.20	Scale 1:50
Project Name Brecon	Project No. 1522.02	Start Date 2026-03-18	End Date 2026-03-18	

Client Lidl Great Britain Ltd	Consultant Remada Ltd	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		0.01	J		140.09	(0.11) 0.11		MADE GROUND: Asphalt.	
		0.30	ES			(0.39) 0.39		MADE GROUND: Greyish brown sandy gravel. Gravel is subangular to subrounded fine to coarse sandstone. Slight hydrocarbon odour.	0.5
		0.50-1.20	B		139.70	0.50		Medium dense to dense reddish brown sandy silty GRAVEL with occasional cobbles. Gravel is subangular to subrounded fine to coarse mudstone, sandstone and quartzite. Cobbles are subangular to subrounded sandstone and quartzite.	1.0
		1.20	SPT(C)	N=20 (3,7/5,5,5,5) N60=24		(1.30) 1.30			1.5
		1.65-1.80	B		138.40	1.80		Medium dense to dense reddish brown sandy silty clay GRAVEL. Gravel is subangular to rounded fine to coarse sandstone, mudstone and quartzite.	2.0
		1.80-2.00	D						2.5
		2.00	SPT(C)	N=50 for 260mm (6,12/14,15,15,6 for 35mm) N60=61					3.0
		3.00	SPT(C)	N=35 (3,3/9,9,7,10) N60=43					3.5
		3.45-4.00	D						4.0
		4.00	SPT(C)	N=21 (3,3/5,3,5,8) N60=26		(5.20) 5.20			4.5
		4.45-5.00	D						5.0
		5.00	SPT(C)	N=20 (5,4/4,4,6,6) N60=24					5.5
		5.45-6.00	D						6.0
		6.00	SPT(C)	N=34 (7,9/10,8,8,8) N60=41					6.5
		7.00	SPT(C)	N=50 for 245mm (8,14/15,14,16,5 for 20mm) N60=61	133.20	7.00		Very stiff reddish brown sandy CLAY with mudstone lithorelics.	7.0
		7.00-7.45 7.45	B SPT(C)	N=50 for 55mm (25 for 70mm/50 for 55mm) N60=61	132.75	7.45		End of Borehole at 7.45m	7.5
									8.0
									8.5
									9.0
									9.5
									10.0

Remarks 1) Borehole CAT scanned prior to drilling. 2) No groundwater encountered during drilling. 3) Terminated due to SPT refusal (N > 50). 4) Borehole backfilled with arising upon completion.	Method, Plant, Stability, Dimensions 0.00 - 7.45m CP Dando 2000	Logger MB
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Cable Percussion Log

BH02
Sheet 1 of 1

Hole Type CP	Easting 303186.00	Northing 228297.00	Ground Level (m) 140.59	Scale 1:50
Project Name Brecon	Project No. 1522.02		Start Date 2026-03-19	End Date 2026-03-19

Client Lidl Great Britain Ltd	Consultant Remada Ltd	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata		
		Depth (m)	Type/ Ref	Results			Legend	Description	
		1.00	SPT	N=43 (6,10/10,10,11,12) N60=51	140.29	(0.30)		Grass over TOPSOIL: Soft reddish brown slightly gravelly sandy silty CLAY. Gravel is subangular to subrounded fine to coarse sandstone and quartzite.	0.5
						0.30			
						(0.90)		Possible MADE GROUND: Soft to firm sandy gravelly cobbly silty CLAY. Gravel is subangular to rounded fine to coarse sandstone and quartzite. Cobbles are subangular to rounded sandstone and quartzite.	1.0
					139.39	1.20		Cobble of slag. (0.40m)	1.5
		2.00	SPT	N=50 for 220mm (10,14/16,16,18 for 70mm) N60=59	138.59	(0.80)		Dense reddish brown sandy cobbly silty GRAVEL. Gravel is subangular to rounded fine to coarse sandstone and quartzite. Cobbles are subangular to subrounded sandstone and quartzite.	2.0
						2.00		End of Borehole at 2.00m	2.5
									3.0
									3.5
									4.0
									4.5
									5.0
									5.5
									6.0
									6.5
									7.0
									7.5
									8.0
									8.5
									9.0
									9.5
									10.0

Remarks 1) Borehole CAT scanned prior to drilling. 2) No groundwater encountered during drilling. 3) Terminated due to obstruction. 4) Borehole backfilled with arising upon completion.	Method, Plant, Stability, Dimensions 0.00 - 2.00m CP Dando 2000	Logger MB
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Cable Percussion Log

BH02A

Sheet 1 of 1

Hole Type CP	Easting 303188.00	Northing 228295.00	Ground Level (m) 140.59	Scale 1:50
Project Name Brecon	Project No. 1522.02		Start Date 2026-03-19	End Date 2026-03-19

Client Lidl Great Britain Ltd	Consultant Remada Ltd	Contractor
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Inst/ Backfill	Water Levels	Samples and Tests		Level (m)	Depth (m) (thickness)	Strata	
		Depth (m)	Type/ Ref			Legend	Description
		0.30-1.20	B	140.29	(0.30) 0.30		Grass over TOPSOIL: Soft reddish brown slightly gravelly sandy silty CLAY. Gravel is subangular to subrounded fine to coarse sandstone and quartzite.
					(0.90)		Soft to firm reddish brown sandy gravelly silty CLAY with occasional cobbles. Gravel is subangular to rounded fine to coarse sandstone, mudstone and quartzite. Cobbles are subangular to rounded sandstone and quartzite.
		1.20-1.60	D	139.39	1.20 (0.20)		Medium dense to dense reddish brown sandy silty GRAVEL with occasional cobbles. Gravel is subangular to subrounded fine to coarse mudstone, sandstone and quartzite. Cobbles are subangular to subrounded sandstone and quartzite.
		2.00 2.10-3.00	D B	139.19	1.40		Medium dense to dense reddish brown sandy cobbly GRAVEL. Gravel is subangular to rounded fine to coarse sandstone and quartzite. Cobbles are subangular to subrounded sandstone and quartzite.
		3.00	SPT(C)				N=32 (4,5/7,7,9,9) N60=39
		3.45-4.00	D				
					(5.05)		
		5.00	SPT(C)				N=15 (1,1/3,4,3,5) N60=18
		5.45-6.00	D				
		6.00	SPT(C)				N=32 (6,10/8,8,8,8) N60=39
		6.45-7.00	D	134.14	6.45		Very stiff reddish brown sandy CLAY with mudstone lithorelics.
		7.00	SPT(C)		(1.00)		N=50 for 265mm (4,8/12,12,13,13 for 40mm) N60=61
		7.00-7.45 7.45	D SPT(C)	133.14	7.45		N=50 for 70mm (25 for 55mm/50 for 70mm) N60=61
							End of Borehole at 7.45m

Remarks 1) Borehole CAT scanned prior to drilling. 2) No groundwater encountered during drilling. 3) Terminated due to SPT refusal (N > 50). 4) Borehole backfilled with arising upon completion.	Method, Plant, Stability, Dimensions 0.00 - 7.45m CP Dando 2000	Logger MB
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Soakaway Test Report

Client: Lidl Great Britain Ltd
Job Name: Brecon
Job No.: 1522.02

Test Date: 16.04.26

Soil Description: 0-0.15m TS: Sandy gravelly silty CLAY,
0.15-1.6m Gravelly very clayey SAND with occasional cobbles,
1.6-2.1m Sandy cobbly silty GRAVEL.

Trial Pit No.	SA01
Test No.	1
Coordinates:	303163, 228241

Weather Conditions: Dry & sunny

Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
11:18	0	0.550	550
11:19	1	0.730	730
11:20	2	0.840	840
11:21	3	0.920	920
11:22	4	1.000	1000
11:23	5	1.010	1010
11:25	7	1.180	1180
11:27	9	1.300	1300
11:29	11	1.350	1350
11:31	13	1.420	1420
11:33	15	1.490	1490
11:35	17	1.550	1550
11:37	19	1.600	1600
11:39	21	1.630	1630
11:41	23	1.680	1680
11:43	25	1.720	1720
11:45	27	1.750	1750
11:47	29	1.780	1780
11:49	31	1.810	1810

