

Flood Risk Statement

McDonald's Pontardawe

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1 Introduction

Stantec UK Ltd have been commissioned by McDonald's Restaurants Ltd to produce a Flood Risk Statement to demonstrate the compliance of the off-site drainage route with Technical Advice Note 15 (TAN15): Development, Flooding, and Coastal Erosion¹ at the McDonald's Pontardawe site. Until such time that compliance is demonstrated, the planning application for the drainage route has been invalidated by Neath and Port Talbot Local Authority.

Proposals for the off-site drainage, a Foul Water Rising Main, will fall under a separate planning application to the original McDonald's Pontardawe, herein referred to as the 'main site', which was granted planning approval in August 2024 (Planning Ref: P2023/0101). The Foul Water Rising Main will serve as supporting infrastructure for the main site, but its off-site routing did not fall under the original planning application for the main site as adoption of the existing foul network was proposed in the original application.

This Flood Risk Statement builds on the information presented in the site Flood Consequence Assessment (Ref: 15297-HYD-XX-XX-RP-FR-0001), Drainage Strategy (Ref: PNT-HYD-XX-XX-RP-C-0002-P02) and the Foul Drainage Layout (Ref: PNT-HYD-XX-XX-DR-C-3011 P04). Specifically, this Flood Risk Statement reviews how the proposed Foul Water Rising Main is compliant with TAN15 guidance.

¹ Technical Advice Note 15: Development, flooding and coastal erosion



2 Existing Site Conditions

2.1 Site Location

The main site is situated in the car park of a Tesco Superstore, located off the A4067, Pontardawe. The main site is bound:

- » To the north by an access road and the Afon Tawe;
- » To the east by an access road and petrol station;
- » To the south by green space and the A4067; and
- » To the west by a Tesco Superstore and its associated parking.

Currently the proposed Foul Water Rising Main routing comprises an access road to the rear (northwest) of the main site and Tesco Superstore Grounds, with greenspace and the Afon Tawe located northwest of this routing. South of the access road is an area of greenspace.

The site address and Ordnance Survey Grid Reference are provided in **Table 1** with the site location shown in **Figure 1**.

Table 1. Site Referencing Information

Site Referencing Information	
Site Address	McDonald's Pontardawe, Pontardawe, Swansea, SA8 3AZ
Grid Reference	SN 72290 03496 272290, 203496



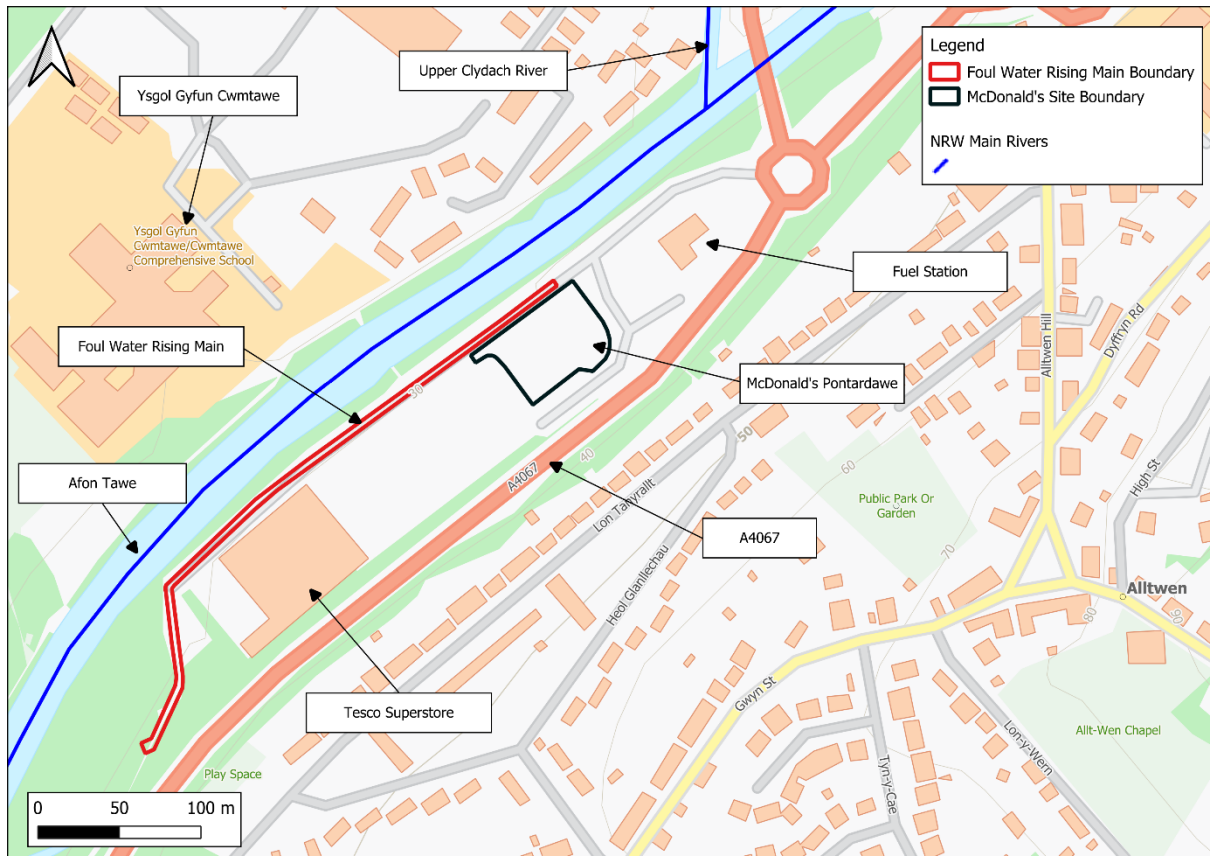


Figure 1: Site Location and Local Hydrology

Although **Figure 1** displays the locations of both the McDonald's site boundary and the Foul Water Rising Main boundary, the focus of this Flood Risk Statement is on the Foul Water Rising Main. The Foul Water Rising Main forms part of the wider McDonald's development.

2.2 Topography

A topographical survey for the site was completed by Hydrock Consultants Ltd, now Stantec UK Ltd in August 2021, however this does not give an indication of the ground elevation along the path of the foul water rising main (**Appendix A**). **Appendix A** shows that the main site is relatively flat with an approximate elevation of 33 metres Above Ordinance Datum (m AOD). The maximum site elevation is 33.98 m AOD on the southwestern boundary of the site, and the minimum site elevation is 32.90 m AOD in the north of the site.

Light Detection and Ranging (LiDAR) Data was obtained from Data Map Wales (**Figure 2**). This indicates that the proposed Foul Water Rising Main route falls from 31.10 m AOD in the north, to a topographic low of 30.04 m AOD southwest of the Tesco Superstore, before increasing to a maximum elevation of 33.94 m AOD at the downstream limit of the proposed Foul Water Rising Main.



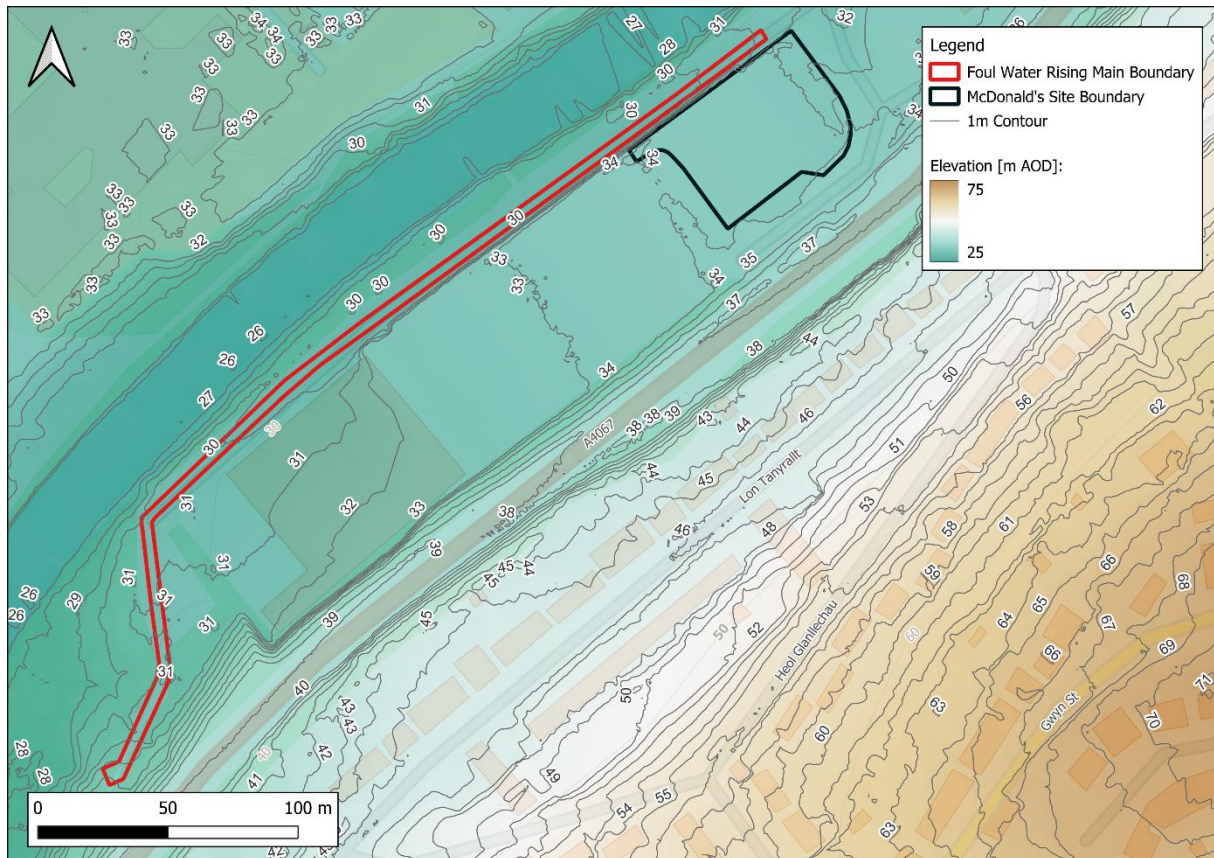


Figure 2: Site Topography

2.3 Hydrology

The nearest Main River under Natural Resources Wales (NRW) jurisdiction is the Afon Tawe, located approximately 30 m west of the Foul Water Rising Main, and 35 m west of the site boundary as shown in **Figure 1**. The Afon Tawe flows in a south westerly direction.

The Upper Clydach River, also a Main River managed under NRW jurisdiction is located approximately 150 m northeast of the site.

Swansea Canal, managed by Swansea Canal Society, also adjoins the Upper Clydach River 440 m northeast of the site.

2.4 Geology and Hydrogeology

According to British Geological Survey (BGS)² geology mapping (accessed November 2025), the entirety of the site, including the Foul Water Rising Main, is underlain by bedrock geology comprising mudstone, siltstone and sandstone of the Brithdir Member. BGS has recorded superficial deposits

² BGS Geology Viewer (BETA)



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2 Existing Site Conditions

comprising glaciofluvial sand and gravel beneath the main site, and alluvium (clay, silt, sand and gravel) beneath the proposed Foul Water Rising Main.

BGS GeoIndex Onshore³ mapping (accessed November 2025) shows that the site is in a location designated as a Secondary A Aquifer for both bedrock and superficial geology. Secondary A Aquifers comprise permeable layers that can support local water supplies and may form an important source of base flow to rivers.

BGS historic borehole records⁴ indicate numerous boreholes to the southeast of the site. The records show that in boreholes approximately 15 m to the southeast of the site, groundwater was encountered between 1.10 to 3.50 m below ground level (bgl) (BGS reference SN70SW125, SN70SW93 and SN70SW98).

Soilscapes⁵ mapping shows the east of the site to be located within 'slowly permeable seasonally wet acid loamy and clayey soils', and the west of the site, encompassing the Foul Water Rising Main, to be located within 'freely draining floodplain soils'.

