
**ALDI STORE - SUSSEX HOUSE, PERRYMOUNT ROAD,
HAYWARDS HEATH**

DRAINAGE STRATEGY

CLIENT
ALDI STORES LTD



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P01	14.11.24	Draft issue	CAP	AST	RAG
P02	26.11.24	Planning issue	CAP	AST	RAG
P03	22.05.25	Updated to address LLFA comments	WAH	AST	RAG

1. INTRODUCTION

This drainage strategy has been prepared to support a planning application for the proposed retail development comprising a new food store at the Sussex House site on Perrymount Road, Haywards Heath, as requested by ALDI Stores Ltd. This drainage strategy has been prepared in line with the relevant legislation and guidance, as detailed below.

The Flood and Water Management Act received royal assent in April 2010. Schedule 3 of the Act proposed to establish a Sustainable Drainage System (SuDS) Approving Body (SAB), however this was not enacted in England, instead with the National Planning Policy Framework being amended to require (where appropriate) the delivery of SuDS for major developments.

Statutory Instrument 2006 No. 2375: *The Town and Country Planning (General Development Procedure) (Amendment) (No. 2) (England) Order 2006*, which came into force on 1st October 2006, made the Environment Agency (EA) a statutory consultee for planning applications where drainage and flood risk are key issues.

The Government laid a statutory instrument making the Lead Local Flood Authority (LLFA) a statutory consultee, and overseer of drainage matters for major planning applications, by adding the consultation requirement to Schedule 4 of the Development Management Procedure Order. This came into effect from 15 April 2015.

As such, both the Local Planning Authority (LPA) and LLFA in consultation are required to approve drainage schemes at planning stage, either during determination or by condition. In England, this is generally undertaken in line with published non-statutory standards (National Standards for Sustainable Drainage) as published by Defra, however individual LPAs and LLFAs are free to implement their own standards and requirements.

The LLFA for the proposed site is West Sussex County Council (WSCC). WSCC set out their requirements in their document West Sussex LLFA Policy for the Management of Surface Water dated November 2018. WSCC also provide guidance relating to local flood risk in their Local Flood Risk Management Strategy (LFRMS) dated May 2015.

The objective of this report is to develop and assess drainage solutions for the proposed development, such that these meet the requirements of WSCC guidance and the NPPF. This report has been developed using current best practice, the aforementioned local standards and guidance, the Non-Statutory Technical Standards for Sustainable Drainage: Practice Guidance, CIRIA C753 The SuDS Manual and site-specific requirements.

2. DEVELOPMENT SITE

2.1. Site Location

The site is located at the northern end of Perrymount Road (B2028) in Haywards Heath, West Sussex. The nearest postcode to the site is RH16 1DN or grid reference TQ 33233, 24600. The site is known as Sussex House, an existing building with associated car parking and includes Commercial House, and 54-56 Perrymount Road. A location plan is included in Appendix A.

2.2. Development Proposals

As shown on the proposed site plan included in Appendix B, an ALDI retail food store is proposed. The development comprises a single building, housing the retail area, warehouse, staff welfare facilities, with external areas to provide a service ramp, customer parking and landscaping. The existing vehicular entrance to the site will be maintained.

2.3. Existing Site Features

The total application site area is approximately 7,977m², or 0.798ha. The site is primarily occupied by Sussex House and its car park which wraps around the sides and rear of the building. In addition, two further retail / commercial units are located along the site frontage with Perrymount Road. All three existing buildings will be demolished to facilitate the proposals. Sussex House and its car park are generally raised above Perrymount Road such that existing ground levels at Perrymount Road are in the region of 54.00mAOD whilst the finished floor level of Sussex House is 56.74mAOD. The parking to the rear of Sussex House generally then falls back

down to the north-eastern corner of the site where ground levels are at a minimum of 53.58mAOD. A topographic survey of the site was carried out by Berry Geomatics Ltd in September 2024 and is included in Appendix C.

The closest watercourse is the Scrase Stream which is an EA main river and located approximately 450 metres to the north and north-east of the site. The Scrase Stream flows in an easterly direction, joining the River Ouse to the east of Haywards Heath.

3. FLOOD RISK

3.1. Flood Risk Features and Suitability for Development

Although West Sussex has a significant length of coastline, Haywards Heath lies a significant distance inland and significant elevation above the coast, and is therefore not at risk of tidal flooding. The site may be at elevated risk of flooding from a number of other sources, which are discussed below.