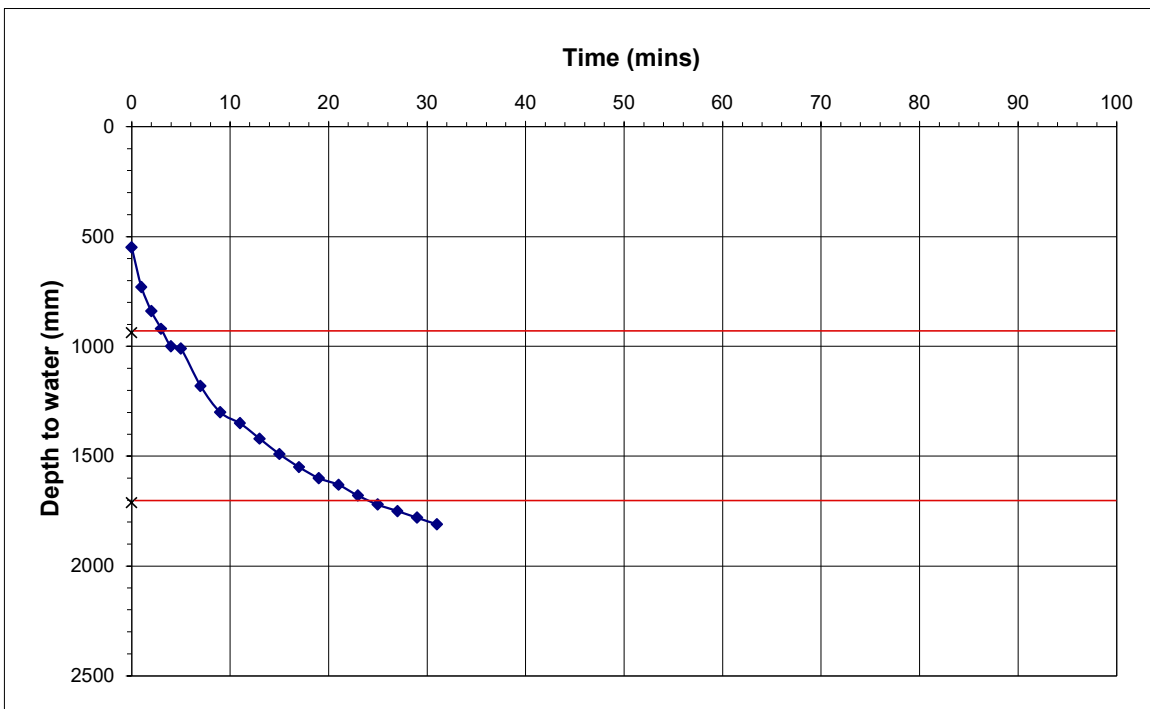
Soakaway Dimensions		(m)	(mm)
Length	=	3.00	3000
Width	=	0.60	600
Depth	=	2.10	2100

Effective depth (full)		m	mm
25%	=	1.71	1712.5
50%	=	1.33	1325.0
75%	=	0.94	937.5

Depth at start of test (mm)	=	550
Depth at end of test (mm)	=	1810

Base area of pit	=	1.800
a_{p50} - 50% internal surface area inc. base	=	7.380
V_{p75-25} - Volume 75 - 25%	=	1.395

t_{p75} (min) = (Read from graph)	3.5
t_{p25} (min) = (Read from graph)	24.5
t_p values extrapolated from graph data =	21
t_p value (seconds) =	1260



Soil infiltration rate, f , (m/s) = 1.50E-04

Notes:

Logged By

MB

Checked by

PGS

Soakaway Test Report

Client: Lidl Great Britain Ltd
Job Name: Brecon
Job No.: 1522.02

Test Date: 16.04.26

Soil Description: 0-0.15m TS: Sandy gravelly silty CLAY,
0.15-1.6m Gravelly very clayey SAND with occasional
cobbles, 1.6-2.1m Sandy cobbly silty GRAVEL.

Trial Pit No.	SA01
Test No.	2
Coordinates:	303163, 228241

Weather Conditions: Dry & sunny

Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
15:28	0	0.500	500
15:29	1	0.61	610
15:30	2	0.65	650
15:31	3	0.71	710
15:32	4	0.78	780
15:33	5	0.84	840
15:38	10	1.02	1020
15:43	15	1.22	1220
15:48	20	1.39	1390
15:58	30	1.47	1470
16:03	35	1.64	1640
16:08	40	1.7	1700
16:13	45	1.78	1780
16:18	50	1.82	1820

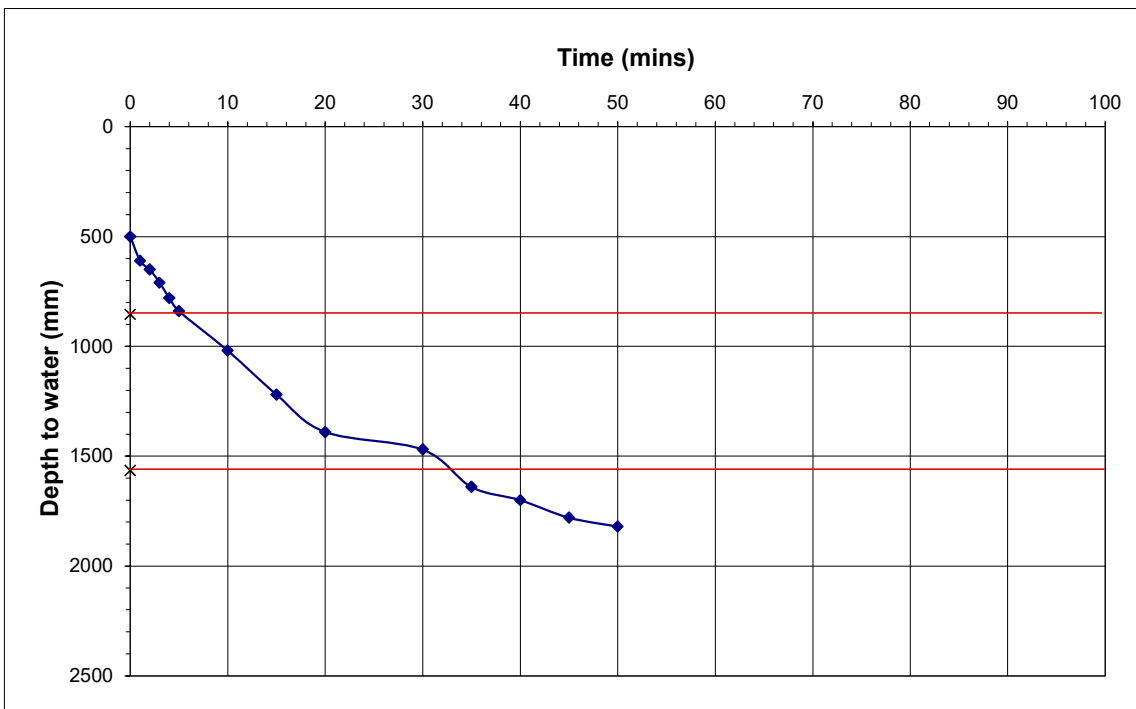
Soakaway Dimensions		(m)	(mm)
Length	=	3.00	3000
Width	=	0.60	600
Depth	=	1.92	1920

Effective depth (full)		m	mm
25%	=	1.57	1565.0
50%	=	1.21	1210.0
75%	=	0.86	855.0

Depth at start of test (mm)	=	500
Depth at end of test (mm)	=	1820

Base area of pit	=	1.800
a_{p50} - 50% internal surface area inc. base	=	6.912
V_{p75-25} - Volume 75 - 25%	=	1.278

t_{p75} (min) = (Read from graph)	5.5
t_{p25} (min) = (Read from graph)	32
t_p values extrapolated from graph data	26.5
t_p value (seconds) =	1590



Soil infiltration rate, f , (m/s) = 1.16E-04

Notes:

Logged By

MB

Checked by

PGS

Soakaway Test Report

Client: Lidl Great Britain Ltd
Job Name: Brecon
Job No.: 1522.02

Test Date: 17.04.26

Soil Description: 0-0.15m TS: Sandy gravelly silty CLAY,
0.15-1.6m Gravelly very clayey SAND with occasional cobbles,
1.6-2.1m Sandy cobbly silty GRAVEL.

Trial Pit No.	SA01
Test No.	3
Coordinates:	303163, 228241

Weather Conditions: Damp & intermittent rain

Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
09:44	0	0.520	520
09:45	1	0.590	590
09:46	2	0.620	620
09:47	3	0.660	660
09:48	4	0.700	700
09:49	5	0.750	750
09:51	7	0.810	810
09:53	9	0.890	890
09:55	11	0.930	930
09:57	13	1.000	1000
09:59	15	1.040	1040
10:04	20	1.160	1160
10:09	25	1.260	1260
10:14	30	1.340	1340
10:24	40	1.480	1480
10:34	50	1.600	1600
10:39	55	1.640	1640
10:54	70	1.690	1690
11:04	80	1.820	1820
11:14	90	1.940	1940