A Phase 1 Ground Conditions Desk Study was prepared by Hydrock Consultants Ltd, now Stantec UK Ltd, in May 2020 (Ref: 15297-HYD-XX-XX-RP-GE-1001). The objective of the study was to formulate a Preliminary Conceptual Ground Model for the site, to identify key geoenvironmental and geotechnical risks to the proposed development. The report highlighted that groundwater levels across the site are high, with seepage encountered between 1 - 4 m bgl within the glaciofluvial deposits during a ground investigation undertaken in 2004. The Landmark Envirocheck report indicates 'a potential for groundwater flooding to occur at the surface'. Groundwater levels are expected to be in hydraulic connectivity with the surface water levels of the Afon Tawe.

³ [BGS GeoIndex Onshore](#)

⁴ [BGS Borehole Records](#)

⁵ [LandIS - Land Information System - Soilscapes soil types viewer](#)



3 Proposed Development

The proposed site layout is presented in **Appendix B**. The proposals are for the installation of a below-ground Foul Water Rising Main, which extends from the McDonald's, along the access road on the northern site boundary, emerging south of the Tesco Superstore within the existing area comprising green space.

The proposed Foul Water Rising Main will be 462 m total in length and comprise a HPPE (PE100) SDR17 80 mm Rising Main. Within the main site grounds, the proposed rising main will be private. Dŵr Cymru Welsh Water (DCWW) will adopt the rising main at the boundary of the adoptable highway to the existing sewer, located at the southern limit of the proposed rising main.

The proposed Foul Water Rising Main will serve as supporting infrastructure to the main McDonald's Restaurant site, which received planning approval in August 2024 (Planning Ref: P2023/0101).



4 Planning Policy

4.1 National Planning Policy

Planning applications are required to adhere to details set forth by the following:

- » Planning Policy Wales (PPW) (2021);
- » TAN15: Development, flooding and coastal erosion (2025); and
- » FCAs: Climate Change Allowances:

NRW defines the fluvial flood zones as follows:

- » **Flood Zone 1 (Low Risk)** comprises land assessed as having a $\leq 0.1\%$ chance of flooding from rivers in any given year (equivalent to the ≥ 1 in 1,000-year return period flood event), including an allowance for climate change.
- » **Flood Zone 2 (Medium Risk)** comprises land assessed as having a 0.1-1% chance of flooding from rivers in any given year (equivalent to the 1 in 1,000 - 1 in 100-year return period flood event), including an allowance for climate change.
- » **Flood Zone 3 (High Risk)** comprises land assessed as having a $\geq 1\%$ chance of flooding from rivers in any given year (equivalent to the ≤ 1 in 100-year return period flood event), including an allowance for climate change.
- » **TAN15 Defended Zones** comprise areas where flood risk management infrastructure provides a minimum standard of protection against flooding from rivers of 1 in 100-year return period flood event with an allowance for climate change and a freeboard.

4.1.1 TAN15 (2025)

TAN15 provides 'technical guidance which supplements the policies set out in PPW and Future Wales in relation to flooding and coastal erosion' by providing a framework within which 'flood risk arising from rivers, the sea and surface water, and the risk of coastal erosion can be assessed'.

According to Figure 4 of TAN15, the proposed development is considered 'Transport and Utilities Infrastructure', which constitutes a 'Less vulnerable development' vulnerability classification.

Paragraph 10.24 states 'In zones 2, 3 and TAN 15 defended zone developers must undertake a flood consequences assessment proportionate to the nature and scale of the proposal. Before granting planning permission, decision makers should be satisfied the scheme is justifiable in accordance with the principles set out in section 8, where they are not satisfied, planning permission should be refused. In these zones, Planning Authorities should seek all opportunities to provide enhanced flood protection for existing communities at risk.'

Figure 5 in Section 11 of TAN15 (**Table 2 below**) summarises frequency thresholds for different types of development to ensure new development remains flood free during the 1% river flood (i.e. a flood with a 1 in 100 chance of occurring in any year) and the 0.5% flood from the sea (i.e. a flood with a 1 in 200 chance of occurring in any year), plus an allowance for climate change over the lifetime of development.



TAN15 states that these thresholds may be applied with more flexibility in regard to redevelopment, changes of use, conversions and extensions, where the ability to substantially redesign a development is limited.

Table 2. Flood events in which development must be flood-free

Vulnerability Categories		Flood Event Type	
		Rivers	Sea
Highly Vulnerable Development	Emergency Services	0.1% + CC	0.1% + CC
	All other types	1% + CC	0.5% + CC
Less Vulnerable Development		1% + CC	0.5% + CC
Water compatible development that may be occupied by people		1% + CC	0.5% + CC

Figure 6 in Section 11 of TAN15 (**Table 3 below**) summarises tolerable conditions in an extreme flood event for different types of new development when assessed against the 0.1% extreme flood event, including an allowance for climate change.

Table 3. Tolerable conditions in an extreme flood event

Types of New Development	Maximum Depth of Flooding (mm)	Maximum Velocity of Flood Waters (m/s)
Highly Vulnerable Development	600	0.15
Less Vulnerable Development	600	0.3
Infrastructure associated with highly vulnerable development	600	0.3
Water Compatible Development	600	0.3

4.2 South West Wales Level 1 Strategic Flood Consequence Assessment⁶ (2022)

The South West Wales Stage 1 Strategic Flood Consequence Assessment (SFCA) identifies areas at risk of flooding from all sources, including the likely impact of climate change. The study identifies areas at potential high risk from flooding as well as providing details of historical flood events and any details of flood risk management structures or procedures present. The SFCA provides an overview of the planning context in South West Wales and represents available data on flood risk from each of the sources of flooding outlined within TAN15. The SFCA has been reviewed in relation to the site, with particular focus on Appendix B, which presents a review of flood risk in Neath Port Talbot.

The SFCA reports sewer flooding incidents by electoral ward. The proposed development lies within the Pontardawe ward, where 12 sewer flooding incidents have been recorded between 1990-2021, though specific locations for these events are unspecified.

⁶ [SW Wales - Stage 1 SFCA](#)



The SFCA also reports flooding incidents by year within the Pontardawe ward, stating that Pontardawe Town Centre, approximately 400 m northeast of the site, and Alloy Industrial Estate, located approximately 550 m northeast of the site, flooded due to a breach of the Swansea Canal in 1998. However, both locations are on the right bank of the River Tawe.

According to the SFCA, the floodplain of the Afon Tawe is present between Ystalyfera and Pontardawe, with some areas of existing development located within Flood Zone 2 and Flood Zone 3. There are no flood defences present within Pontardawe that result in the site being situated within a TAN15 Defended Zone.

4.3 Neath Port Talbot Flood Risk Management Strategy Plan (2024)⁷

As a Lead Local Flood Authority (LLFA), Neath Port Talbot Council is required under Section 9 of the Flood and Water Management Act 2010 to develop, maintain, apply and monitor a Local Flood Risk Management Strategy (LFRMS). The LFRMS must address potential flood risk arising from all local sourcing, including surface water runoff, groundwater and ordinary watercourses. The overall aim of the LFRMS is to ensure that flood risk is properly managed through a coordinated approach whereby communities, individuals, voluntary groups, and private sector organisations work together.

In Section 9.12 of the LFRMS, several measures are proposed for the Afon Tawe Catchment, which the site falls within, to effectively manage flood risk in the area. These measures include:

- » Measure 7: Asset Surveys;
- » Measure 8: S21 Asset Register;
- » Measure 9: Critical Flood Risk Asset Inspections;
- » Measure 10: Critical Flood Risk Asset Maintenance and Repairs;
- » Measure 12: Flood Risk Assessments; and
- » Measure 14: Feasibility Studies.

Overall, it is expected that the proposed measures for the Afon Tawe Catchment would likely result in beneficial environmental effects. For the most part, benefits would be slight and are mostly related to maintenance or repair of assets.

4.4 Neath and Port Talbot Local Development Plan (2011-2026) (Adopted 2016)⁸

The current Local Development Plan (LDP) was adopted in January 2016 and guides the future development of Neath Port Talbot, providing a clear vision for the County Borough setting out where, when and how much new development can take place over the 2011 to 2026 period. The aim of the

⁷ [Neath Port Talbot Flood Risk Management Strategy Plan](#)

⁸ [Neath and Port Talbot Local Development Plan](#)



LDP is to provide developers and the public with certainty about the planning framework for the Neath Port Talbot area. It provides a framework for local decision-making and sets out the council's land use policies and proposals to control development in the county borough up to 2026. It also provides the basis by which planning applications will be determined.

The LDP refers to Strategic Policy SP1: Climate Change. Strategic Policy SP1 presents guidance related to flood risk. However, this guidance is now considered outdated since the release of the new TAN15 in March 2025.

The proposed development site in Pontardawe is not allocated within the LDP.

4.5 Climate Change Considerations

Under TAN15 and local planning policy, it must be demonstrated that any proposed development at the site will be safe over its intended lifetime. This could include measures to ensure the development is flood resistant / resilient and that safe access and egress is provided for the following flood events, also known as 'design flood events'.

- » 1 in 100-year (1% AEP) fluvial flood event accounting for the future impacts of climate change;
- » 1 in 200-year (0.5% AEP) tidal / coastal flood event accounting for the future impacts of climate change;
- » 1 in 100-year pluvial (surface water) event accounting for the future impacts of climate change; and
- » 1 in 30-year (3.3% AEP) pluvial (surface water) event accounting for the future impacts of climate change.

Table 4 and **Table 5** provide the latest climate change uplifts for fluvial and surface water flooding, as per the NRW Climate Change Allowances and FCA guidance⁹.

Table 4. Peak River Flow Allowances for the West Wales River Basin District

West Wales	Total potential change anticipated by the 2020s	Total potential change anticipated by the 2050s	Total potential change anticipated by the 2080s
Upper end estimate	25%	40%	75%
Change factor / central estimate	15%	25%	30%
Lower end estimate	5%	10%	15%

Table 5. Change to extreme rainfall intensity (compared to a 1961-1990 baseline)

All of Wales	Total potential change anticipated by the 2020s (2015 – 2039)	Total potential change anticipated by the 2050s (2040 – 2060)	Total potential change anticipated by the 2080s (2070 – 2115)

⁹ Flood Consequence Assessments: Climate Change (gov.wales)



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Upper estimate	10%	20%	40%
Central estimate	5%	10%	20%



5 Existing Site Flood Risk

TAN15 requires flood risk from the following sources to be assessed:

- » Tidal and fluvial sources (sea and river flooding);
- » Surface water sources (flooding resulting from overland flows);
- » Groundwater sources;
- » Sewer flooding; and
- » Artificial sources, canals, reservoirs etc.

Each of these sources are addressed within this section of the report.

5.1 Tidal Flood Risk

NRW Mapping shows the tidal limit of the Afon Tawe to be approximately 6.5km downstream of the site. The minimum elevation on site is 30.04 m AOD and therefore, the risk of tidal flooding is considered to be 'negligible'.

5.2 Fluvial Flood Risk

According to the NRW Flood Map for Planning (Rivers) (**Figure 3**), the proposed Foul Water Rising Main is mostly located within Flood Zone 3 (High Risk), with remaining sections located within Flood Zone 2, associated with the Afon Tawe. This data does not include a detailed representation of flood defences, riverbanks or the site-specific topography.