3.2. Fluvial and Tidal Flooding

According to the Environment Agency's (EA) Flood Map for Planning, the site is wholly located within flood zone 1, the lowest risk area in terms of fluvial and tidal flooding, as are all local access and egress routes. As such, and as the site area is less than 1ha, a full flood risk assessment (FRA) is not required. An extract from the Flood Map for Planning is included in Appendix D.

3.3. Historic Flood Data

Historic flood locations can be useful in indicating flood risk as if flooding has occurred in the past it could occur in similar locations and from similar sources in the future. The LFMRS does not identify Haywards Heath as an area that has suffered from an event flooding more than 100 properties in the past, and given the distance of the site from the closest Flood Zone 2 (>300m), it is apparent that it would not have been affected by any less severe events. Relevant extracts from the LFMRS are included in appendix D.

3.4. Surface Water Flooding

Surface water flooding can occur when rainfall intensities overwhelm the normal drainage processes of an area, causing water to flow or pond on the surface. Surface water flood risk mapping is provided by EA long term flood risk service, with mapping being generated from direct rainfall modelling. According to this, the site is classified as very low risk, describing areas with a chance of flooding in each year of less than 0.1%.

Perrymount Road is shown to be classified as a medium and low risk whilst a potential overland flow route is indicated passing alongside the site's south-eastern boundary through The Heath play area, with no flows originating off-site crossing the site boundary. External ground levels within the car park will be designed to route any pooling water away from the building but to remain on site. Whilst some local streets to the north are shown to be at high risk of surface flooding, an egress route via Perrymount Road towards the south will be maintained in all but the most extreme flood events. An extract from the EA's flood mapping is included in appendix D.

3.5. Groundwater

Groundwater flooding can occur when sub-surface water tables rise above the surface levels of an area, causing groundwater to emerge at the surface. Generally, groundwater flooding affects low-lying areas with relatively permeable geology, capable of storing sufficient quantities of groundwater while also allowing water to move through it at a reasonable rate.

Geological mapping indicates the site is underlain by the Upper Tunbridge Wells Sand member comprising interbedded sandstone and siltstone. These are relatively impermeable and unproductive strata with regards to groundwater storage and transportation. As such the risk of groundwater flooding is considered to be low.

3.6. Canals, Reservoirs and Water Retaining Infrastructure

It is important to consider flood risk to the development from water retaining infrastructure, such as reservoirs and canals, as in the event of a breach of these structures, large volumes of water could be released within a short period of time, which can prove extremely hazardous in areas through which this water would flow.

The EA provide mapping for reservoir flood risk, showing the nearest reservoir being the Ardingly Reservoir approximately 4 kilometres to the north of Haywards Heath. The EA mapping shows that the site is located beyond the maximum extent of flooding for any such breach event in nearby reservoirs. Additionally, no canals are located within the vicinity of the site.

3.7. Sewer Flooding

Flooding can be caused by the surcharging of the sewerage system, either due to excess rainwater in storm events, or due to blockages. In these cases, excess flows typically escape from the system at manholes, before flowing overland.

Haywards Heath is not identified in the LFMRS as an area that has been known to suffer from sewer flooding in the past, and no other evidence has been found of recorded sewer flooding within the vicinity. Foul and storm drainage networks are present across and around the site which are discussed in further detail in section 5.1. However, much of the existing drainage will be removed to facilitate the development. The remaining drainage is predominantly located within the roads around the development or sufficiently remote from the proposed building to not pose a flood risk. As such the site is not considered to be at risk from sewer flooding. Relevant extracts from the LFMRS are included in appendix D.

3.8. Flood risk mitigation

Since the proposed development is considered to be at low risk of flooding from all of the above sources, no specific flood risk mitigation measures are proposed. Generally, the floor level of the proposed building should be set no lower than existing ground levels.

4. CLIMATE CHANGE

4.1. Climate Change Allowances and Guidance

In order to produce a sustainable drainage system throughout the lifespan of the development, it is important to make allowances for climate change. Climate change is expected to influence peak tidal sea levels, maximum wave heights, peak river flows and rainfall intensity. Guidelines on how to make allowance for these are published by the Environment Agency and Defra. Of these, the most relevant to the design of the proposed drainage systems is rainfall intensity, while the others are more relevant to flood risk.