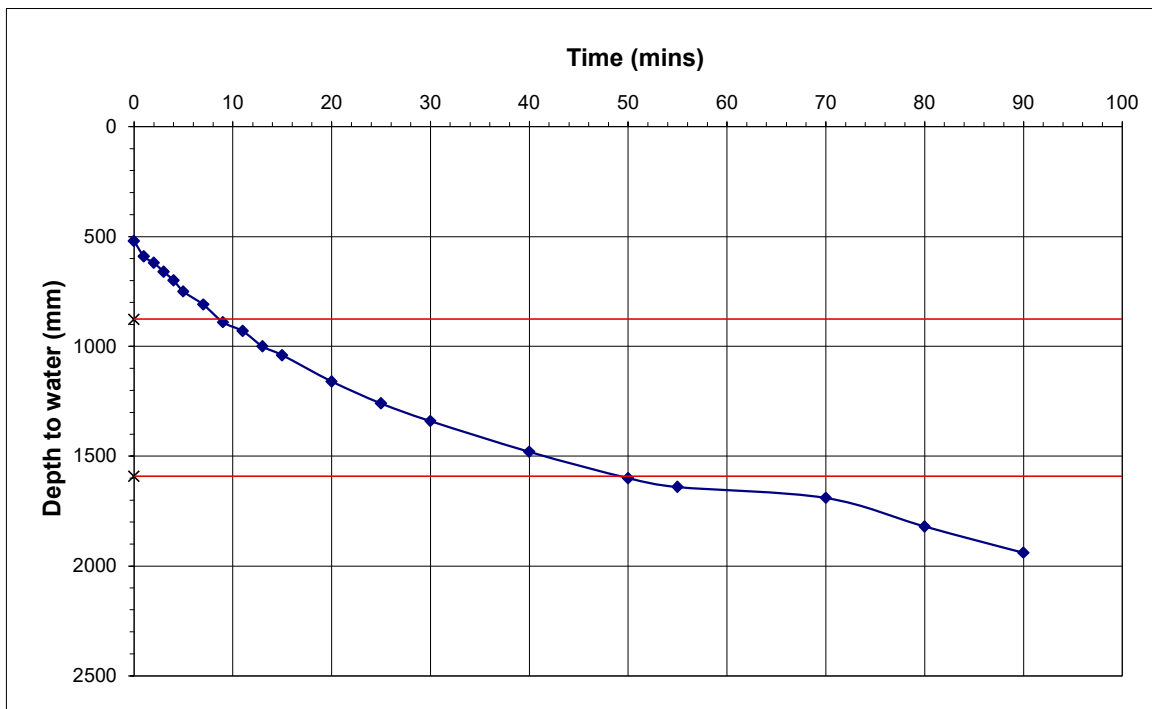
Soakaway Dimensions		(m)	(mm)
Length	=	3.00	3000
Width	=	0.60	600
Depth	=	1.95	1950

Effective depth (full)		m	mm
25%	=	1.59	1592.5
50%	=	1.24	1235.0
75%	=	0.88	877.5

Depth at start of test (mm)	=	520
Depth at end of test (mm)	=	1940

Base area of pit	=	1.800
a_{p50} - 50% internal surface area inc. base	=	6.948
V_{p75-25} - Volume 75 - 25%	=	1.287

t_{p75} (min) = (Read from graph)	8.5
t_{p25} (min) = (Read from graph)	49
t_p values extrapolated from graph data =	40.5
t_p value (seconds) =	2430



Soil infiltration rate, f , (m/s) = 7.62E-05

Notes:

Logged By

MB

Checked by

PGS

Soakaway Test Report

Client: Lidl Great Britain Ltd
Job Name: Brecon
Job No.: 1522.02

Test Date: 16.04.26

Soil Description: 0-0.2m TS: Gravelly clayey silty SAND,
0.2-0.7m Gravelly clayey silty SAND with occasional
cobbles, 0.7-1.8m Sandy cobbly silty GRAVEL.

Weather Conditions: Dry & sunny

Trial Pit No.	SA02
Test No.	1
Coordinates:	303177, 228271

Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
10:01	0	1.350	1350
10:02	1	1.400	1400
10:03	2	1.430	1430
10:04	3	1.500	1500
10:05	4	1.530	1530
10:06	5	1.580	1580
10:07	6	1.620	1620
10:08	7	1.640	1640
10:09	8	1.660	1660
10:10	9	1.680	1680
10:11	10	1.710	1710
10:12	11	1.750	1750
10:13	12	1.760	1760
10:14	13	1.790	1790
10:15	14	1.790	1790
10:16	15	1.790	1790
10:17	16	1.790	1790
10:18	17	1.800	1800

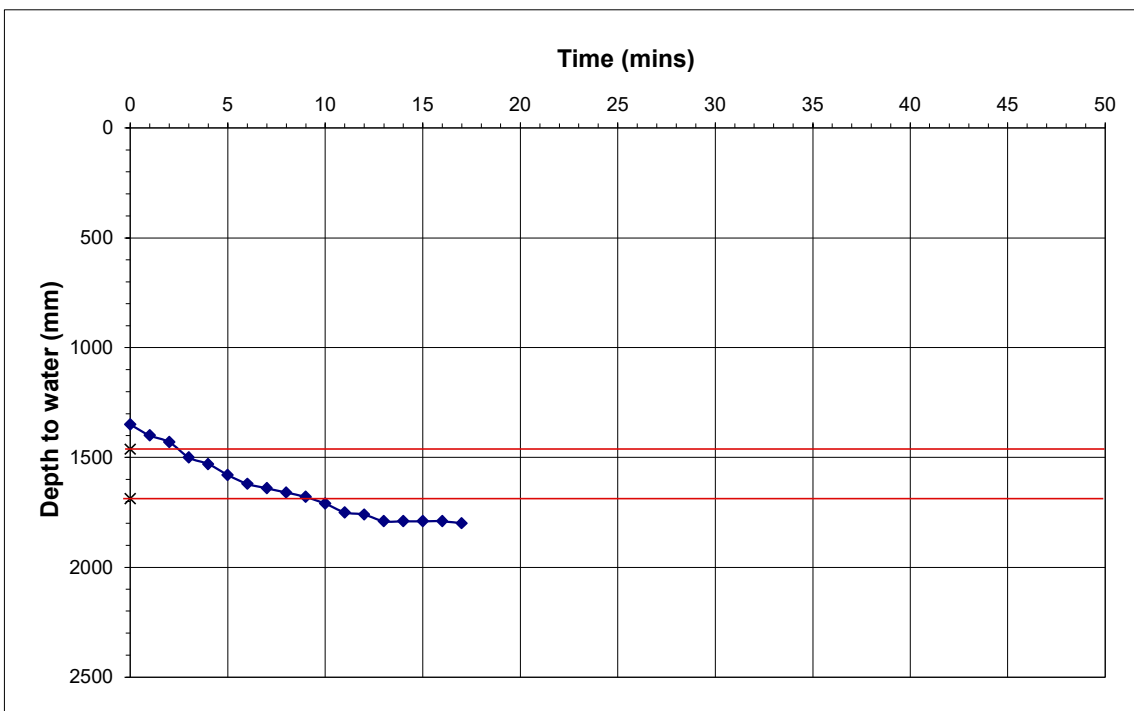
Soakaway Dimensions		(m)	(mm)
Length	=	3.00	3000
Width	=	0.60	600
Depth	=	1.80	1800

Effective depth (full)		m	mm
25%	=	1.69	1687.5
50%	=	1.58	1575.0
75%	=	1.46	1462.5

Depth at start of test (mm)	=	1350
Depth at end of test (mm)	=	1800

Base area of pit	=	1.800
a_{p50} - 50% internal surface area inc. base	=	3.420
V_{p75-25} - Volume 75 - 25%	=	0.405

t_{p75} (min) = (Read from graph)	2.5
t_{p25} (min) = (Read from graph)	9.5
t_p values extrapolated from graph data	7
t_p value (seconds) =	420



Soil infiltration rate, f , (m/s) = 2.82E-04

Notes:

Logged By

MB

Checked by

PGS

Soakaway Test Report

Client: Lidl Great Britain Ltd
Job Name: Brecon
Job No.: 1522.02

Test Date: 16.04.26

Soil Description: 0-0.2m TS: Gravelly clayey silty SAND,
0.2-0.7m Gravelly clayey silty SAND with occasional cobbles,
0.7-1.8m Sandy cobbly silty GRAVEL.

Trial Pit No. SA02
Test No. 2
Coordinates: 303177, 228271

Weather Conditions: Dry & sunny

Time	Elapsed Time (min)	Depth to water from ground level (m)	(mm)
11:54	0	0.810	810
11:55	1	0.900	900
11:56	2	0.950	950
11:57	3	1.020	1020
11:58	4	1.080	1080
11:59	5	1.130	1130
12:00	6	1.160	1160
12:01	7	1.220	1220
12:02	8	1.240	1240
12:03	9	1.280	1280
12:04	10	1.310	1310
12:05	11	1.330	1330
12:06	12	1.370	1370
12:08	14	1.400	1400
12:10	16	1.420	1420
12:11	17	1.450	1450
12:12	18	1.480	1480
12:13	19	1.490	1490
12:14	20	1.500	1500
12:16	22	1.520	1520
12:17	23	1.540	1540
12:18	24	1.560	1560
12:21	27	1.600	1600
12:24	30	1.640	1640
12:26	32	1.670	1670