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5 Existing Site Flood Risk

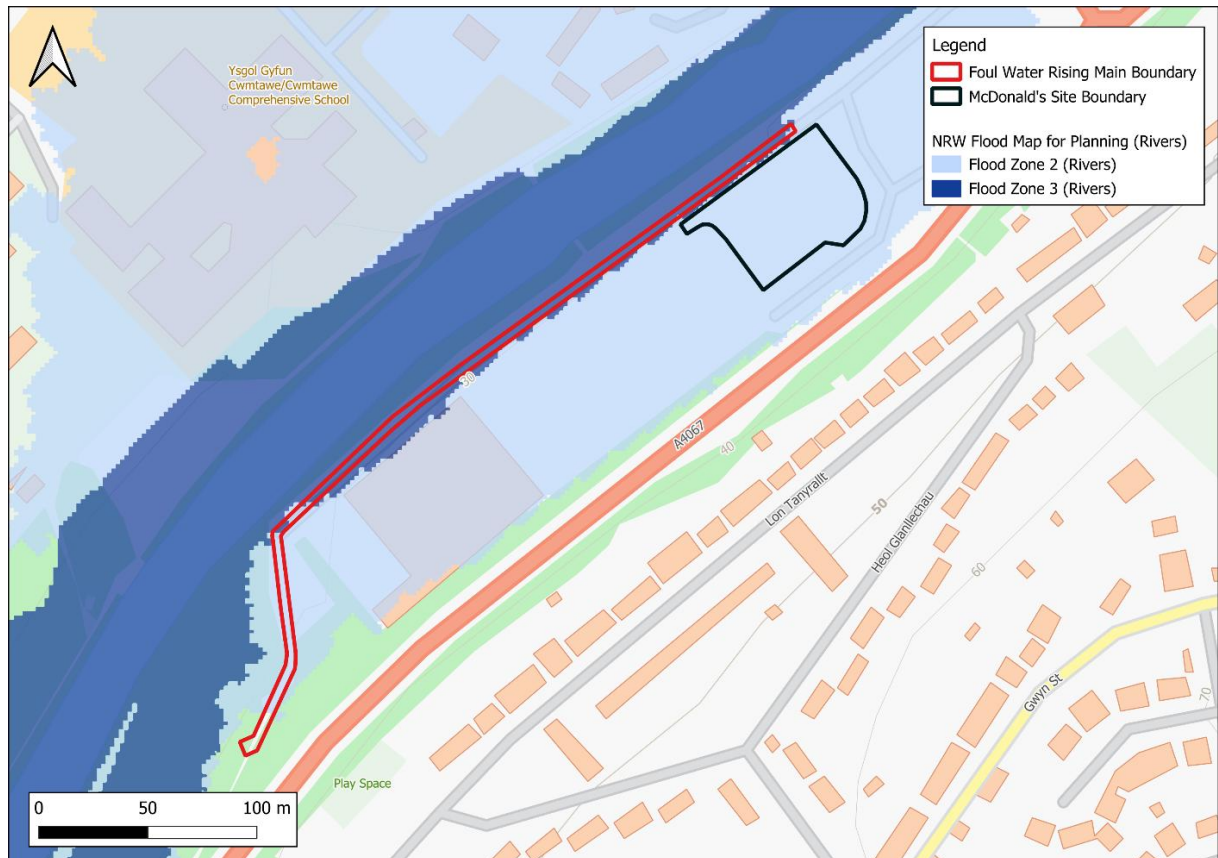


Figure 3: NRW's Flood Map for Planning (Rivers)

According to NRW's recorded flood extents dataset, the southern extent of the proposed Foul Water Rising Main has previously been impacted by fluvial flooding from the Afon Tawe in December 1979. The extent of this event is shown in **Figure 4**.



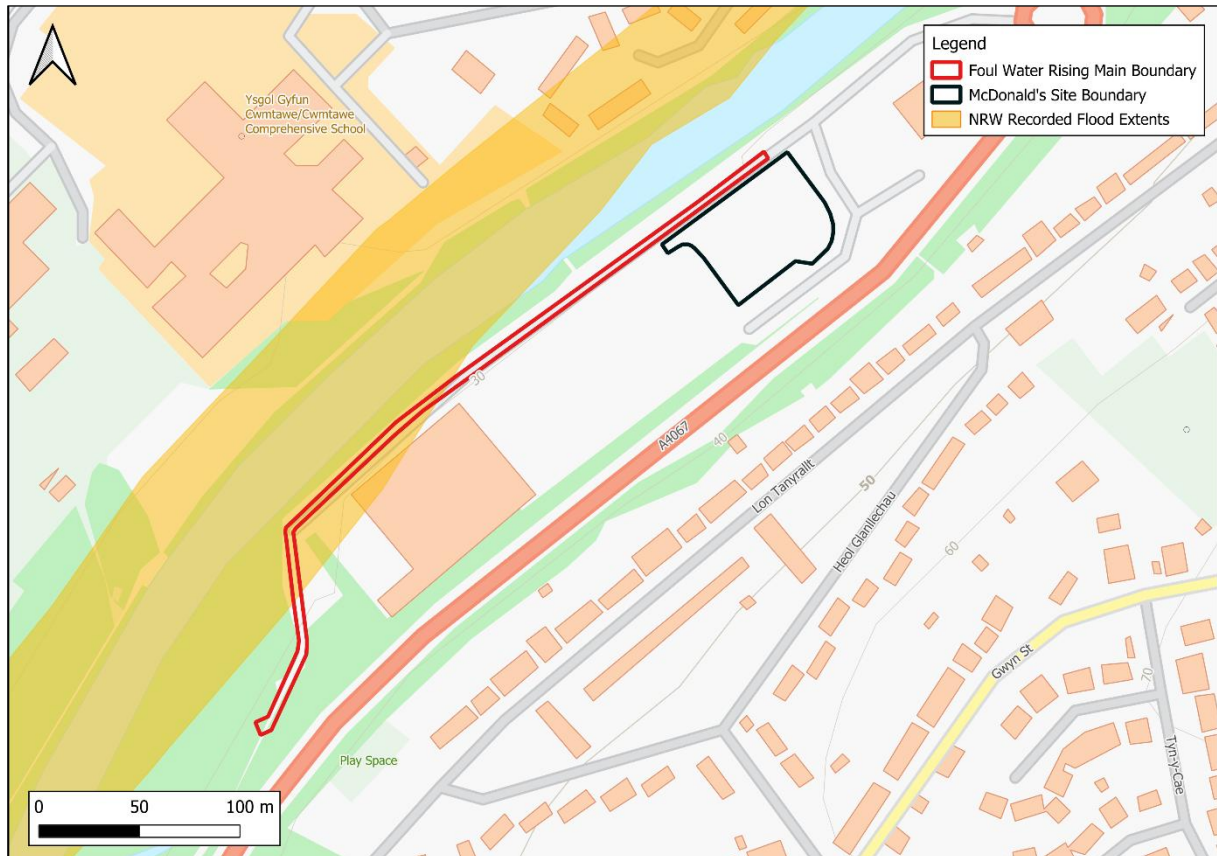


Figure 4: NRW's Recorded Flood Extents

The NRW Flood Defences and Assets dataset does not show the presence of any flood defence assets on the left bank of the Afon Tawe in proximity to the site. There is a flood defence asset located approximately 260 m northeast of the site, on the right bank of the Afon Tawe. This flood defence asset is shown to provide protection to Ysgol Gyfun on the right bank of the river within the NRW Areas Benefitting from Flood Defences mapping. Neither the main site, nor the proposed Foul Water Rising Main are located within a TAN15 Defended Zone.

To aid the discussion of flood risk in this report, the Pontardawe_5 v1.0 (2015) and v1.2 (2022) fluvial models were obtained from NRW and are discussed in more detail in **Section 5.3**.

5.3 Pontardawe_5 Fluvial Model

In 2014, JBA were commissioned by NRW to undertake a flood risk study at Pontardawe in South Wales. As part of this study, the Pontardawe_5 Fluvial Model, a 1D/2D ESTRY-TUFLOW model, was produced. Several design runs were simulated as part of the Pontardawe_5 fluvial hydraulic modelling study, however, for the purpose of this Flood Risk Statement, and in line with the requirements set out in TAN15, the following events are considered as part of this study:

- » Design Flood Event: 1 in 100-year (1% AEP) plus 30% Climate Change (CC) (Defended Scenario); and
- » Extreme Flood Event: 1 in 1000-year (0.1% AEP) plus 30% CC (Defended Scenario).

Both the 1 in 100-year plus CC, and 1 in 1000-year plus CC events, which were reviewed as part of this study are from the Pontardawe_5 Fluvial Model v1.2 (2022), as these simulations reflect the latest climate change allowances for the West Wales River Basin District (**Table 4**).

The model results are presented in **Sections 5.3.1** and **5.3.2**.

5.3.1 1 in 100-year plus CC Event (Defended)

The defended scenario includes all existing defences (NRW, private and informal). **Figure 5** displays the maximum flood depth results for the 1 in 100-year plus CC event. The results indicate that flooding is predicted along the route of the proposed Foul Water Rising Main, up to a maximum depth of 1.35 m occurring immediately west of the main site during the 1 in 100-year plus CC event.

While the site is located within the 1 in 100-year plus CC flood extent, TAN15 Flood Frequency Thresholds should be applied flexibly given that the proposals are for a subsurface feature. Furthermore, as the proposed site is to remain unmanned, with the exception of the installation and construction phases, and for occasional maintenance, risk to the site and its users is considered minimal.

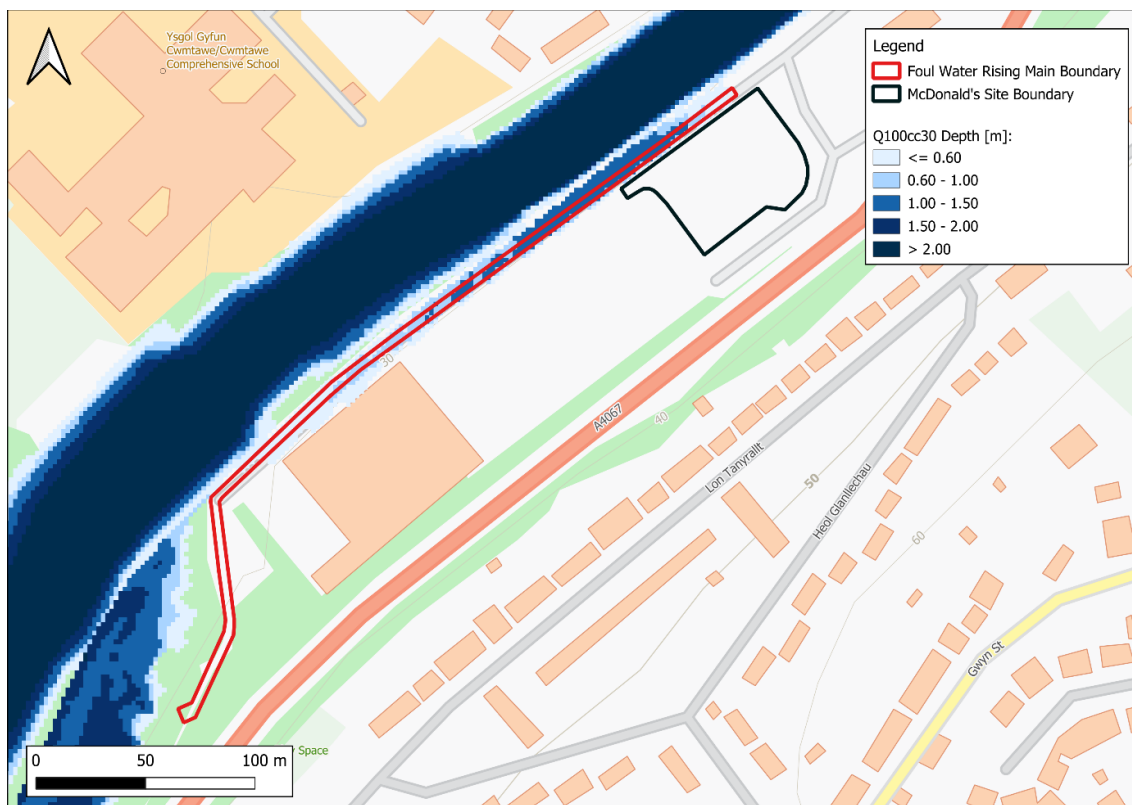


Figure 5: 1 in 100-year plus CC maximum flood depth for the defended scenario

5.3.2 1 in 1000-year plus CC Event (Defended)

Figure 6 and **Figure 7** display the maximum flood depth and velocity results for the 1 in 1000-year plus CC event, which is considered the extreme flood event. As outlined in **Table 3**, in the extreme event, the maximum tolerable depth of flooding for a less vulnerable development is 600 mm (0.60 m), and the maximum tolerable flood velocity for less vulnerable development is 0.30 m/s.