4.2. Increase in Flood Risk Due to Climate Change

Since the site is sufficiently remote from the coastline to not be at risk from tidal flooding, increases in sea levels and wave heights are not considered to increase the flood risk to the proposed development over its lifespan.

Peak river flows are expected to increase with time, which is likely to relatively raise fluvial flood levels for a flood event with given probability. Since the site is wholly located in flood zone 1, the lowest risk area, and is a significant distance from the nearest area classified as flood zone 3, it is not considered likely that increases in peak river flow will be sufficient to significantly change the fluvial flood risk to the proposed development.

4.3. Peak Rainfall Intensity Allowances

Appropriate peak rainfall increase allowances for the relevant have been extracted from the EA's online guidance and are reproduced below. At the request of the LLFA, the Upper End allowance for the 2070s epoch will conservatively be adopted. Therefore, the design of the drainage system will be checked with a 40% increase in peak rainfall intensity on the 1 in 30-year storm event and a 45% increase in peak rainfall intensity on the 1 in 100-year storm event as an allowance for climate change to assess the potential range of impact.

Adur and Ouse Management Catchment peak rainfall allowances		
3.3% annual exceedance rainfall event		
Epoch	Central allowance	Upper end allowance
2050s	20%	35%
2070s	20%	40%

1% annual exceedance rainfall event		
Epoch	Central allowance	Upper end allowance
2050s	20%	45%
2070s	25%	45%

*Use '2050s' for development with a lifetime up to 2060 and use the 2070s epoch for development with a lifetime between 2061 and 2125.

This map contains information generated by Met Office Hadley Centre (2019): UKCP Local Projections on a 5km grid over the UK for 1980-2080. Centre for Environmental Data Analysis, 2022

Figure 1: - Extract from the Environment Agency's online climate change allowances data

5. MANAGING SURFACE WATER

5.1. Existing Surface Water Drainage

The existing car park to the west (front) of Sussex House is positively drained by a series of drainage channels and gullies conveying surface water to an underground surface water drainage system. This system generally falls in a westerly direction to an unattenuated connection to the public storm water sewer within Perrymount Road. Storm water collected from the roofs of Sussex House and the two further retail units is also connected into this system.

The parking areas to the sides and rear of Sussex House are also positively drained by channels and gullies but these areas discharge to three manhole soakaways located near the site's northern, north-eastern and south-eastern boundaries. The existing drainage system is shown on the topographic survey in appendix C.

The Southern Water sewer asset map is included in appendix E and confirms that the existing public surface water sewer within Perrymount Road is 300mm in diameter and falls in a northerly direction.

5.2. Existing Foul Water Drainage

In addition, the existing buildings are served by two foul connections to the existing public foul sewer within Perrymount Road. The Southern Water asset map confirms that the foul sewer is 225mm in diameter and falls in a northerly direction.

5.3. Proposed Discharge Point

As part of the proposed development, the surface water drainage arrangement has been reviewed. This review, based on the SuDS management train, assessed the different surface water management techniques that can avoid, reduce or delay the surface water discharge from site. The techniques considered include rainwater re-use, followed by discharge of surface water to: ground via soakaways and infiltration features, watercourses and public sewers, in that order of preference.

(a) Surface water runoff is collected for re-use

Rainwater re-use is not feasible for the proposed store as non-potable water demand is very low. Refer to calculations in appendix F.

(b) Soakaways and Infiltration Features

As mentioned in section 5.1, part of the existing site discharges to manhole soakaways suggesting that infiltration features could provide a viable option for the disposal of storm water. Infiltration testing was undertaken at the site by Enzygo in October 2023 as part of a previous development proposal for residential use. The infiltration report is included in appendix F. Infiltration testing was undertaken in each of the three manhole soakaways discussed in section 5.1 of this report. The results of the testing is summarised in Table 1 below.

Reference	Infiltration rate (m/s)	Depth of test (mbgl)	Relative level (mAOD)
MH06 (south-east)	4.79×10^{-5}	4	51.608
MH07 (north-east)	4.76×10^{-5}	4	50.365
MH08 (north)	5.56×10^{-5}	4	52.302

Table 1: - Summary of infiltration testing undertaken by Enzygo in 2023.

The infiltration rates recorded therefore suggest that disposal of surface water to the ground is a viable method.