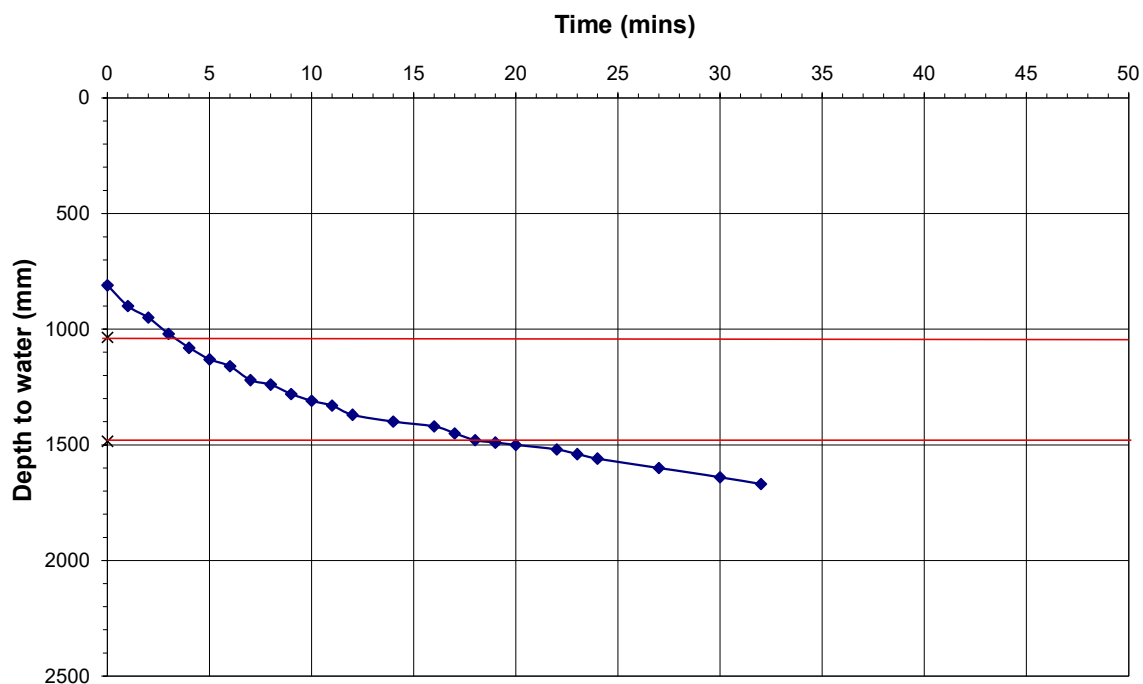
Soakaway Dimensions	(m)	(mm)
Length	= 3.00	3000
Width	= 0.60	600
Depth	= 1.71	1710

Effective depth (full)	m	mm
25%	= 1.49	1485.0
50%	= 1.26	1260.0
75%	= 1.04	1035.0

Depth at start of test (mm)	= 810
Depth at end of test (mm)	= 1670

Base area of pit	= 1.800
a_{p50} - 50% internal surface area inc. base	= 5.040
V_{p75-25} - Volume 75 - 25%	= 0.810

t_{p75} (min) = (Read from graph)	3
t_{p25} (min) = (Read from graph)	19
t_p values extrapolated from graph data	16
t_p value (seconds) =	960



Soil infiltration rate, f , (m/s) =

1.67E-04

Soakaway Test Report

Client: Lidl Great Britain Ltd
Job Name: Brecon
Job No.: 1522.02

Test Date: 17.04.26

Soil Description: 0-0.2m TS: Gravelly clayey silty SAND,
0.2-0.7m Gravelly clayey silty SAND with occasional
cobbles, 0.7-1.8m Sandy cobbly silty GRAVEL.

Weather Conditions: Damp & intermittent rain

Trial Pit No.	SA02
Test No.	3
Coordinates:	303177, 228271

Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
08:39	0	0.41	410
08:40	1	0.52	520
08:41	2	0.56	560
08:42	3	0.62	620
08:43	4	0.7	700
08:44	5	0.72	720
08:46	7	0.87	870
08:48	9	0.96	960
08:50	11	1.05	1050
08:53	14	1.15	1150
08:55	16	1.21	1210
08:57	18	1.25	1250
08:59	20	1.29	1290
09:01	22	1.32	1320
09:04	25	1.37	1370
09:09	30	1.44	1440
09:14	35	1.5	1500
09:19	40	1.55	1550
09:22	43	1.58	1580
09:24	45	1.63	1630

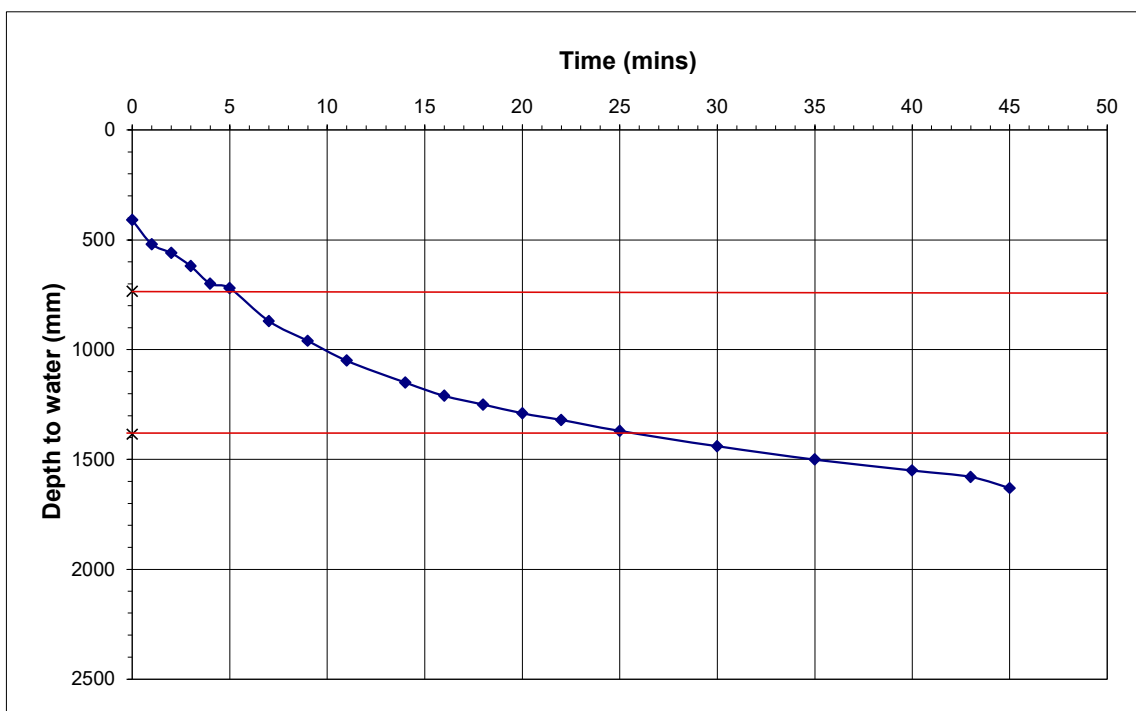
Soakaway Dimensions		(m)	(mm)
Length	=	3.00	3000
Width	=	0.60	600
Depth	=	1.71	1710

Effective depth (full)		m	mm
25%	=	1.39	1385.0
50%	=	1.06	1060.0
75%	=	0.74	735.0

Depth at start of test (mm)	=	410
Depth at end of test (mm)	=	1630

Base area of pit	=	1.800
a_{p50} - 50% internal surface area inc. base	=	6.480
V_{p75-25} - Volume 75 - 25%	=	1.170

t_{p75} (min) = (Read from graph)	5.5
t_{p25} (min) = (Read from graph)	25.5
t_p values extrapolated from graph data	20
t_p value (seconds) =	1200



Soil infiltration rate, f , (m/s) = 1.50E-04

Notes:

Logged By

MB

Checked by

PGS

REMADA
GEO CONSULTANTS

PGS

REMADA
GEO CONSULTANTS

PGS

REMADA
GEO CONSULTANTS

PGS

Soakaway Test Report

Client: Lidl Great Britain Ltd
Job Name: Brecon
Job No.: 1522.02

Test Date: 16.04.26

Soil Description: 0-0.15m TS: Sandy gravelly silty CLAY,
0.15-0.9m Gravelly clayey silty SAND with occasional
cobbles, 0.9-2.0m Sandy cobbly silty GRAVEL.

Weather Conditions: Dry & sunny

Trial Pit No. SA04
Test No. 1
Coordinates: 303165, 228216

Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
10:41	0	1.100	1100
10:42	1	1.200	1200
10:43	2	1.250	1250
10:44	3	1.310	1310
10:45	4	1.350	1350
10:46	5	1.400	1400
10:47	6	1.440	1440
10:48	7	1.490	1490
10:49	8	1.500	1500
10:50	9	1.510	1510
10:51	10	1.540	1540
10:52	11	1.560	1560
10:53	12	1.600	1600
10:54	13	1.620	1620
10:55	14	1.660	1660
10:56	15	1.670	1670
10:58	17	1.690	1690
11:00	19	1.730	1730
11:01	20	1.750	1750
11:06	25	1.810	1810
11:12	31	1.960	1960