As shown in **Figure 6**, flood depths greater than 0.60 m are predicted within along the route of the proposed Foul Water Rising Main. The 1 in 1000-year plus CC simulation predicts a maximum depth of 2.75 m southwest of the main site, along the proposed route of the Foul Water Rising Main.

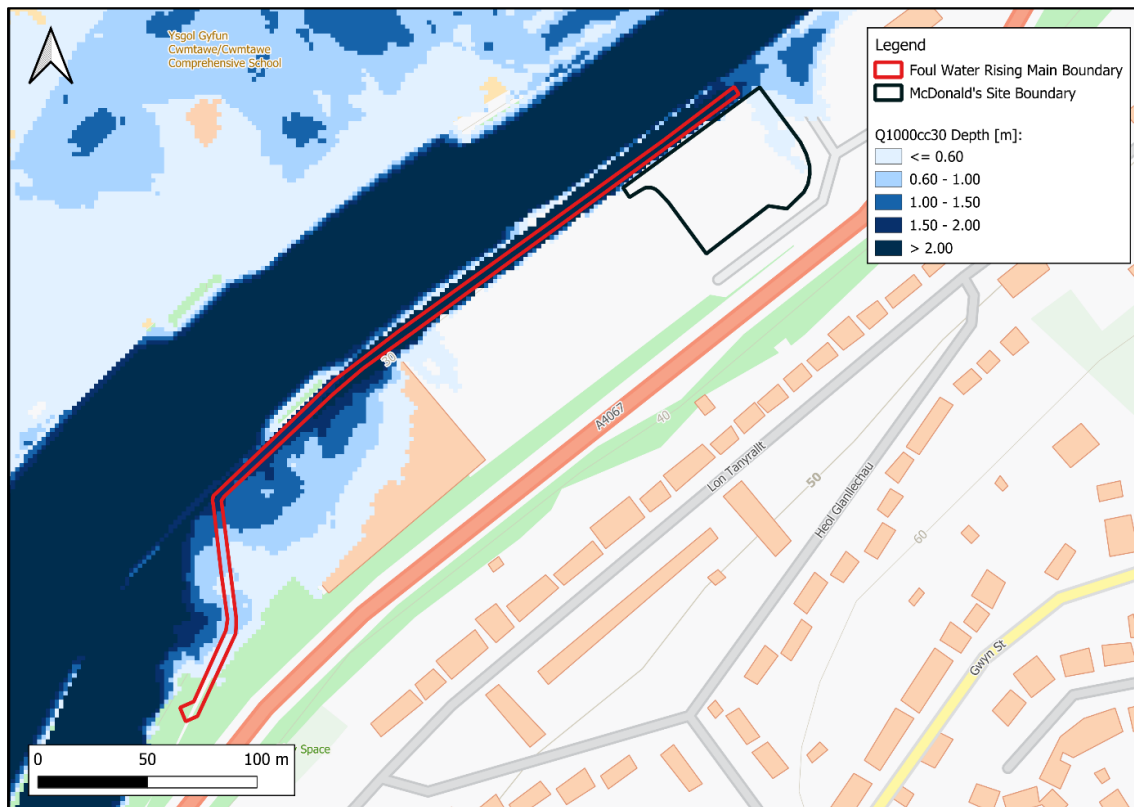


Figure 6: 1 in 1000-year plus CC maximum flood depth for the defended scenario

Figure 7 shows flood velocities exceeding 0.30 m/s also occur along the route of the Foul Water Rising Main, with the maximum predicted velocity in this location of 5.05 m/s.

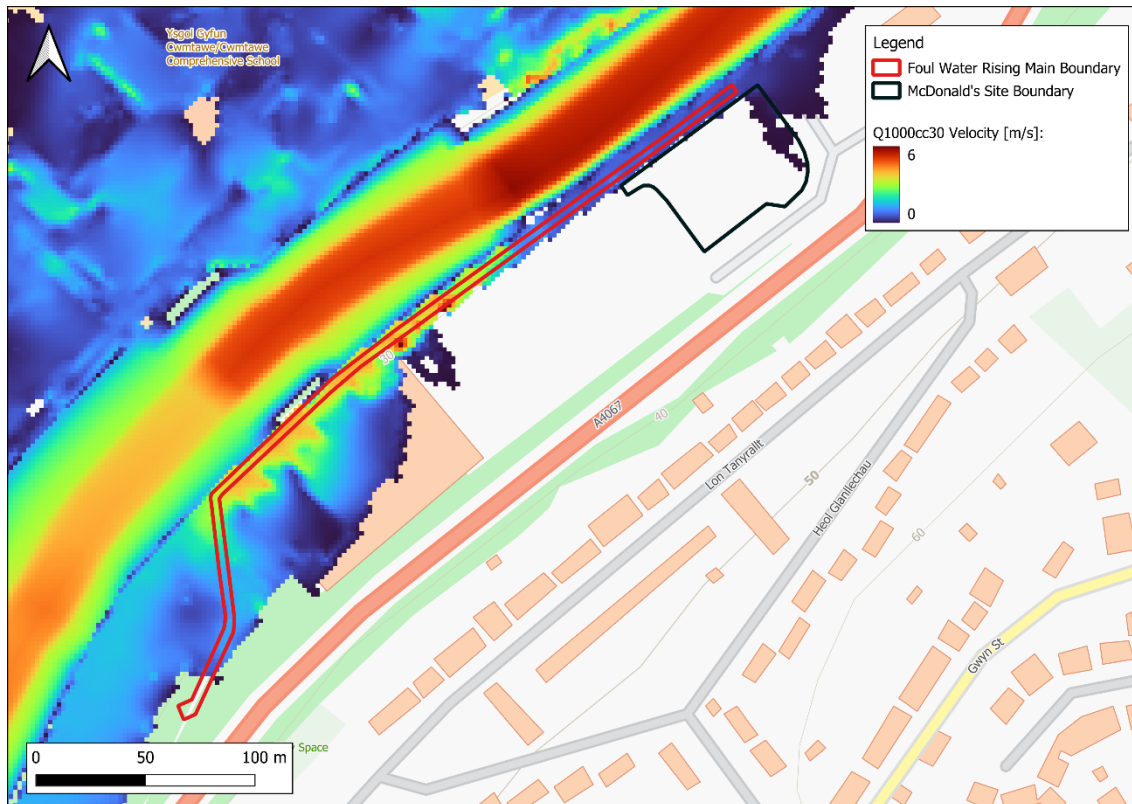


Figure 7: 1 in 1000-year plus CC maximum flood velocity for the defended scenario

While the proposed route of the Foul Water Rising Main is shown to be outside of TAN15 tolerable conditions for less vulnerable development, for both flood depth and velocity during an extreme event, TAN15 tolerable conditions should be applied flexibly to the Foul Water Rising Main as this feature will only be manned when access is required for maintenance, and during the installation/construction phase.

5.4 Surface Water Flood Risk

Surface water (pluvial) flooding is caused by rainfall levels exceeding the natural infiltration properties of the surrounding soils. Flooding can also occur owing to the absence of a natural method of drainage such as watercourses or ditches, or where soil infiltration rates are low. Flooding often results in ponding of water at low points or when surface water flow routes are blocked by an obstruction.

The NRW Flood Map for Planning, shows parts of the Foul Water Rising Main route to be located within Flood Zone 2 and Flood Zone 3 in relation to Surface Water and Small Watercourses (**Figure 8**). Specifically, areas of Flood Zone 2 and 3 are found along the road to the northwest of the main site and Tesco Superstore. The southernmost extent of the proposed Foul Water Rising Main is located in Flood Zone 1. The NRW Flood Map for Planning (Surface Water and Small Watercourses) dataset is inclusive of the effects of climate change.

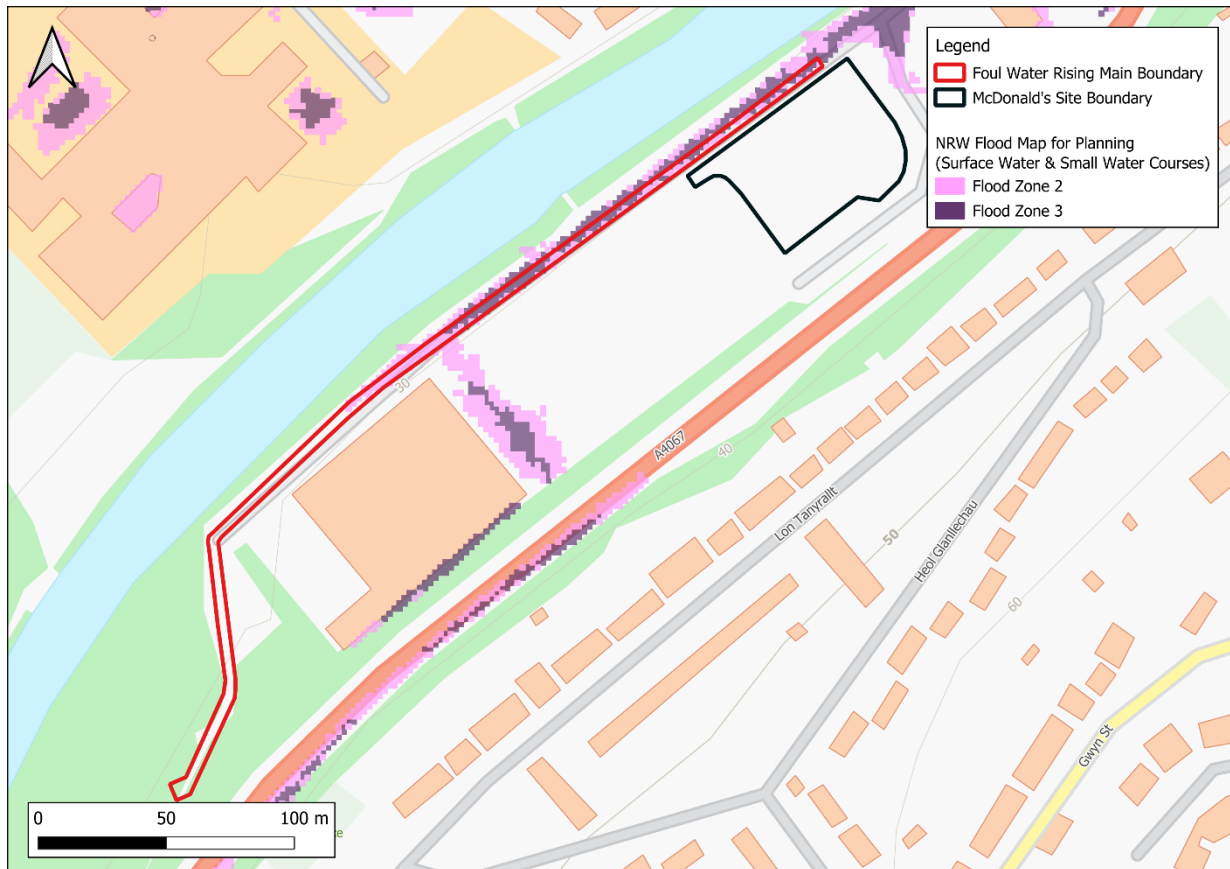


Figure 8: NRW's Long Term Flood Risk Map (Surface Water and Small Watercourses)

Due to the risk of surface water flooding at the site, flood mitigation, resistance and resilience measures are discussed in **Section 6**.

5.5 Groundwater Flooding

Groundwater flooding is caused by the emergence of water originating from sub-surface permeable strata. A groundwater flood event results from a sufficient rise in groundwater level where the water table intersects the ground surface and inundates low lying land. Periods of prolonged rainfall may also be a cause of groundwater flooding, with aquifers and soils becoming saturated.

The site is located in an area designated as a Secondary A Aquifer for bedrock and superficial geology, which suggests permeable layers that can support local water supplies and baseflow to rivers. BGS historic borehole records show that groundwater was encountered between 1.10 - 3.50 m bgl, approximately 15 m southeast of the main site (BGS reference: SN70SW125, SN70SW93 and SN70SW98).