A Phase II Geotechnical Site Investigation has also been undertaken by Earth Environmental & Geotechnical Ltd, Report Ref. R3971/24, dated September. A number of window sample logs were recorded, which typically indicate a shallow layer of made ground over sand, which is also conducive to the use of infiltration features. A single Cable Percussion Borehole to a depth of 7.5m below ground level, or 46.8m AOD, did not encounter groundwater. A soakaway tank with an invert level of 51.0m AOD would therefore be considerably higher than the local groundwater table. Relevant extracts from the investigation report are also included in appendix F.

5.4. Surface Water Drainage Strategy

The proposed development will be positively drained through drainage channels and gullies for the external areas and rainwater downpipes for the food store roof. The surface water will be conveyed in an underground network to the north-west corner of the site to discharge to the underlying strata. The proposed drainage layout is included in appendix F.

Since there is insufficient space within the proposed site boundary for any significant above ground features (e.g. infiltration basins), attenuation storage is proposed to be provided by a below ground geocellular soakaway. In addition, permeable paving construction is proposed for the majority of the parking bays to the south of the store.

Each infiltration rate recorded was on the first fill of the manhole and as such further infiltration testing will be undertaken at the proposed location and invert level of the geocellular soakaway. The infiltration testing undertaken to date was also at significant depth therefore shallow infiltration testing will also be undertaken to confirm that the permeable paving will also soakaway adequately. Should shallow infiltration potential be found to be poorer or not exist, a fin drain collection will be installed and a connection to the storm drainage made to discharge the water generated by the bays to the geocellular soakaway. Drainage serving the roof and car parking areas has been separated such that the car parking areas can pass through a class 1 bypass interceptor.

The proposed drainage system has been modelled in Infodrainage software with the resultant calculations shown in appendix F. The Infodrainage calculations show that a tank providing approximately 360m³ of storage volume is required to prevent flooding during the 1 in 100 year storm event (including 45% climate change allowance).

For extreme events beyond the 1 in 100+CC event, or in the event of drainage system failure, the levels of the site are such that ponding will initially occur at the gullies at the site entrance, and will immediately overflow on to Pennymount Road to the west before encroaching on the car park or the building. Refer to Exceedance Flow sketch in appendix F

5.5. Water Quality and Pollution Mitigation

The site has been considered as three separate sub-catchments based on land use and pollution mitigation features and each has been individually assessed using the Simple Index Approach. Refer to appendix F for SIA results for each catchment, which are also summarised as follows:

Catchment 1 – store roof

The Aldi roof, being coated with inert materials, is classified as a low pollution hazard level. The roof will be drained via a series of downpipes at the rear of the building run-off and run-off will be conveyed to the soakway where the underlying soil will inherently provide sufficient pollution mitigation.

Catchment 2 – car park via direct infiltration permeable paving

Subject to confirmatory shallow infiltration testing, a number of parking bays surfaced in permeable block paving (PBP) with permeable sub base which is designed to filter and treat water before infiltrating directly to the ground, with the soil beneath also providing a measure of groundwater protection.

Catchments 3 – car park and access via proprietary interceptor

For trafficked areas not served by permeable paving, run-off will be directed to the soakaway via a proprietary fuel and oil separator. A SPEL 'ESR' type unit is proposed, which has achieved validated mitigation indices that may be used in the Simple Index Approach; refer to data sheets in appendix F.

During construction, it is anticipated that water will be disposed of to the ground via temporary infiltration features with suitable pollution mitigation measures including for example settlement tanks and silt bags.

5.6. Design and Construction of the Surface Water Drainage System

The drainage system shall be designed and specified to ensure structural integrity is maintained under anticipated loading conditions over the design life of the development.

6. FOUL DRAINAGE

Foul demand from the development will be generated from the welfare area in the store. As mentioned in 5.2, two existing foul connections are present from site. It is proposed to utilise the more northerly existing connection as shown on the drainage layout in appendix F. A gravity connection from the building to the existing connection point can be achieved. A CCTV of the drainage has confirmed that the existing foul drain connects to the public main within Perrymount Road as shown on the drainage layout. In terms of foul load, the development proposals are likely to be a reduction when compared with the existing site.