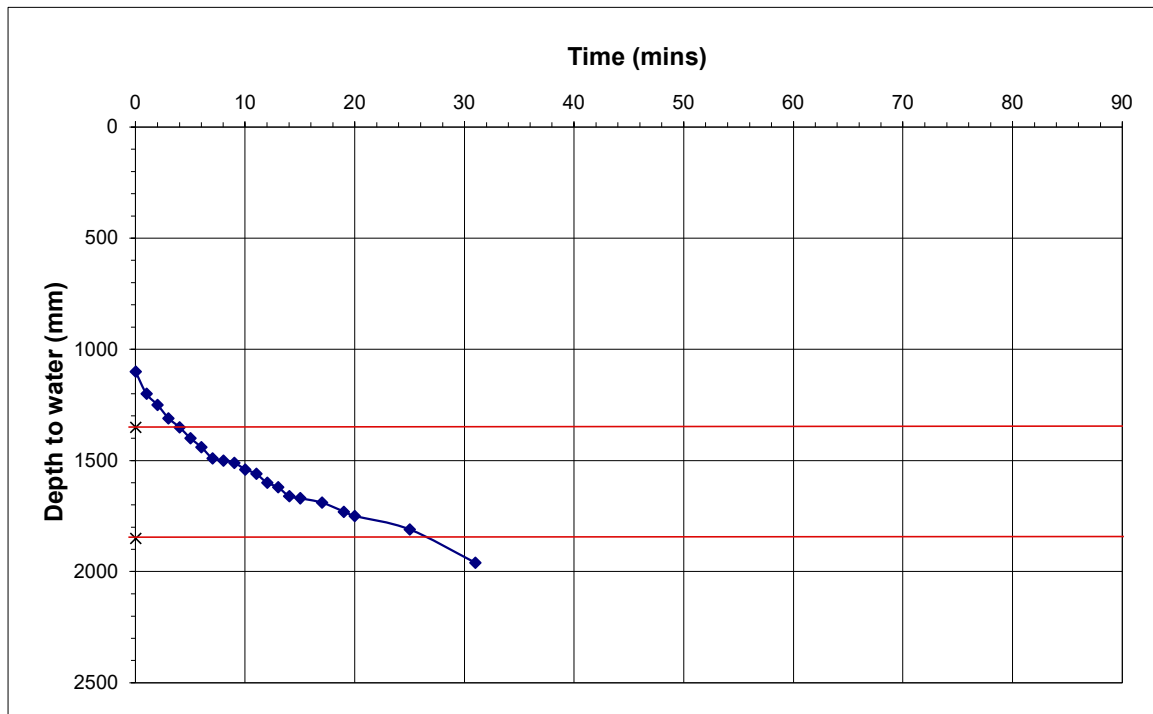
Soakaway Dimensions		(m)	(mm)
Length	=	3.00	3000
Width	=	0.60	600
Depth	=	2.10	2100

Effective depth (full)		m	mm
25%	=	1.85	1850.0
50%	=	1.60	1600.0
75%	=	1.35	1350.0

Depth at start of test (mm)	=	1100
Depth at end of test (mm)	=	1960

Base area of pit	=	1.800
a_{p50} - 50% internal surface area inc. base	=	5.400
V_{p75-25} - Volume 75 - 25%	=	0.900

t_{p75} (min) = (Read from graph)	4
t_{p25} (min) = (Read from graph)	27
t_p values extrapolated from graph data	23
t_p value (seconds) =	1380



Soil infiltration rate, f , (m/s) = 1.21E-04 **(normal test)**
Soil infiltration rate, f , (m/s) = ~~(pit filled with stone)~~

Notes:

Logged By

MB

Checked by

PGS

Soakaway Test Report

Client: Lidl Great Britain Ltd
Job Name: Brecon
Job No.: 1522.02

Test Date: 16.04.26

Soil Description: 0-0.15m TS: Sandy gravelly silty CLAY,
0.15-0.9m Gravelly clayey silty SAND with occasional
cobbles, 0.9-2.0m Sandy cobbly silty GRAVEL.

Weather Conditions: Dry & sunny

Trial Pit No.	SA04
Test No.	2
Coordinates:	303165, 228216

Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
14:49	0	0.800	800
14:50	1	0.840	840
14:51	2	0.890	890
14:52	3	0.930	930
14:53	4	0.990	990
14:54	5	1.050	1050
14:55	6	1.100	1100
14:57	8	1.200	1200
14:59	10	1.250	1250
15:01	12	1.330	1330
15:03	14	1.400	1400
15:05	16	1.450	1450
15:09	20	1.510	1510
15:14	25	1.570	1570
15:19	30	1.650	1650
15:24	35	1.710	1710
15:34	45	1.880	1880
15:39	50	1.890	1890

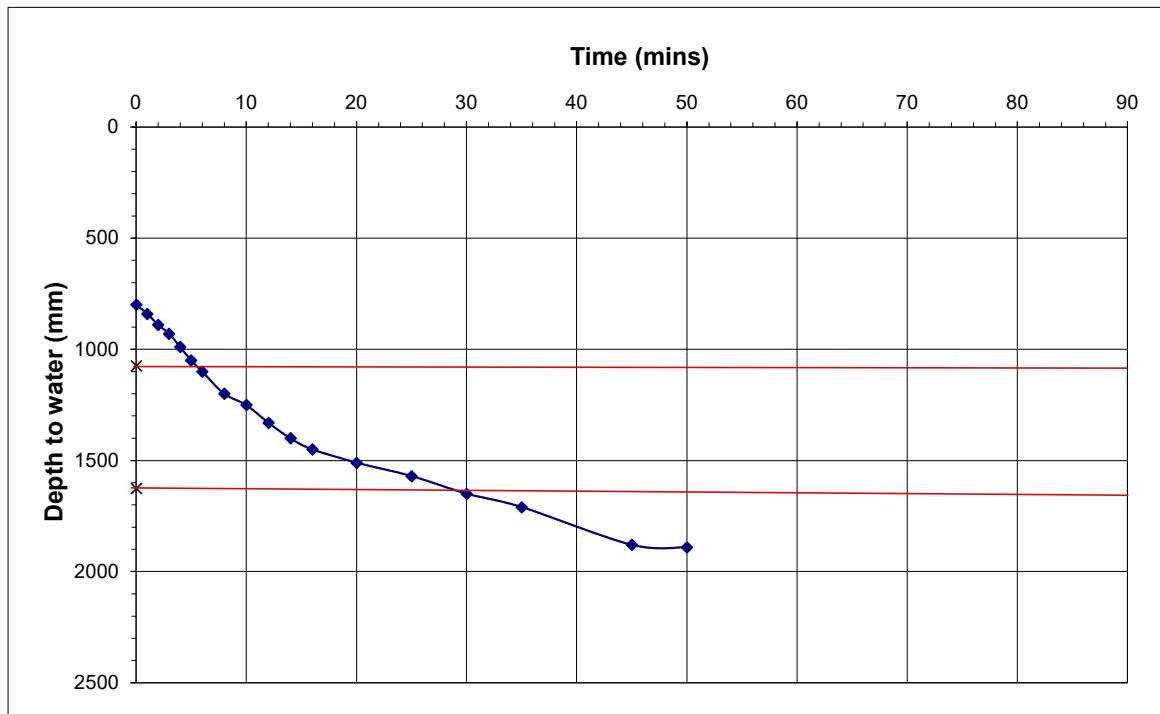
Soakaway Dimensions		(m)	(mm)
Length	=	3.00	3000
Width	=	0.60	600
Depth	=	1.90	1900

Effective depth (full)		m	mm
25%	=	1.63	1625.0
50%	=	1.35	1350.0
75%	=	1.08	1075.0

Depth at start of test (mm)	=	800
Depth at end of test (mm)	=	1890

Base area of pit	=	1.800
a_{p50} - 50% internal surface area inc. base	=	5.760
V_{p75-25} - Volume 75 - 25%	=	0.990

t_{p75} (min) = (Read from graph)	7
t_{p25} (min) = (Read from graph)	27
t_p values extrapolated from graph data	20
t_p value (seconds) =	1200



Soil infiltration rate, f , (m/s) = 1.43E-04 **(normal test)**
Soil infiltration rate, f , (m/s) = ~~(pit filled with stone)~~

Notes:

Logged By

MB

Checked by

PGS

Soakaway Test Report

Client: Lidl Great Britain Ltd
Job Name: Brecon
Job No.: 1522.02

Test Date: 17.04.26

Soil Description: 0-0.15m TS: Sandy gravelly silty CLAY,
0.15-0.9m Gravelly clayey silty SAND with occasional
cobbles, 0.9-2.0m Sandy cobbly silty GRAVEL.

Weather Conditions: Damp & intermittent rain

Trial Pit No.	SA04
Test No.	3
Coordinates:	303165, 228216

Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
10:47	0	0.660	660
10:48	1	0.700	700
10:49	2	0.770	770
10:50	3	0.820	820
10:51	4	0.870	870
10:52	5	0.910	910
10:57	10	1.040	1040
11:02	15	1.150	1150
11:07	20	1.230	1230
11:12	25	1.320	1320
11:17	30	1.390	1390
11:22	35	1.450	1450
11:27	40	1.500	1500
11:32	45	1.550	1550
11:37	50	1.590	1590
11:47	60	1.650	1650
11:57	70	1.720	1720
12:07	80	1.890	1890