A Phase 1 Ground Conditions Desk Study was prepared by Hydrock Consultants Ltd, now Stantec UK Ltd, in May 2020 (Ref: 15297-HYD-XX-XX-RP-GE-1001). The report highlighted that groundwater levels across the site are high, with seepage encountered in a 2004 ground investigation between 1.00 - 4.00 m bgl within glaciofluvial deposits. The Landmark Envirocheck report indicates 'a potential for groundwater flooding to occur at the surface'. Groundwater levels are expected to be in hydraulic connectivity with the surface water levels of the Afon Tawe.



As proposals are for the installation of a sub-surface Foul Water Rising Main, groundwater may be encountered during the construction phase, due to the site's proximity to the Afon Tawe. Therefore, as a result of the identified risk of groundwater flooding at the site, flood mitigation, resistance and resilience measures are discussed in **Section 6**.

5.6 Sewer Flooding

Flooding can occur owing to the failure of existing foul or surface water drainage infrastructure. If flows within the drainage system exceed the designed capacity or foreign matter causes blockages, overflow to the surface can occur, leading to flooding.

As outlined in **Section 4.2**, the SFCA reported 12 recorded sewer flooding incidents within the Pontardawe ward.

Dwr Cymru Welsh Water (DCWW) is identified as the entity responsible for sewer infrastructure across the study area. DCWW network maps have been provided in **Appendix C**, which indicates that the site is not currently served by a sewer network. However, a review of Solum Surveying Ltd Utility and CCTV survey (Ref: 7290, **Appendix D**) indicates the presence of a 150 – 300 mm diameter surface water drain, and a 225 mm foul water drain beneath the main site. These identified drains extend through the Tesco Superstore car park prior to diverting around the northern boundary of the superstore. Based on the differences between ground levels and pipe invert levels, the surface water drain is set 1.67 m bgl, and the foul water drain is set 2.70 m bgl.

The proposed drainage design for within the main McDonald's Restaurant site will not be considered within **Section 5.6** of this report, as a SAB Drainage Report (Ref: PNT-HYD-XX-XX-RP-C-0002-P02) has already been submitted with the original application. The details of the proposed Foul Water Rising Main, are discussed below.

The Foul Water Rising Main will be situated approximately 1 m bgl. It will follow the route of the access road along the northwestern site boundary, and connect to an existing 600 mm DCWW sewer, south of the site. The proposed Foul Water Rising Main will feature an in-built sump to pump out excess flows in the event that blockage or capacity exceedance occurs.

The site is considered to be at a 'low' risk of sewer flooding.

5.7 Artificial Sources

Failures and overtopping of reservoirs and navigable water bodies, and failure of water mains, constitute the primary means of flooding from artificial sources.

NRW Flood Risk from Reservoirs mapping shows the site to lie outside of the extents of potential reservoir flooding. NRW also state that reservoir flooding is extremely unlikely to happen. All large reservoirs must be inspected and supervised by reservoir panel engineers. As the enforcement authority for the Reservoirs Act 1975 in England and Wales, the NRW ensure that reservoirs are inspected regularly, and essential safety work is carried out.

Additionally, there is no indication within the NRW Detailed Flood Map for Planning that the site is at an enhanced risk of flooding from artificial sources.



There is some residual risk of flooding from Swansea Canal, which previously flooded Pontardawe Town and Alloy Industrial Estate. However, as the canal is located 440 m northeast of the site, flood defences are present on the left and right banks of the Upper Clydach River, and the Afon Tawe would first intercept the canal flows, risk of flooding from this source is considered unlikely.

Considering the probability of catastrophic reservoir failure is considered to be extremely low and risk of flooding from the Swansea Canal is residual, the risk of artificial flooding to the site is considered to be low.

5.8 Access and Egress

Site access and egress will be via the road to the northwest of the main site and Tesco Superstore. However, the proposed Foul Water Rising Main will generally be unmanned, with the exception of during the installation/construction period and for occasional maintenance, as such, access and egress will not be required frequently.

The access / egress road for the proposed development is located partially within Flood Zone 3 (Rivers) (**Figure 3**) and Flood Zone 3 (Surface Water and Small Watercourses) (**Figure 8**). Standing water below 0.3m is generally considered safe for vehicles to pass through. In the modelled design flood event (defended 1 in 100-year plus climate change), the model results predict flood depths along the access road up to 1.35 m (**Figure 5**). Due to the identified risk along the access road, measures to protect site users are proposed in **Section 6** of this report.

5.9 Existing Flood Risk Summary

Each flood risk source and its associated risk level is provided in **Table 6** Table 6. It has also been specified which specific sources require mitigation measures, which will be discussed in **Section 6**.

Table 6. Existing Flood Risk Summary

Flood Risk Source	Existing Site Risk Level	Mitigation Required
Tidal	Low	No
Fluvial	High	Yes – see Section 6
Surface Water	High	Yes – see Section 6
Groundwater	High	Yes – see Section 6
Sewers	Low	No
Artificial Sources	Low	No



6 Flood Mitigation, Resistance and Resilience

The following flood risk mitigation, resistance and resilience measures have been recommended in response to the risks outlined in **Section 5**.

6.1 Site Layout and Sequential Approach

The McDonald's Restaurant and proposed Foul Water Rising Main constitute 'less vulnerable' development, in accordance with Figure 4 of TAN15 guidance. The proposed Foul Water Rising Main will serve as supporting infrastructure to the McDonald's Restaurant. This supporting infrastructure will be unmanned, except for during the installation/construction phase, and during occasional maintenance inspections. Therefore, there is minimal risk to occupants of the site.

6.2 Flood Warning

NRW monitors rainfall and river levels to provide a flood forecasting and flood warning service throughout Wales. The purpose of flood warnings is to alert people that flooding is expected, and to prompt people to take action to protect themselves and their property when required. Although the site is not occupied, it is recommended that stakeholders, such as site managers or maintenance contractors, register for NRW flood alerts to stay informed of potential flood events. This will support proactive planning of routine maintenance during periods of lower flood risk and more favourable weather conditions.

6.3 Fluvial and Surface Water Risk Mitigation

To mitigate against fluvial and surface water flood risk, it is recommended that installation/construction works cease, and/or maintenance checks and works are not carried out when an NRW flood warning has been issued for either rainfall or river levels (See **Section 6.2**).

6.4 Groundwater Risk Mitigation

The greatest risk to the site from flooding associated with groundwater is during the installation/construction phase of the proposed development, when sub-surface groundworks are occurring. During this period, it is recommended that groundwater levels are monitored continuously, and dewatering measures are implemented, as necessary.



7 Conclusions

Stantec UK Ltd have been commissioned by McDonald's Restaurants Ltd to undertake a Flood Risk Statement, for the proposed development at McDonald's Pontardawe, Swansea, SA8 3AZ.

The flood risk to the site has been summarised in **Table 7**.

Table 7. Final Flood Risk Summary

Flood Risk Source	Mitigation Proposed	Final Risk Level
Tidal	N/A	Low
Fluvial	Avoid installation/construction works and site maintenance works during periods of likely flooding, i.e., during inclement weather conditions or when a NRW flood warning is issued.	Low
Surface Water	Avoid installation/construction works and site maintenance works during periods of likely flooding, i.e., during inclement weather conditions or when a NRW flood warning is issued.	Low
Groundwater	Groundwater monitoring and dewatering measures, as necessary	Low
Sewers	N/A	Low
Artificial Sources	N/A	Low

As the proposed Foul Water Rising Main constitutes 'redevelopment', will serve as supporting infrastructure for the approved McDonald's Pontardawe, and will primarily be unmanned, TAN15 guidance should be applied flexibly for this development.

This report therefore demonstrates that, in respect to flood risk, the proposed development:

- » Is suitable in the proposed location;
- » Will be adequately flood resistant and resilient;
- » Will not place additional persons at risk of flooding;
- » Will not increase flood risk elsewhere as a result of the proposed development through the loss of floodplain storage or impedance of flood flows; and
- » Will put in place measures to ensure surface water is appropriately managed.

This report concludes that in flood risk context, the proposals are safe and appropriate and do not increase flood risk.

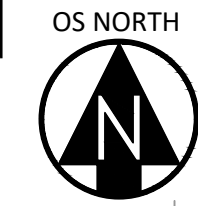


Appendices



Appendix A Topographical Survey





203475N

203450N

203425N

Please note: Whilst efforts have been made to accurately identify and survey all necessary features, we cannot guarantee that all features have been captured or correctly identified. All information contained within should be checked onsite prior to design work or construction work. Hydrock accepts no liability for inaccurate or misleading information shown within this drawing. Lidar data is shown in blue on layers named 3D LIDAR TRIANGLES and 3D LIDAR Contours within the CAD model - derived from a Environment agency source from 2011. Hydrock does not accept any liability for this data.

Notes:
All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions on are to be taken from this drawing. This drawing is to be read in conjunction with all relevant Engineers' and Service Engineers' drawings and specifications. This drawing is copyright.

LEVEL INFORMATION

Heights in Metres
Datum : GPS controlled (OSGB36 -15)

COORDINATE INFORMATION

Values in Metres
All Coordinates are : Derived from OS (OSGB36(15)) and centered
ST01 (E- 272320.445 N- 203480.624 Z- 34.727)

COORDINATE SCHEDULE

Station	Easting	Northing	Level
ST01	272320.445	203480.624	34.727
ST02	272320.243	203566.967	32.377
ST03	272303.859	203538.497	32.005

ABBREVIATIONS

[illegible]

LF	Chain Link Fence	WPR	Wooden Post & Rail Fence
Walls			
L	Block	RW	Retaining Wall
C	Brick	W	Wall
C	Concrete		
DB	Devon Bank		
DS	Dry Stone		
S	Stone		

Rev	Date	Description	By	Chk
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Hydrock

Over Court Barns, Over Lane, Almondsbury, Bristol, BS32 4DJ
TEL: 01454 619 533 FAX: 01454 614 125 or visit
www.budrock.com

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Client

MCDONALDS
RESTAURANTS LIMITED

Project: TESCO SUPERMARKET
PONTARDAWE

Project Number: 15297

TOPOGRAPHICAL SURVEY

Drawn:	Checked:	Scale @ A0:	Drawn Date:	First Issue:
PLS	JWH	1:200	20/08/2021	20/08/2021