7. OPERATIONS AND MAINTENANCE

7.1. Surface & Foul Water Networks

The proposed surface and foul water drainage networks within the development site will remain private under the ownership and responsibility of ALDI Stores Ltd.

Maintenance of the private networks within the site will be undertaken by ALDI Stores Ltd. The finalised maintenance schedule will be dependent on the precise details of the network and treatment stages; however, a typical strategy is included in Appendix G.

8. SUMMARY AND CONCLUSIONS

8.1. Summary

The site is designated wholly as flood zone 1, and is considered to be at low risk of flooding from all sources. Climate change is not expected to significantly worsen flood risk to the proposed development. A 45% increase in rainfall intensity has been allowed for in the design of the surface water drainage system.

Soakaways are considered to be suitable for the disposal of surface water runoff from the site. As such it is proposed to discharge surface water to the underlying strata via a geocellular storage tank beneath the car park. This tank has been sized to prevent flooding for all rainfall events up to and including those with a 1 in 100-year return period including a 45% increase in rainfall intensity as an allowance for climate change.

Foul demand from the proposed development will be discharged to the existing Southern Water sewerage network, utilising an existing connection to the main in Perrymount Road.

All on-site drainage will remain private and under the operations and maintenance responsibility of ALDI Stores Ltd.

8.2. Conclusions

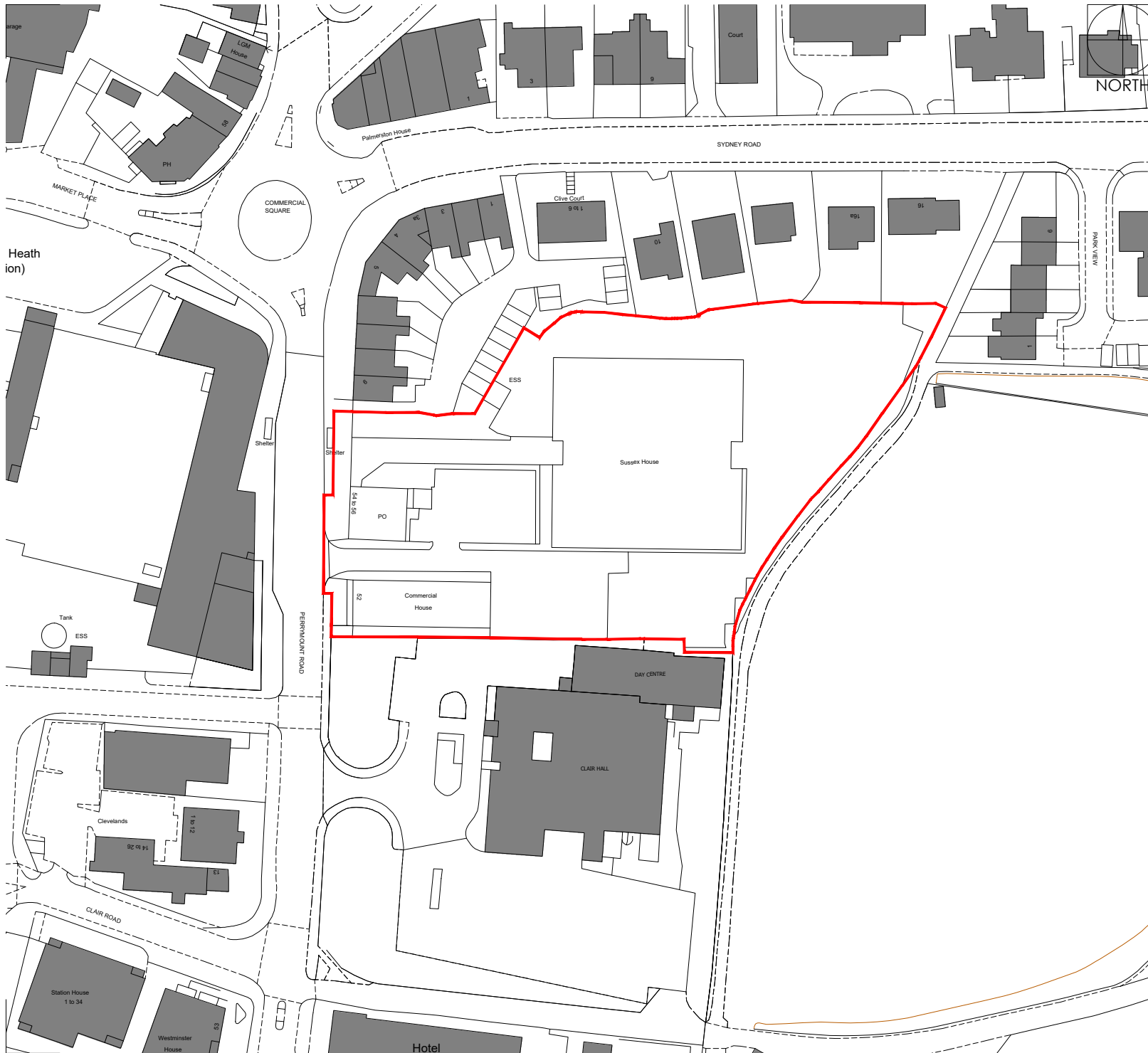
This report concludes that the foul and surface water drainage strategy for the development as proposed is appropriate and it meets the requirements of the NPPF.