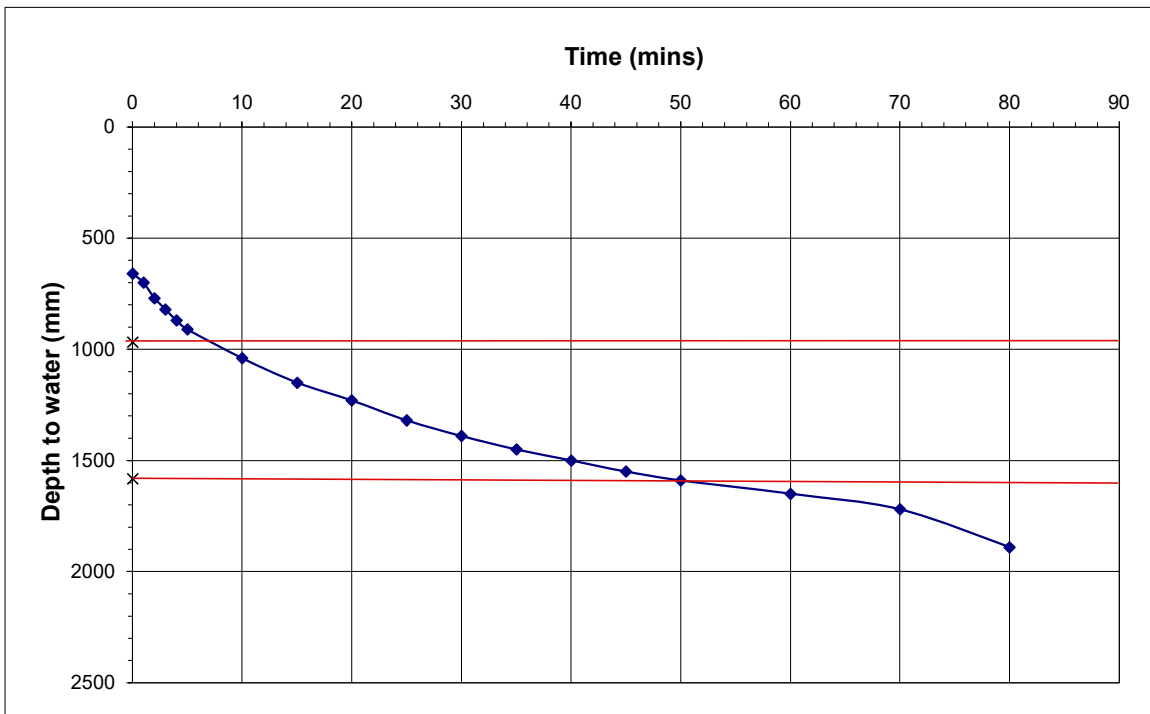
Soakaway Dimensions		(m)	(mm)
Length	=	3.00	3000
Width	=	0.60	600
Depth	=	1.89	1890

Effective depth (full)		m	mm
25%	=	1.58	1582.5
50%	=	1.28	1275.0
75%	=	0.97	967.5

Depth at start of test (mm)	=	660
Depth at end of test (mm)	=	1890

Base area of pit	=	1.800
a_{p50} - 50% internal surface area inc. base	=	6.228
V_{p75-25} - Volume 75 - 25%	=	1.107

t_{p75} (min) = (Read from graph)	7
t_{p25} (min) = (Read from graph)	50
t_p values extrapolated from graph data	43
t_p value (seconds) =	2580



Soil infiltration rate, f , (m/s) = 6.89E-05 **(normal test)**
Soil infiltration rate, f , (m/s) = ~~(pit filled with stone)~~

Notes:

Logged By

MB

Checked by

PGS

Appendix D DCWW Sewer Records



Dŵr Cymru
Welsh Water

New Lidl store developmentLD3 8LQ



LEGEND(Representative of most common features)

- Waste network:
- | | | | |
|--|-------------------------|--|---|
| | Foul chamber | | Outfall |
| | Surface water chamber | | Lamphole |
| | Combined chamber | | Storm Overflow |
| | Combined sewer overflow | | Rising main |
| | Special purpose chamber | | Gravity sewer |
| | Treatment works | | Private sewer |
| | Non Dwr Cymru | | Private sewer subject to Sect. 104 adoption agreement |
| | Pumping station | | Private Sewer Transfer |
- NB: Sewers symbol colour indicates the type.
- | | | | |
|--------|--|--|--------------------|
| RED | Combined | | Lateral Drain |
| GREEN | Surface Water | | Inspection Chamber |
| BROWN | Foul | | |
| Purple | Former S2c sewers (for indicative purposes only) | | |

Notes:

Whilst every reasonable effort has been taken to correctly record the pipe material of DCWW assets, there is a possibility that in some cases pipe material (other than Asbestos Cement or Pitch Fibre) may be found to be asbestos cement (AC) or Pitch Fibre (PF). It is therefore advisable that the possible presence of AC or PF pipes be anticipated and considered as part of any risk assessment prior to excavation

Dwr Cymru Cyfyngedig ('the Company') gives this information as to the position of its underground apparatus by way of general guidance only and on the strict understanding that it is based on the best information available and no warranty as to its correctness is relied upon In the event of excavations or other works made in the vicinity of the company's apparatus and any onus of locating the apparatus before carrying out any excavations rests entirely on you. The information which is supplied hereby the company, is done so in accordance with statutory requirements of sections 198 and 199 f the water industry Act 1991 based upon the best information available and in particular, but without prejudice to the generality of the foregoing, it should be noted that the records that are available to the Company may not disclose the existence of a drain sewer or disposal main laid before 1 September 1989, or if they do, the particulars thereof including their position underground may not be accurate. It must be understood that the furnishing of this information us entirely without prejudice to the provision of the New Roads and Street Works Act 1991 and the company's right to be compensated for any damage to its apparatus.

EXACT LOCATIONS OF ALL APPARATUS TO BE DETERMINED ON SITE

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Map Ref: 303182.228267

Map Scale 1: 1,500

PrintedBy Cecile Leston

PrintedOn 07/07/2026

Appendix E Development Plans

KEY

+ 110.2m

EXISTING LEVEL

+ 110.2m

PROPOSED LEVEL

1:0.0

0

0

HARD LANDSCAPING GRADE

1:0.0

0

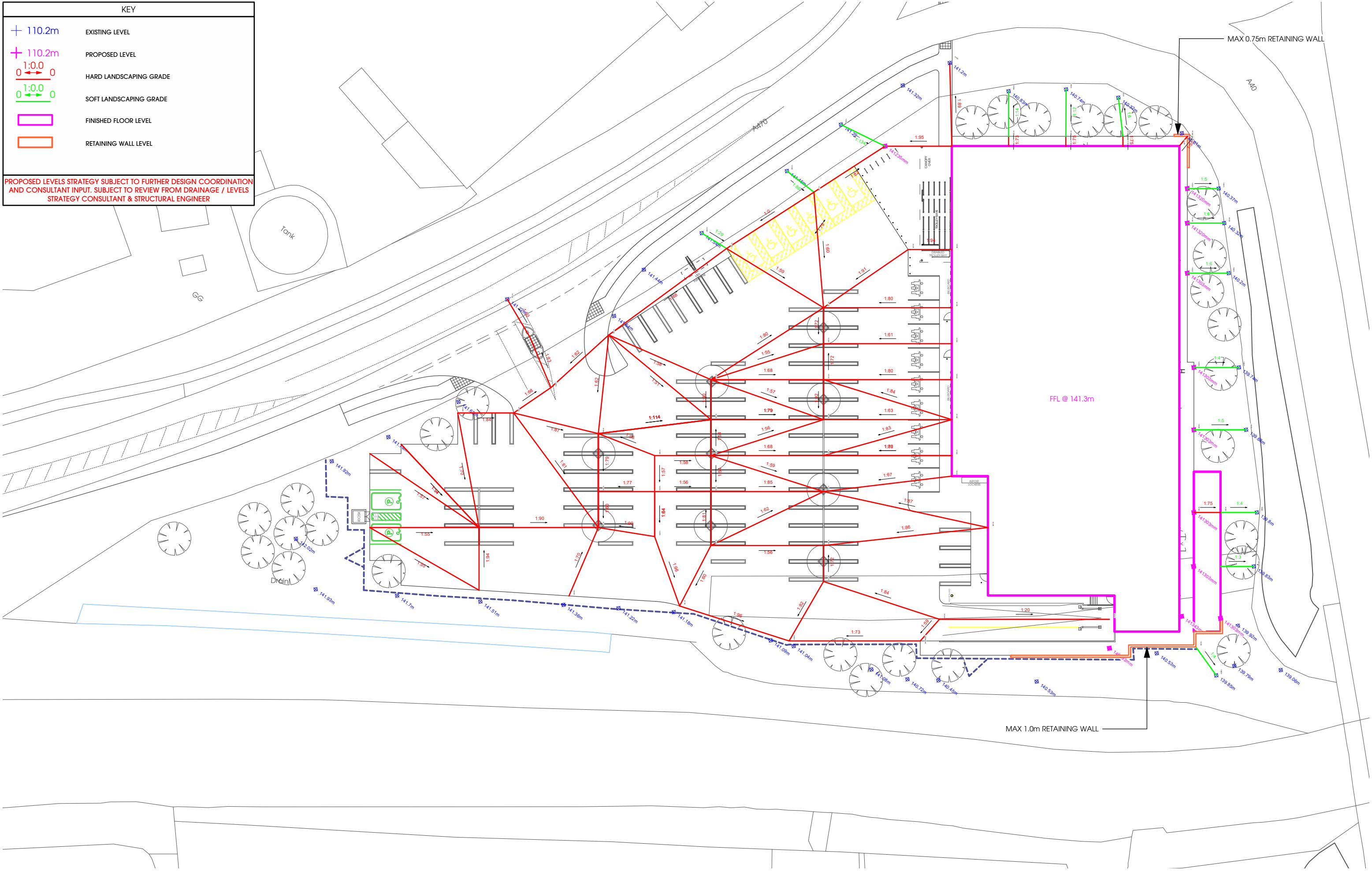
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SOFT LANDSCAPING GRADE

FINISHED FLOOR LEVEL

RETAINING WALL LEVEL

PROPOSED LEVELS STRATEGY SUBJECT TO FURTHER DESIGN COORDINATION AND CONSULTANT INPUT. SUBJECT TO REVIEW FROM DRAINAGE / LEVELS STRATEGY CONSULTANT & STRUCTURAL ENGINEER

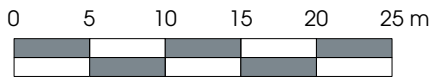


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ALL DIMENSIONS SHOULD BE CHECKED ON SITE BEFORE WORK COMMENCES

SUBJECT TO RECEIPT OF TITLE DEED

DESIGN SUBJECT TO FURTHER SURVEYS AND CONSULTANT INFORMATION



Rev	Date	Description	MS	Drawn
A	18/09/2026	2nd EV spaces repositioned at next to the substation, 1.1m Conservation fence added as per landscape design proposal, trees and planting amended to suit the latest landscape design.		

htcarchitects

York Place Studio
8 Britannia Street
Leeds
LS1 2DZ
T: (0113) 244 3457
W: www.htcarchitects.co.uk
E: info@htcarchitects.co.uk

client

Lidl GB Ltd.

project

Kings Meadow - Brecon LD3 8LQ

drawing title

Proposed Levels Strategy

date

August 2026

status

Planning

scale

1:500 @ ISO A3

drawn

BMS

checked

-

job no.