Drawing Status. INFORMATION

Drawing No. 15297 - TS01 Sheet 1 of 1

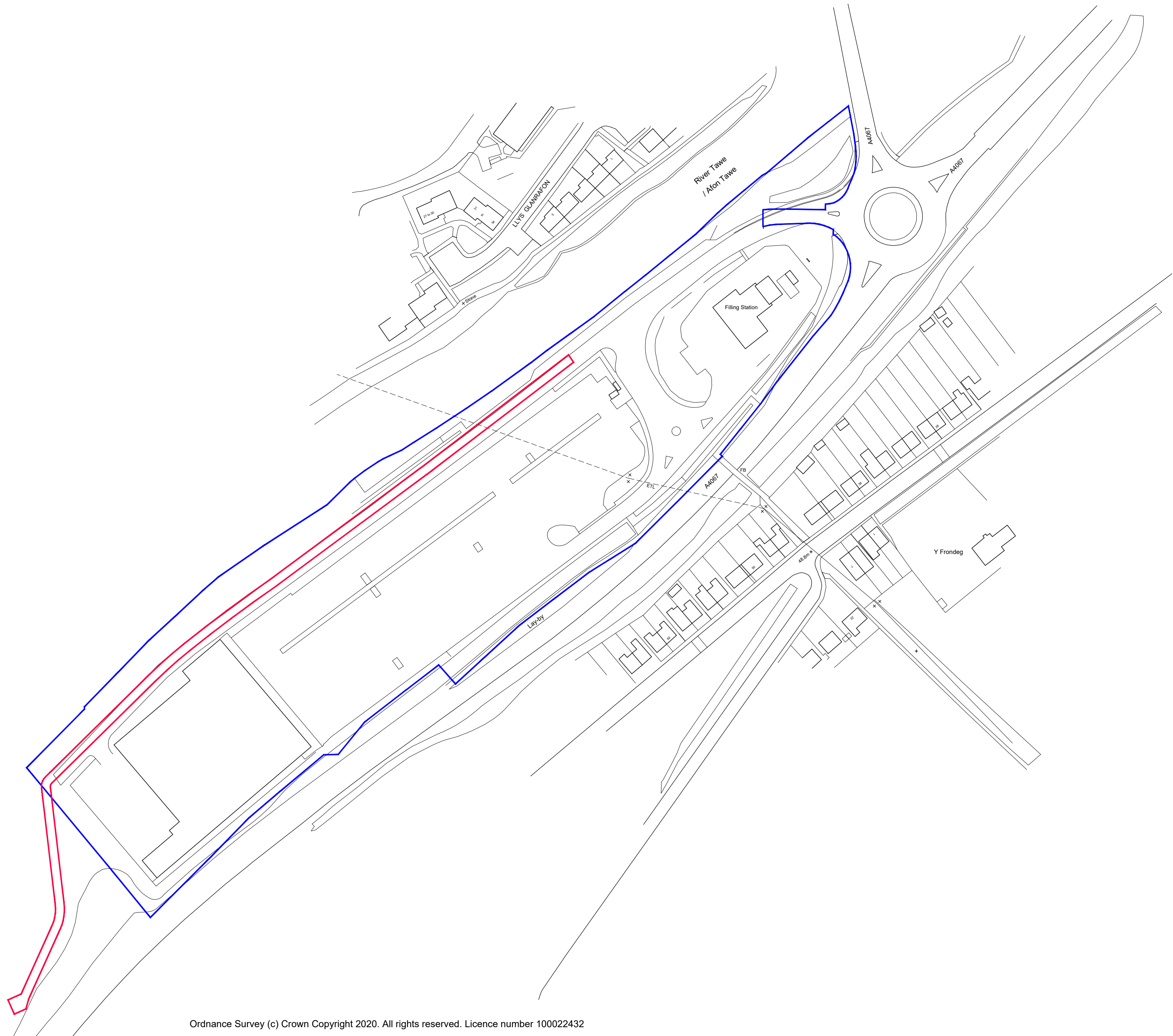
Appendix B Proposed Site Layout



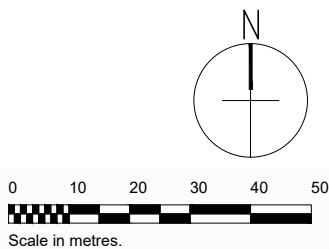
Notes:
All drawings to be read in conjunction with all other drawings as noted on issue sheet.

Application Boundary:

Other Land under Applicant Control
(as per Title Plan CYM333608):



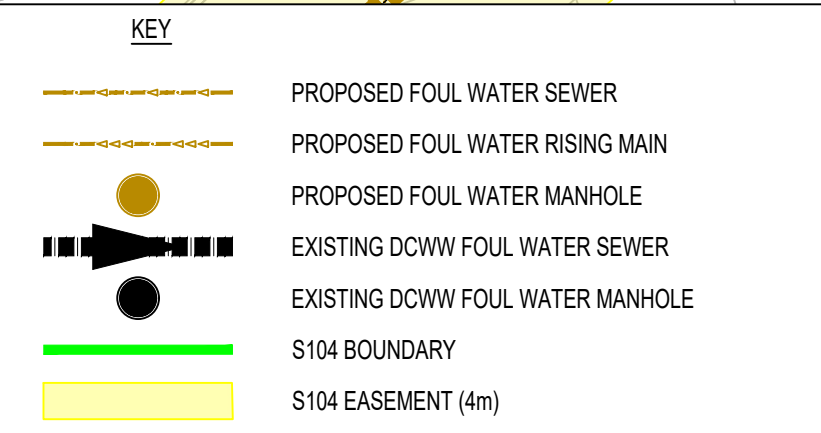
Ordnance Survey (c) Crown Copyright 2020. All rights reserved. Licence number 100022432



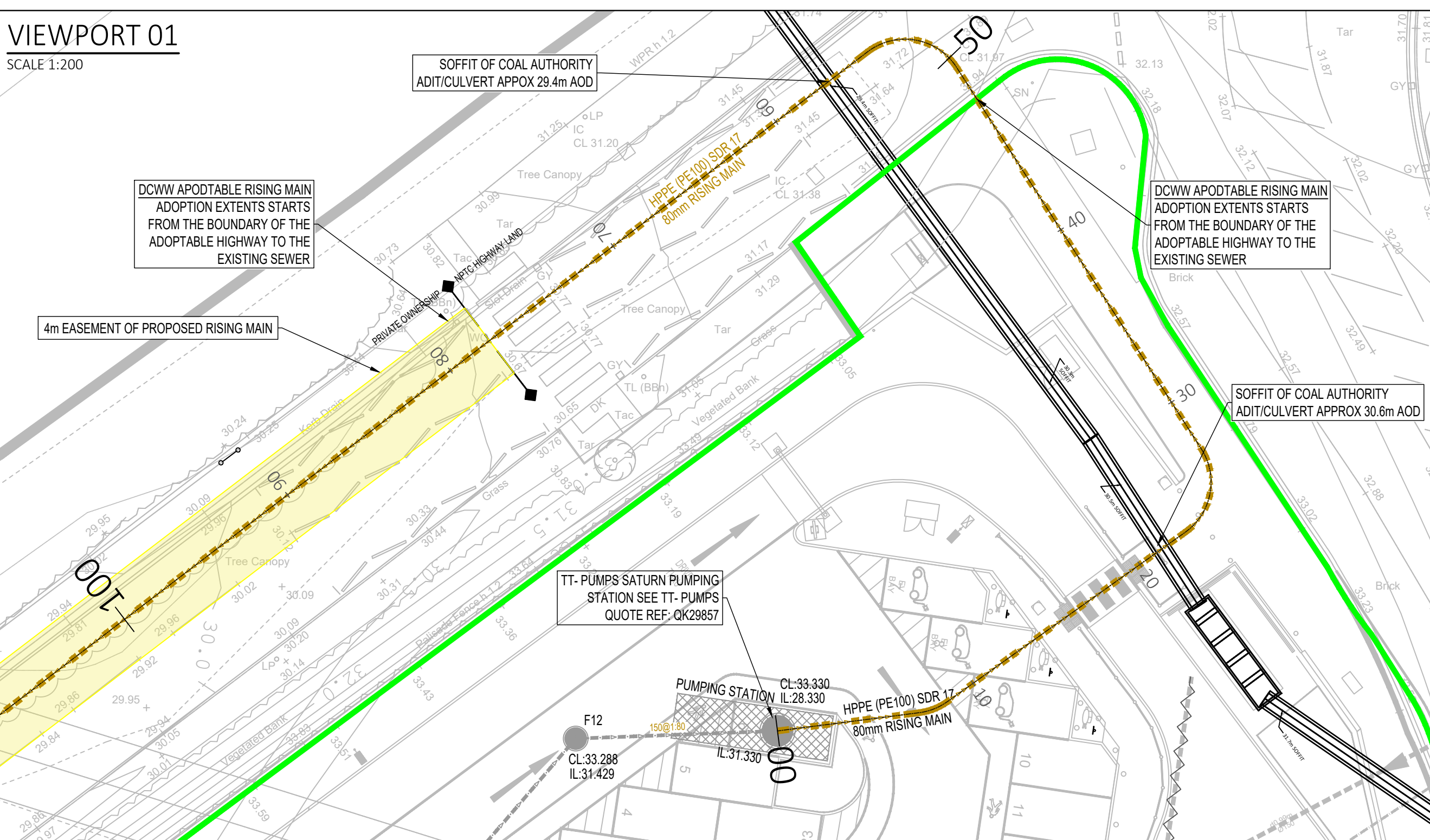
A		05.08.25	Application Boundary updated.		DM	-
REV.	DATE.	DRAWING REVISIONS.			BY.	CHECKED
GENERAL NOTES: All works are to be undertaken in accordance with the Building Regulations and the latest British Standards. All proprietary materials and products are to be used strictly in accordance with the manufacturer's recommendations. All dimensions to be checked on site prior to construction. All risks assessed to comply with the designer's responsibility under the Construction (Design Management) Regulations 2015.						
PROPOSED DEVELOPMENT AT					STORE No :-	
Tesco, Gwyn's Drift, Pontardawe						
SWANSEA SA8 3AZ					ST 1744	
ON BEHALF OF :-						
McDonald's Restaurants Ltd						
DRAWING TITLE :-						
Site Location Plan						
Proposed New Drainage						
DRAWN BY	CHECKED BY		DRAWING No.			
DM			6682-SA-1744-AL12 A			
SCALE & SIZE	DATE					
1:1250@A2	AUG 25					
 Scurr Architects 85 Southdown Road High Wycombe ALD 976 T: 01494 733990 email: scurr@scurr.co.uk www.scurr.co.uk architects ■ designers ■ project managers 						
© Copyright McDonald's Restaurants & Scurr Architects						

SCALE 1:100

SCALE 1:100

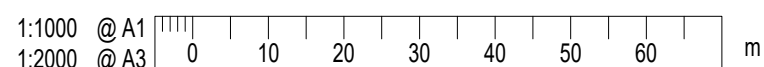


SCALE 1:200



- S104 DRAINAGE NOTES:

1. DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT PROJECT DRAWINGS
2. THIS PROJECT HAS BEEN DESIGNED TO COMPLY WITH SEWERS FOR ADOPTION 7TH EDITION STANDARDS. THE CONTRACTOR SHALL ENSURE THAT AN UP TO DATE COPY OF SEWERS FOR ADOPTION 7TH EDITION TOGETHER WITH ALL ITS CURRENT DCWW ADDENDUM DOCUMENTS ARE AVAILABLE ON SITE FOR COMPLIANCE.
3. WHEN SEWERS ARE LOCATED WITHIN A PUBLIC HIGHWAY, THE OUTSIDE OF THE SEWER SHOULD BE IN THE VEHICLE CARRIAGEWAY (NOT FOOTPATH) AND BE AT LEAST 1m AWAY FROM THE KERBLINE. THE OUTSIDE OF MANHOLE CONSTRUCTIONS SHOULD BE AT LEAST 0.5m AWAY FROM THE KERBLINE.
4. THE DEVELOPER MUST SELF-TEST AND CERTIFY THAT THE DESIGN CRITERIA, MATERIAL STANDARDS AND WORKMANSHIP SPECIFICATIONS FOR THE PROPOSED POTENTIALLY ADAPTABLE SEWERS ARE IN ACCORDANCE WITH THOSE SET OUT IN "SEWERS FOR ADOPTION - A DESIGN AND CONSTRUCTION GUIDE FOR DEVELOPERS" 7TH EDITION AND THE REQUIREMENTS OF THE STATUTORY UNDERTAKER DCWW AND CONFIRM THE SAME IN WRITING TO THE ADOPTION AUTHORITY.
5. DEPTH AND LOCATION OF FOUL DRAINAGE CONNECTION POINT TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF WORKS
6. Foul DRAINAGE OUTLETS FROM DWELLINGS TO BE CONFIRMED BY ARCHITECT PRIOR TO COMMENCEMENT OF WORKS
7. SURFACE WATER RUN-OFF LOCATIONS TO BE CONFIRMED BY ARCHITECT PRIOR TO COMMENCEMENT OF WORKS
8. ALL PRIVATE SWS DRAINS TO BE Ø150mm HDPE PIPEWORK LAID AT A MINIMUM FALL OF 1 in 100 UNLESS STATED.
9. ALL LINEAR DRAIN OUTLETS TO BE Ø100mm AT MINIMUM FALL OF 1 in 100 TO MAXIMUM FALL OF 1 in 10 UNLESS STATED.
10. ALL PRIVATE FWS DRAINS TO BE Ø100mm uPVC PIPEWORK LAID AT A MINIMUM SLOPE OF 1 in 40 UPSTREAM OF FIRST W.C. CONNECTION ON A RUN. AFTER CONNECTION OF 1st W.C. TO BE LAID AT MINIMUM SLOPE OF 1 in 80 UNLESS STATED.
11. PIPEWORK TO HAVE BED AND W.R.C.C. AS FOLLOWS:
 - UNDERNEATH PRIVATE DRIVEWAYS, PARKING AREAS WITH RESTRICTIONS TO PREVENT ACCESS BY VEHICLES IN EXCESS OF 7.5T AND PATHWAYS ADJACENT TO VEHICLE ACCESS TO BE:
 - COVER TO TOP OF PIPE > 0.9m - TYPE Z (PLASTIC)
 - COVER TO TOP OF PIPE < 0.9m - TYPE Z (CONCRETE SURROUND)
 - UNDERNEATH DOMESTIC GARDENS AND PATHWAYS WITH NO POSSIBILITY OF VEHICLE ACCESS TO BE:
 - COVER TO TOP OF PIPE > 0.35m - TYPE S or TYPE T (PLASTIC)
 - COVER TO TOP OF PIPE < 0.35m - TYPE Z (CONCRETE SURROUND)
12. ALL SIDE CONNECTIONS IN MAN-HOLES/INSPECTION CHAMBERS TO BE MADE AT HALF PIPE LEVEL.
13. CONNECTIONS MADE USING PRE-FORMED JOINTS ARE TO BE IN ACCORDANCE WITH FIGURE B.24 SEWERS FOR ADOPTION 7TH.
14. ADOPTED PIPES WHICH PASS BETWEEN OR CLOSE TO BUILDINGS ARE TO BE IN ACCORDANCE WITH FIGURES B.1 AND B.2 SEWERS FOR ADOPTION 7TH.
15. ALL 100mm DIAMETER 1404.1 BS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 1404.1, BS EN 1852 AND BS EN 12666-1 AND BE KITE MARKED. THERMOPLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598-1 AND BS EN 13598-2 AND BE KITE MARKED.
16. ALL PIPES AND FITTINGS FOR DIAMETER OF 100/110mm TO BE EITHER:
 - FLOLINE EN1401 DRAINAGE SYSTEM
 - HEFROWIT PLASTIDRAIN SYSTEM
 - MARLEY SOLID WALL UNDERGROUND DRAINAGE PIPE SYSTEM
 - OSMADRAIN BUILDING DRAINAGE SYSTEM
 - POLYPIPE EN1401-1 STANDARD UNDERGROUND DRAIN SYSTEM
 - OR SIMILAR APPROVED BY RELEVANT AUTHORITY AND/OR HYDROCK
17. ALL PIPES AND FITTINGS FOR DIAMETERS OF 150mm - 300mm TO BE EITHER:
 - MARLEY TWINWALL SYSTEM
 - UPONOR ULTRA-RIB SYSTEM
 - WAVIN OSMIA ULTRA-RIB SYSTEM
 - POLYPIPE CIVILS POLYSEWER TWINWALL SYSTEM
 - OR SIMILAR APPROVED BY RELEVANT AUTHORITY AND/OR HYDROCK
18. 3m MAXIMUM LENGTH P.V.C.PIPES INSTALLED BY BFF/PFG ACCREDITED CONTRACTOR - COPY OF CERTIFICATE REQUIRED.
19. USE OF DIFFERENT PIPE SUPPLIER OR SPECIFICATION MUST BE APPROVED BY STATUTORY UNDERTAKER - IF IN DOUBT ASK.
20. ALL PIPEWORK MANUFACTURED IN UNPLASTICIZED POLYVINYL CHLORIDE (PVC-U) P.V.C. DRAINAGE SYSTEM WITH FLEXIBLE JOINTS TO BS EN1401-1:1998, BS 4680 OR BS 5464. PVC-U PIPES INSTALLED BY BRITISH PLASTICATIONS - PLASTIC PIPE GROUP - MANUFACTURER APPROVED INSTALLERS. PLEASE PROVIDE COPY OF CERTIFICATION TO HYDROCK PRIOR TO LAYING ANY PIPEWORK.
21. PROPOSED ADAPTABLE SEWERS ARE ONLY PERMITTED TO HAVE OTHER SEVERELY CONFLICTING CONNECTIONS AND OTHER SERVICES LAID AT AN ANGLE OF BETWEEN 45° AND 90° ACROSS THE LINE WITH A VERTICAL CLEARANCE IN EXCESS OF 300mm.



REVISIONS

P04	Notes amended	08/07/25	IMH	IMH RB
P03	Route amended	02/07/25	IMH	IMH RB
P02	Updated following further Topo	08/01/25	IMH	CDJ RB
P01	First Issue	21/11/23	HV	JH RB
Rev.	Revision Notes	Date	Drawn By	Checked Approved

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LIENT

MCDONALDS RESTAURANTS LTD

PROJECT

MCDONALDS PONTARDAWE

TITLE

SECTION 104

FOUL DRAINAGE LAYOUT

HYDROCK PROJECT NO.

C-15297

SCALE @ A1

1:1 1000

STATUS DESCRIPTION

SUITABLE FOR REVIEW & COMMENT

STATUS

S3

DRAWING NO.

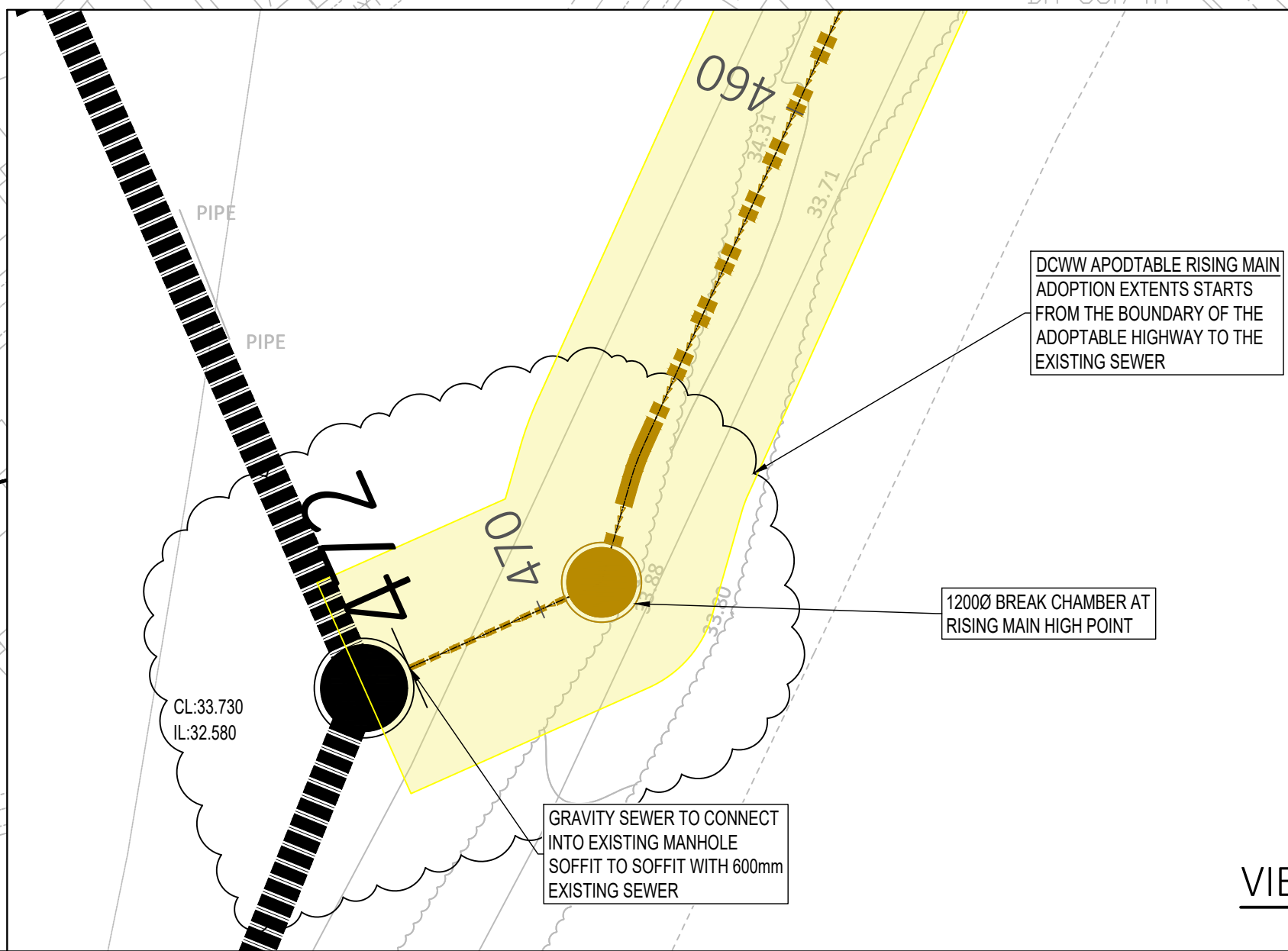
PNT-HYD-XX-XX-DR-C-3011

REVISION

P04

VIEWPORT 03

SCALE 1:100



Appendix C DCWW Network Mapping





LEGEND(Representative of most common features)

	Foul chamber		Outfall
	Surface water chamber		Lamphole
	Combined chamber		Storm Overflow
	Combined sewer overflow		Rising main
	Special purpose chamber		Gravity sewer
	Private sewer		Private sewer subject to Sect. 104 adoption agreement
	Private sewer Transfer		Lateral Drain
	Inspection Chamber		

Notes:

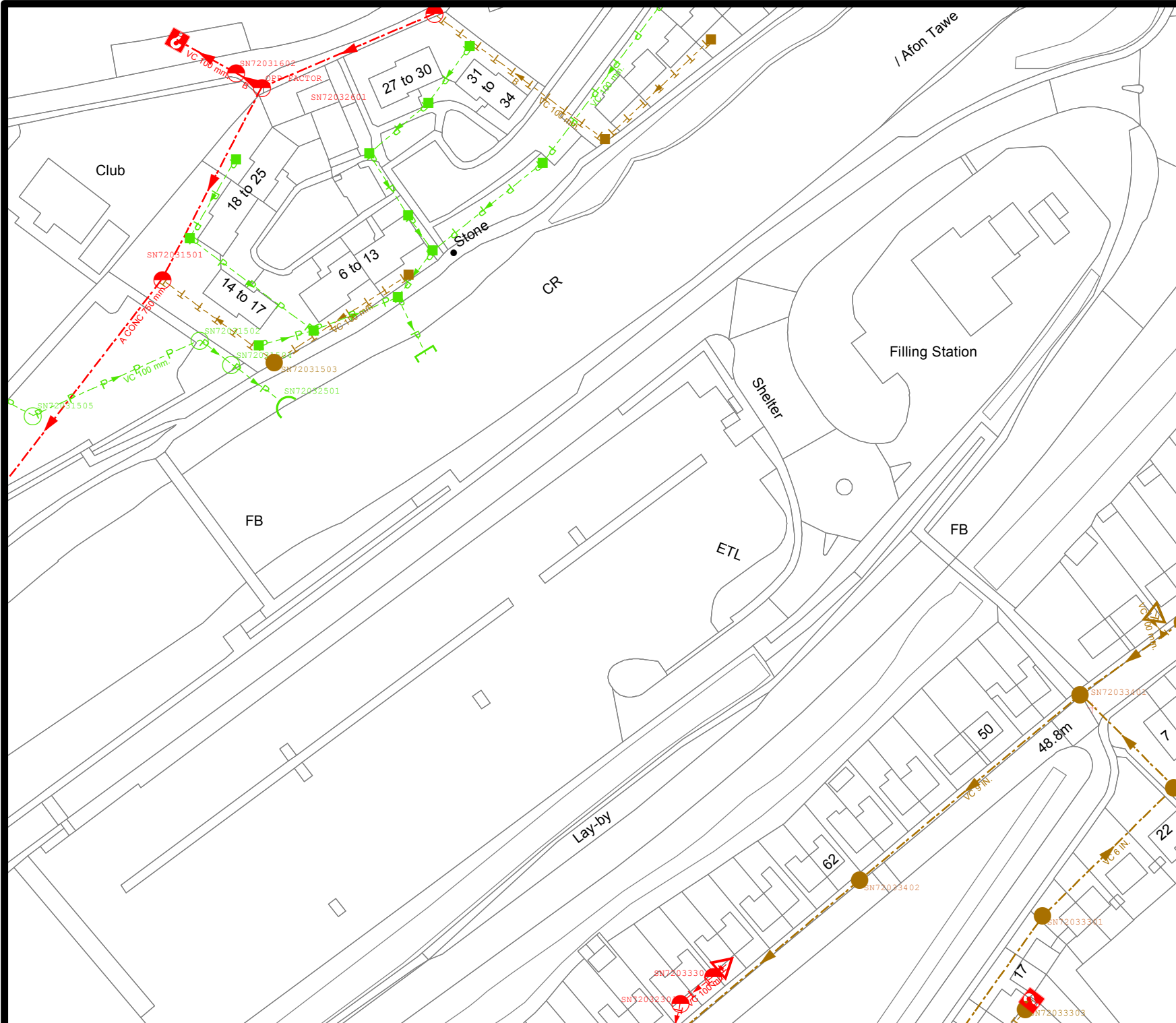
Whilst every reasonable effort has been taken to correctly record the pipe material of DCWW assets, there is a possibility that in some cases pipe material (other than Asbestos Cement or Pitch Fibre) may be found to be asbestos cement (AC) or Pitch Fibre (PF). It is therefore advisable that the possible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