Report prepared by Craddys



Claire Pitchers

APPENDIX A LOCATION PLAN



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0 12.5 25 37.5 50 62.5m

SCALE 1:1250

Rev	Date	Description	Drawn	Chk'd

KEY:

Application Site Area (red line):
1.98acres; 0.802Ha



Architecture
Masterplanning
Interior Design

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Wakefield Manchester Milton Keynes Reading London Harrogate

Client

Aldi Stores Ltd



Project Title

Proposed Redevelopment

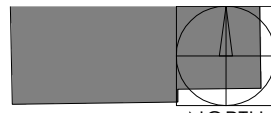
Sussex House
Perrymount Road
Haywards Heath, RH16 1DN

Drawing Title				
Location Plan				
Drawn	Checked	Scale @A4	BIM Status	Date
HWG	ERJ	1:1250	NA	11/24
Drawing Status			Rev.	THP Project No
Planning			-	19971
Project No.	Originator	Volume	Level	Type Role Number
19971	THPK	00	XX	DR A 0100

APPENDIX B

PROPOSED SITE PLAN

A diagram showing a square with a semi-circle attached to its bottom side. The word "SQUARE" is written inside the square area.



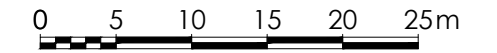
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Subject to confirmation of legal boundaries, underground services locations, easements & other site constraints.

This drawing has been based on ordnance survey mapping and the following drawings:

Berry Geomatics, dwg 54/24 issued 30/09/24

Barrell Tree Consultancy, dwg 24107-1B issued 26/09/24



SCALE 1:500

Rev	Date	Description	Drawn	Chk'd
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ALDI FOOD STORE:

Ground Floor	
Proposed	2041m ² (GEA)
Proposed	1940m ² (GIA)

External Areas:	
Parking aisles	6m & 7.5
Parking spaces	2.5m x 5.0m
Parking spaces	97
	Inc. 6 Accessible
	5 Parent & Child
	6 EV + 20 Future

Cycle Parking 20 Customer Space
 10 Staff Spaces

Key:

- | | |
|---|--|
|  | Aldi lease area (Red line) 1.97 Acres; 0.7977 Hectares |
|  | Electrical Easement |
|  | Permeable Paving |
|  | Landscaping |
|  | Proposed new trees |

For details of the Landscaping scheme refer to Smeeden Foreman drawing: 19971-SFW-XX-XX-DR-L-1001



Architecture
Masterplanning
Interior Design

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Client

Aldi Stores Ltd



Project Title

Proposed Redevelopment

Sussex House
Perrymount Road
Haywards Heath, RH16 1DN

Drawing Title

Proposed Site Plan

Drawn	Checked	Scale @A3	BIM Status	Date
HWG	ERJ	1:500	NA	11/24

Drawing Status	Rev.	THP Project No
Planning	-	19971

Project No.	Originator	Volume	Level	Type	Role	Number
19971	THPK	00	XX	DR	A	0120

Retained trees

- | | | |
|---|--|--------------------------------|
|  | BS category A | Trees of high quality |
|  | BS category B | Trees of moderate quality |
|  | BS category C | Trees of low quality |
|  | BS category U | Trees unsuitable for retention |
|  | Estimated tree positions not included on original land survey and/or adjusted crown spreads for category A and B trees | |
|  | Root protection area (RPA) boundaries for category A and B trees | |
|  | Root protection area (RPA) boundaries for category C trees | |

APPENDIX C

TOPOGRAPHIC SURVEY

APPENDIX D FLOOD MAPPING

two within a year, but then not for another 250 years. We may also experience any number of smaller flood events between the larger events.