3223

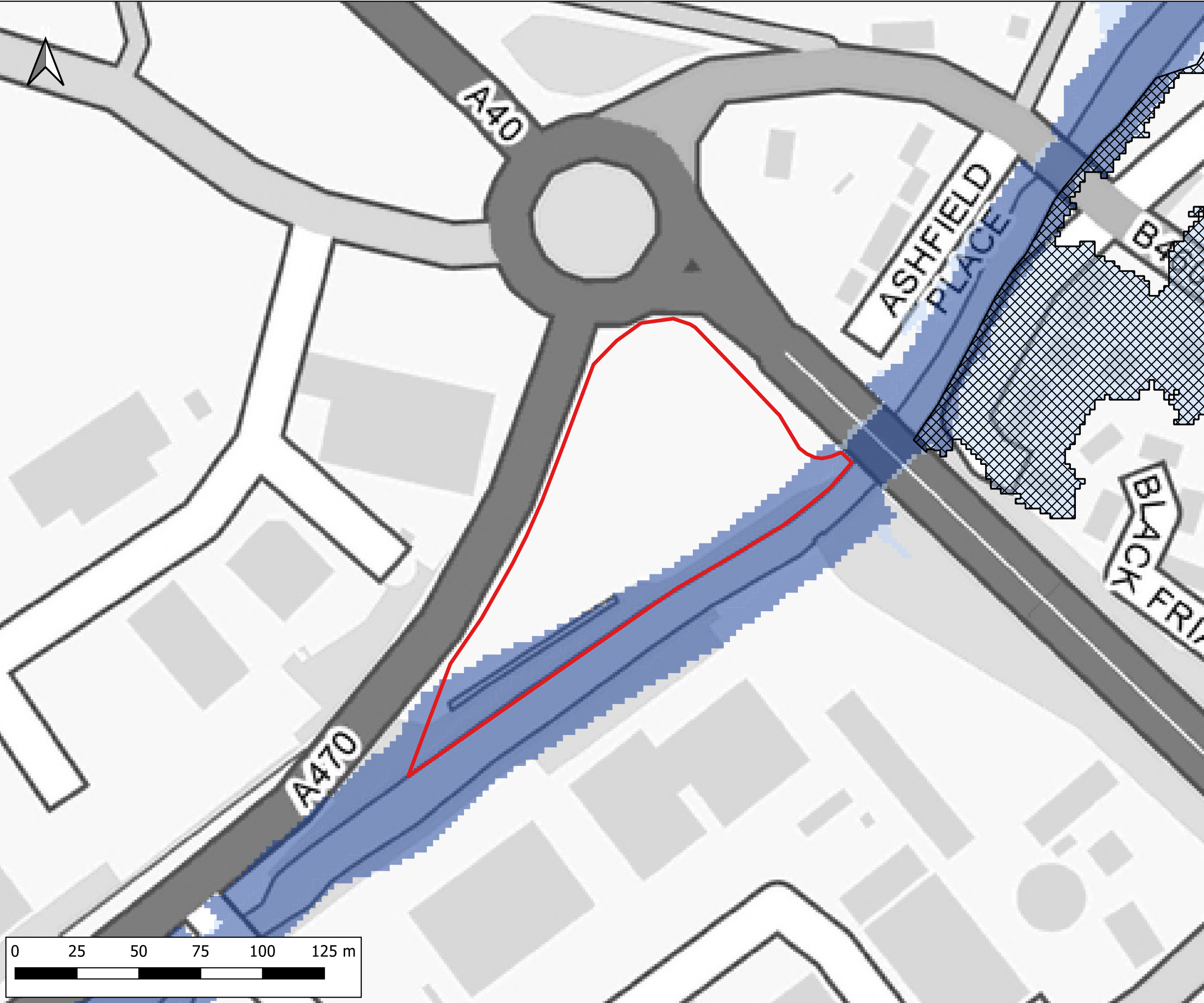
dwg no.

P416

rev.

A

Appendix F NRW Flood Maps



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise
2) Flood Zone 3 displays the extent of flooding from rivers with a 1% AEP or greater of flooding in a given year including and allowance for climate change and the sea with a 0.5% AEP or greater of flooding in a given year including and allowance for climate change
3) Flood Zone 2 displays the extent of flooding from rivers with a less than 1% AEP but greater than or equal to 0.1% AEP of flooding in a given year including and allowance for climate change and the sea with a less than 0.5% AEP but greater than or equal to 0.1% AEP of flooding in a given year including an allowance for climate change

LEGEND

- Site Boundary
 - TAN15 Defended Zones
- Flood Map for Planning
- Flood Zone 1
 - Flood Zone 2
 - Flood Zone 3



CLIENT:			
			
 www.waterco.co.uk			
SCHEME:			
Kings Meadow, Brecon			
PLOT TITLE:			
NRW Flood Map for Planning (Rivers and Sea) Data published May 2026			
PLOT STATUS:			DATE:
FINAL			24-09-2026
DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
LH	JP	AW	1:1500
PLOT NAME:			REVISION:
17891_NRW_FMfP			-



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

Site Boundary

Flood Zones - Rivers

Flood Zone 1

Flood Zone 2

Flood Zone 3

CLIENT:

www.waterco.co.uk

SCHEME:

Kings Meadow, Brecon

PLOT TITLE:

NRW Flood Zones - Rivers
Data published May 2026

PLOT STATUS:		DATE:	
FINAL		24-09-2026	

DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
LH	JP	AW	1:1500

PLOT NAME:	REVISION:
17891_NRW_Flood_Zones_Rivers	-



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

Site Boundary

Flood Zones - Surface Water & Small Watercourses

Flood Zone 1

Flood Zone 2

Flood Zone 3

CLIENT:

www.waterco.co.uk

SCHEME:

Kings Meadow, Brecon

PLOT TITLE:

NRW Flood Zones - Surface Water & Small Watercourses
Data published May 2026

PLOT STATUS:		DATE:	
FINAL		24-09-2026	

DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
LH	JP	AW	1:1500

PLOT NAME:	REVISION:
17891_NRW_Flood_Zones_Surface_Water	-



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

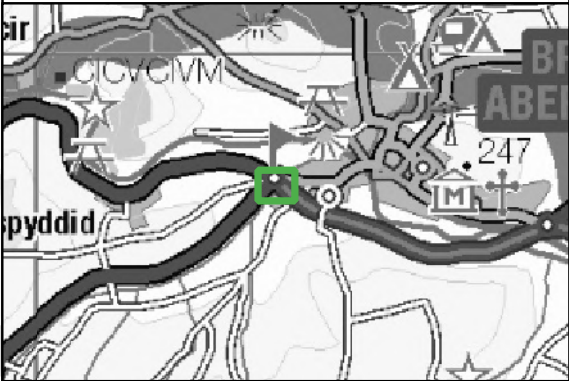
Site Boundary

Flood Zones - Sea

Flood Zone 1

Flood Zone 2

Flood Zone 3



CLIENT:




www.waterco.co.uk

SCHEME:

Kings Meadow, Brecon

PLOT TITLE:

NRW Flood Risk from the Sea
Data published May 2026

PLOT STATUS:		DATE:	
FINAL		24-09-2026	

DRAWN:	CHECKED:	APPROVED:	PLOT SCALE AT A3:
LH	JP	AW	1:1500

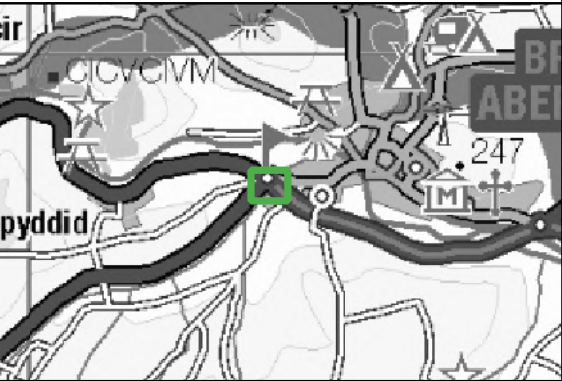
PLOT NAME:	REVISION:
17891_NRW_Flood_Zones_Sea	-



Notes:
1) All dimensions are in metres and all levels in metres above Ordnance Datum unless stated otherwise

LEGEND

-  Site Boundary
-  NRW Recorded Flood Extents



CLIENT:



SCHEME:

Kings Meadow, Brecon

PLOT TITLE:

NRW Recorded Flood Extents
Data published May 2026

PLOT STATUS:

FINAL

DATE:

24-09-2026

DRAWN:

LH

CHECKED:

JP

APPROVED:

AW

PLOT SCALE AT A3:

1:1500

PLOT NAME:

17891_NRW_Recorded_Flood_Extents

REVISION:

-

Appendix G DCWW Consultation

Mr Louis Hunt
Waterco
Ruthin
Denbighshire
LL15 1NJ

Date: 20/07/2026
Our Ref: PPA0010218

Dear Mr Hunt

Grid Ref: 303175 228234
Site Address: Brecon, Powys
Development: Proposed commercial store

I refer to your pre-planning enquiry received relating to the above site, seeking our views on the capacity of our network of assets and infrastructure to accommodate your proposed development. Having reviewed the details submitted I can provide the following comments which should be taken into account within any future planning application for the development.