Dŵr Cymru Cylgorddy (the Company) gives this information as to the position of its underground apparatus by way of general guidance only and on the understanding that it is based on the best information available and is not warranted as to its correctness in the event of excavations or other works made in the vicinity of the company's apparatus. The error of locating apparatus liable carrying out any excavations made entirely on your. The information which is supplied by the Company is done so in accordance with statutory requirements of sections 104 and 105 of the Water Industry Act 1991 which is 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 include the existence of water mains, service pipes, drains, lateral drains or disposal pipes and any associated apparatus laid before 1 September 1990, or if they are, the position thereof and their position may not be accurate. It must be understood that the furnishing of this information is entirely without prejudice to the provisions of the New Roads and Street Works Act 1991 and the Company's rights to be compensated for any damage to be anticipated.

**EXACT LOCATIONS OF ALL APPARATUS
TO BE DETERMINED ON SITE.**

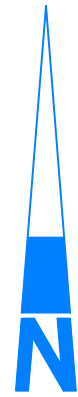
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Map Ref: 272278,203499
Map scale: 1:1250
Printed by: Emma John
Printed on: 07 Jul 2021



Appendix D Utilities and CCTV Survey





Shelter

203525 N

203500 N

203475 N

272275 E

27300 E

272325 E

- Notes :
- GRID AND LEVELS BASED ON OSGB36 NATIONAL DATUM, DERIVED FROM THE NATIONAL GPS NETWORK.
 - DRAINAGE INFORMATION HAS BEEN DETERMINED WITHOUT MAN ENTRY INTO CHAMBERS AND WHILST EVERY EFFORT HAS BEEN MADE TO CORRECTLY IDENTIFY THIS INFORMATION, IT SHOULD ALWAYS BE CHECKED IN AREAS THAT ARE CRITICAL TO THE FUTURE PROPOSAL.
 - ALL SEWERS ARE PRESUMED TO BE STRAIGHT BETWEEN CHAMBERS UNLESS PROVEN THROUGH TRACKING TECHNIQUES.
 - TREE AND HEDGE SPECIES HAVE BEEN IDENTIFIED AS ACCURATELY AS POSSIBLE BUT SHOULD BE CROSS CHECKED IN CRITICAL AREAS.

UNDERGROUND SERVICES

1) Although every effort has been made to trace underground services using radio detection, no guarantee can be given that all utilities have been found. Due to their non-conductivity it may not be possible to trace certain types of plastic service pipes, e.g. Gas & Water.

Service trial holes are recommended prior to excavation.

2) In the absence of evidence to the contrary the route of confirmed manhole connections are assumed to be direct and straight.

3) Underground service information should be read in conjunction with latest statutory drawings.

4) Please note that it is illegal to fit telecommunications covers in public areas. Their routes can be ascertained by contacting the relevant statutory authorities. Any broken or damaged manholes were not fitted by Solum Surveying Ltd. It is not possible to trace plastic pipes by radio detection e.g. Gas/Water, fibre optic cables or pipes of less than 100mm in diameter. The electronic detection of power will apply to live metallic penetrations that we can induce signal to.

As an alternative GPR techniques can be employed at additional cost in attempt to locate services not detectable by radio detection. All tracing is subject to retrieval of cover signs.

GPR Reflections / Ground Radar

The material surrounding and particularly above buried services can affect whether the services can be located using GPR. Reinforced concrete, buried metallic objects, the presence of moisture in clay, and changes in the material composition can lead to poor data resolution.

As we have no information with respect to the material overlying ANY services the GPR method can only give a guaranteed accuracy of 50% Depth results using GPR are typically accurate to within 10% with a horizontal accuracy of ±20mm.

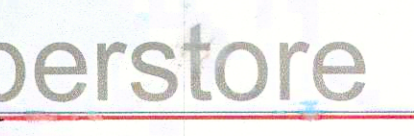
These figures will vary as the velocity of the ground is assumed at 80m/s. The results of the GPR survey should be treated with caution as there is no guarantee that any service shown actually exists, only a possibility that something can be seen on the records.

- A number of technologies were used to obtain the information shown on this drawing. Varying ground conditions can affect the performance of these systems, therefore 100% detection is not guaranteed. Always exercise caution when excavating.
- Where electric and metallic services are illustrated on this drawing as a single utility line, these may represent multiple pipe/cables.
- Possible radar images show the position of suspected underground linear features. These features have produced an inconsistent response to the radar.
- It is not always possible to differentiate between construction features and pipes. It is therefore possible that some of the features shown are not pipes or cables.
- Every care has been taken to ensure the correct identification of the utility types, however these should be independently verified prior to use in any design building works.
- All pipe diameters and levels are assumed to be correct, however due to non entry to inspection chambers, these should be verified before any works commence.
- Depth shown have been measured using radio frequency locators and are to the center of the pipe/cables.
- All depths are shown in millimetres.
- Solum Surveying Ltd cannot accept any responsibility for any damage to computer systems which may result from viruses which may be contained in the data provided.
- Scale indicated is only applicable when plotted at sheet size.

KEY			
BT	BT B1 (PAS128)	BT B2 (PAS128)	BT B3 (PAS128)
BT B1 (PAS128)	BT B2 (PAS128)	BT B3 (PAS128)	BT B4 (PAS128)
BT B2 (PAS128)	BT B3 (PAS128)	BT B4 (PAS128)	BT B5 (PAS128)
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ABBREVIATIONS

AC Acoustic Connection	RE Ridding Eye
AR Assumed Route	RWP Rain Water Pipe
BD Backdrop	SA Survey Abandoned
BL Base Level	SP Spill Pipe
CL Cover Level	SS Soil Stack
CP Catchpit	SUP Soil Vent Pipe
DCI Drainage Channel	TTR Taken from Records
DP Down Pipe	UTL Unable to Locate
GY Gully	UTR Unable to Raise
Id Id	UTS Unable to Survey
IL Invert Level	UTTF Unable to Trace Further
NFI No Further Information	WL Water Level

[illegible]

AC Assembled Connection	PTG Pipe To Ground
AR Accessory Road	PTS Pipe To Surface
BD Backdrop	SR Pipe Riser
BL Base Level	SL Soil Level
CL Cover Level	SP Soil Pipe
CP Catchpit	SOF Soft Soil Height
DCH Drainage Channel	TFFI Takers From Records
EF Electricity Pole	TOT Top Of Tank
ER Earth Road	TOP Top Of Pipe
FH Fire Hydrant	TL Traffic Light
GV Gas Valve	TP Telegraph Pole
GU Gully	UTL Unable to Locate
IG Depth	UTR Unable to Raise
I Invert Level	UTS Unable to Survey
IC Inspection Cover	UTT Unable to Trace
LP Lamp Post	UTT Unable to Trace Further
MM Manhole	WV Stop Valve
RE Racking Entry	WV Stop Vent Pipe
RWP Rain Water Pipe	WW Vent Pipe
OSA Off Survey Area	WL Water Level

Quality	Description
BA	Service verified in an open excavation or inside an inspection chamber
B1	Horizontal and vertical location only using two geophysical techniques
B2	Horizontal and vertical location only using one geophysical technique
B3	Horizontal location only using one geophysical technique. No depth
B4	Service is expected to exist, assumed or taken from records

Drawing Revision		
No	Date	Description
R0		
R1		
R2		
R3		
R4		

Site Utility Notes :

- Water services onsite routes not confirmed, no signals achieved via GPR.
- Mains Gas TFR unable to achieve signal via GPR
- Some drainage systems could not be surveyed due to either confined space entry requirements or drainage systems blocked, collapsed or flooded.
- Telecoms could not be plotted from the Fuel station TFR
- Fuel lines / Vent Pipes plotted as an assumed route, no readable signal could be obtained to accurately plot the below surface plant.
- Unable to locate all vehicles either may be obscured manholes, valves etc during survey.
- Unable to locate all tanks in frontcourt area. Refer to as built plans by installer.

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Tesco Gwyns Drift
Alltwen
Pontardawe

Utility & CCTV Survey - Sheet 2

Scale 1:200	Sheet Size: A0	Date Of Survey: 04/02/2022	ALSO SEE DRAWING
Project Number: 7290	Rev: R0	Surveyed By: GD/AS/MG/ST/AF	CHECKED BY: MP/L/E

- ### ABBREVIATIONS
- | | |
|----------------------------|------------------------------|
| AC Acoustic Corrosion | RE Rodding Eye |
| AR Assumed Route | RWP Rain Water Pipe |
| BD Backdrop | SA Survey Abandoned |
| BL Base Level | SP Soil Pipe |
| CL Cover Level | SS Soil Stack |
| CP Catchpit | SVP Soil Vent Pipe |
| DCH Drainage Channel | TFR Taken From Records |
| DP Down Pipe | UTL Unable to Locate |
| GY Gully | UTR Unable to Raise |
| Id Depth | UTS Unable to Survey |
| IL Invert Level | UTTF Unable to Trace Further |
| NFI No Further Information | WL Water Level |

TSA Standards - "Even an appropriate and professionally executed survey may not be able to achieve a 100% detection rate".

[illegible]

AC Accoustic Connection	PTG Pipe To Ground
AR Assumed Route	PTG Pipes To Surface
BD Backdrop	RF Radio Frequency
BL Base Level	SB Soil Seal
CL Cover Level	SDF Silt Depth
CP Canopy	SF Soil Height
COCH Drainage Channel	TFR Taken From Records
EP Electricity Pipe	TO Top Of Tank
ER Earth Road	TOP Top Of Pipe
FI Fire Hydrant	TL Traffic Light
GV Gas Valve	TP Telegraph Pole
GU Gully	UTL Unable To Locate
HL Depth	UTL Unable To Raise
IL Invert Level	UTL Unable To Survey
IC Inspection Cover	UTL Unable To Trace
LP Lamp Post	UTL Unable To Trace Further
LM Manhole	SV Stop Valve
LI Lined	SWP SW Water Pipe
RE Roading Entry	VP Vertical Pipe
RWP Rain Water Pipe	WV Waste Water
OSA Off Survey Area	

Drawing Revision		
No	Date	Description
R0		
R1		
R2		
R3		
R4		

- Water services onsite routes not confirmed, no signals achieved via GPR.
- Mains Gas TFR unable to achieve signal via GPR
- Some drainage systems could not be surveyed due to either confined space entry requirement or drainage systems blocked, collapsed or flooded.
- Telecoms could not be plotted from the fuel station TFR
- Fuel lines / Vent Pipes system plotted as an assumed route, no readable signal could be obtained to accurately plot the below surface plant.
- Onsite obstructions, vehicles etc may of obscured manholes, valves etc during survey.
- Unable to locate fuel tanks in forecourt area. Refer to as built plans by installer.

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Tesco Gwyns Drift
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Pontardawe

Utility & CCTV Survey - Sheet 3

Scale: 1:200	Sheet Size: A0	Date Of Survey: 04/02/2022	ALSO SEE DRAWING:
Project Number: 7290	Rev: R0	Surveyed By: GD/AS/MG/ST/AF	CHECKED BY: MP/LF

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