APPRAISAL Firstly, we note that the proposal relates to a proposed commercial store in Brecon, Powys and acknowledge that the site comprises of a potential windfall development with no allocated status in the Local Development Plan (LDP). Accordingly, whilst it does not appear an assessment has been previously undertaken of the public sewerage and watermains systems, we offer the following comments as part of our appraisal of this development. **PUBLIC SEWERAGE NETWORK** The proposed development site is located in the immediate vicinity of a separate/mixed sewerage system, comprising combined, foul and surface water public sewers, which drains to Brecon Wastewater Treatment Works (WwTW). You are also advised that some public sewers and lateral drains may not be recorded on our maps of public sewers because they were originally privately owned and were transferred into public ownership by nature of the Water Industry (Schemes for Adoption of Private Sewers) Regulations 2011. The presence of such assets may affect the proposal. In order to assist you may contact Dwr Cymru Welsh Water on 0800 085 3968 to establish the location and status of the apparatus in and around your site. Please be mindful that under the Water Industry Act 1991 Dwr Cymru Welsh Water has rights of access to its apparatus at all times. **SURFACE WATER DRAINAGE** As of 7th January 2019, this proposed development is subject to Schedule 3 of the Flood and Water Management Act 2010. The development therefore requires approval of Sustainable Drainage Systems (SuDS) features, in accordance with the 'Statutory standards for sustainable drainage systems – designing, constructing, operating and maintaining surface water drainage systems'. As highlighted in these standards, the developer is required to explore and fully exhaust all surface water drainage options in accordance with a hierarchy preferring

infiltration (PL2) and, where infiltration is not possible, disposal to a surface water body (PL3), in liaison with the Lead Local Flood Authority and/or Natural Resources Wales, or surface water sewer or highway drain (PL4) in liaison with the riparian owner and/or Local Highways Authority. Please note, DCWW is a statutory consultee to the SAB application process and will provide comments to any SuDS proposals by response to SAB consultation. Please refer to further detailed advice relating to surface water management included in our attached Advice & Guidance note and our Developer Services website at <https://developers.dwrcymru.com/en/help-advice/regulation-to-be-aware-of/sustainable-drainage-systems>. In the absence of an accompanying surface water drainage strategy, it is recommended that the developer engage in consultation with Brecon National Park Authority, as the determining SuDS Approval Body (SAB), in relation to their proposals for SuDS features. Please be advised that due to capacity constraints with the downstream public sewerage network, under no circumstances would we allow surface water runoff highway run-off from the proposed development to communicate directly or indirectly with the public combined sewerage system. In addition, please note, no amount of land drainage run-off is permitted to discharge directly or indirectly into the public sewerage system. Furthermore, Planning Policy Wales (PPW) acknowledges that discharge of surface water to foul sewers is prohibited and highlights that any additional surface water from new developments should not be discharged to combined systems because of the risk of pollution when combined systems overflow (Para 6.6.3). Moreover, PPW recognises the challenges faced from rainfall intensity causing surface water flooding and diffuse pollution (Para 6.6.14) along with the importance of well-maintained sewerage networks (Para 6.6.15), particularly as a result of run-off from built surfaces and the sewage discharges from overloaded sewers (Para 6.6.16). In this instance we acknowledge receipt of a form, which indicates proposals to dispose surface water flows into a surface water body. **FOUL WATER DRAINAGE – SEWERAGE NETWORK** We have considered the impact of foul flows generated by the proposed development and concluded that flows can be accommodated within the public sewerage system. We advise that the flows should be connected to the foul sewer between manholes SO03270901 and SO03270904 located road to the south. Should a planning application be submitted for this development we will seek to control these points of communication via appropriate planning conditions and therefore recommend that any drainage layout or strategy submitted as part of your application takes this into account. However, should you wish for an alternative connection point to be considered please provide further information to us in the form of a drainage strategy, preferably in advance of a planning application being submitted. You may need to apply to Dwr Cymru Welsh Water for any connection to the public sewer under Section 106 of the Water Industry Act 1991. However, if the connection to the public sewer network is either via a lateral drain (i.e. a drain which extends beyond the connecting property boundary) or via a new sewer (i.e. serves more than one property), it is now a mandatory requirement to first enter into a Section 104 Adoption Agreement (Water Industry Act 1991). The design of the sewers and lateral drains must also conform to the Welsh Ministers Standards for Foul Sewers and Lateral Drains, and conform with the publication "Sewers for Adoption"- 7th Edition. Further information can be obtained via the Developer Services pages of www.dwrcymru.com. **FOUL WATER**



Welsh Water is owned by Glas Cymru – a 'not-for-profit' company.
Mae Dwr Cymru yn eiddo i Glas Cymru – cwmni 'nid-er-elw'.

We welcome correspondence in
Welsh and English

Dŵr Cymru Cyf, a limited company registered in
Wales no 2366777. Registered office: Pentwyn Road,
Nelson, Treharris, Mid Glamorgan CF46 6LY

Rydym yn croesawu gohebiaeth yn y
Gymraeg neu yn Saesneg

Dŵr Cymru Cyf, cwmni cyfyngedig wedi'i gofrestru yng
Nghymru rhif 2366777. Swyddfa gofrestredig: Heol Pentwyn
Nelson, Treharris, Morgannwg Ganol CF46 6LY.

DRAINAGE – SEWAGE TREATMENT No problems are envisaged with the Waste Water Treatment Works for the treatment of domestic discharges from this site. Please note that the Natural Resources Wales have planning advice for planning authorities relating to increased phosphate levels in several river Special Areas of Conservation (SAC). Applications for new development in these areas need to consider the requirements set out in the planning advice and should form part of the local planning authority's decision making when determining planning applications.' In this instance, [Name] Wastewater Treatment Works (WwTW) ultimately discharges to a river Special Area of Conservation (SAC). We would advise that this WwTW has a phosphorus consent limit and is currently compliant with the 95% quartile for its flow passed forward (FPF) performance, at the time of this pre-application consultation.

POTABLE WATER SUPPLY We anticipate this development will require the installation of a new single water connection to serve the new premise. The provisions of Section 45 of the Water industry Act 1991 apply. We therefore rely on the Local Planning Authority to control the delivery of any required reinforcement or offsite works by way of planning condition at planning application stage. Dwr Cymru Welsh Water is not responsible for fire protection or for providing suitable fire flows for firefighting. If a dedicated fire suppression main for a development is required a separate application can be made to DCWW. We cannot guarantee the constant availability of water, flow or pressure required for such systems and these aspects must be considered when designing a dedicated sprinkler/fire suppression system. If a dedicated fire suppression main for a commercial/industrial development is needed a separate application for is required. It is not mandatory for DCWW to accept a connection for fire suppression purposes on a development of this nature. Each application will be assessed on a case-by-case basis. Providing fire flows and fire protection are the responsibility of the appropriate regional Fire Services. We refer you to the 3rd Edition of the National Guidance Document on the Provision of Water for Fire Fighting published by the Local Government Association and Water UK. More information on Potable Water Connections can be found online at <https://developers.dwrcymru.com/en/applications/water-connections>

FURTHER CONTACT If you have any questions about the above response, please contact Amy Marshall who is the Development Planning Officer for Brecon at developer.services@dwrcymru.com or on 0800 917 2652. They will be happy to assist you further.

I trust the above information is helpful and will assist you in forming water and drainage strategies that should accompany any future planning application. I also attach copies of our water and sewer extract plans for the area, and a copy of our Planning Guidance Note which provides further information on our approach to the planning process, making connections to our systems and ensuring any existing public assets or infrastructure located within new development sites are protected.

Please note that our response is based on the information provided in your enquiry and should the information change we reserve the right to make a new representation. Should you have any queries or wish to discuss any aspect of our response please do not hesitate to contact our dedicated team of planning officers, either on 0800 917 2652 or via email at developer.services@dwrcymru.com



Welsh Water is owned by Glas Cymru – a 'not-for-profit' company.
Mae Dwr Cymru yn eiddo i Glas Cymru – cwmni 'nid-er-elw'.

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Please quote our reference number in all communications and correspondence.

Yours faithfully,

Matthew Lord
Planning Liaison Manager
Developer Services

Please Note that demands upon the water and sewerage systems change continually; consequently the information given above should be regarded as reliable for a maximum period of 12 months from the date of this letter.



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