To explain this information in another way the Bognor Regis rainfall event in June 2012 saw over 10cm of rain fall in 24 hours. This area may see an average of 60cm annually. In Bognor Regis this downpour equated to a 1 in 200 year rainfall event. In other words, the event had a 0.5 % annual probability event, or, had the betting odds of 200/1. Clearly, it was a very rare rainfall event. These rainfall events can consist of torrential rain over a short period of time, or, prolonged showers over a longer period. The important factors are the amount of rain that has fallen, and over how much time.

Rainfall rates can vary greatly from one town to another. In 2012 Bognor Regis recorded over 10cm in 24 hours, whereas inland at Itchingfield and Haywards Heath the totals were much less. It is important to interpret the flood risk maps with this in mind, because they model a uniform 'Bognor Regis 2012' rainfall event occurring everywhere in the county at the same time. This is necessary to see where we might experience the biggest problems, which then informs our work programme. In reality it is more likely we will see certain towns flooded as predicted on the flood maps, and others that received less rainfall, to a much lesser extent.

Drainage systems and flood defences are designed to protect against a certain magnitude event occurring. Most surface water drains and sewers are designed to cope with a 1 in 30 year event, whilst river and tidal defences are generally built to protect against a 1 in 100 year or 1 in 200 year event respectively. The dilemma in flood risk management is how much do you over engineer your design to account for very rare events. This is one of the cost benefit choices that risk management authorities make.

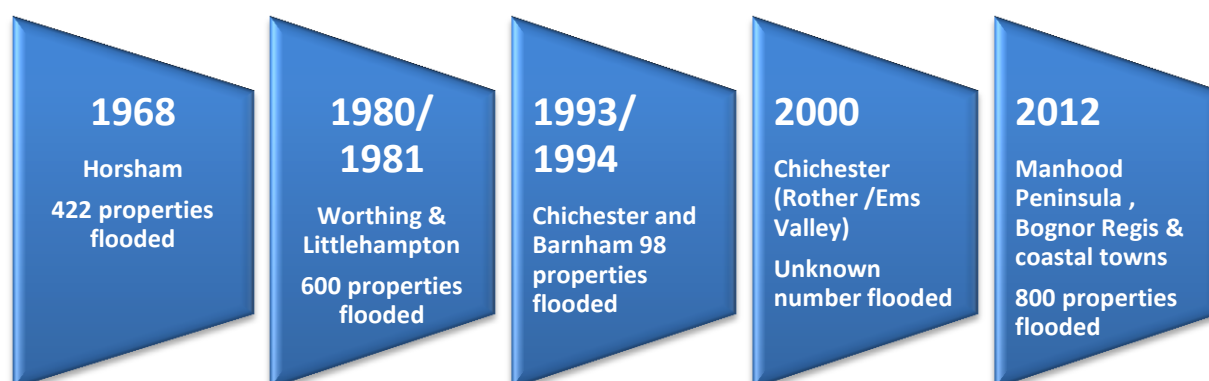


What is the flood risk within the County?

Historic flood events and properties at risk

West Sussex has a history of fluvial, coastal, surface water and groundwater flooding. There are records that extend back hundreds of years shown in previous research from our archives, provided by the fire brigade, media, academic papers, and the British Hydrological Survey. Often it is difficult to compare different events because the towns and rivers have been modified over time, and statistical information can be incomplete. The historic flood events that have occurred since 1968, and caused approximately 100 properties or more to flood, are shown in the diagram below. Hundreds of other smaller flood events have been recorded across the county from a range of flood risk sources. Some events affected properties, others just roads, and in some instances the information does not specify.

Flooding occurs within West Sussex at many locations. To identify these areas in the county, existing plans and flood risk mapping have been reviewed.



The property counts in Figure 1 are derived from the West Sussex Preliminary Flood Risk Assessment (PRFA 2011) and latest flood risk mapping from the Environment Agency (the National Flood Risk Assessment - Nafra 2008/09). These are described on page 27. Both data sets will be updated in late 2013, and any variations in property risk numbers included in the next review of the strategy.

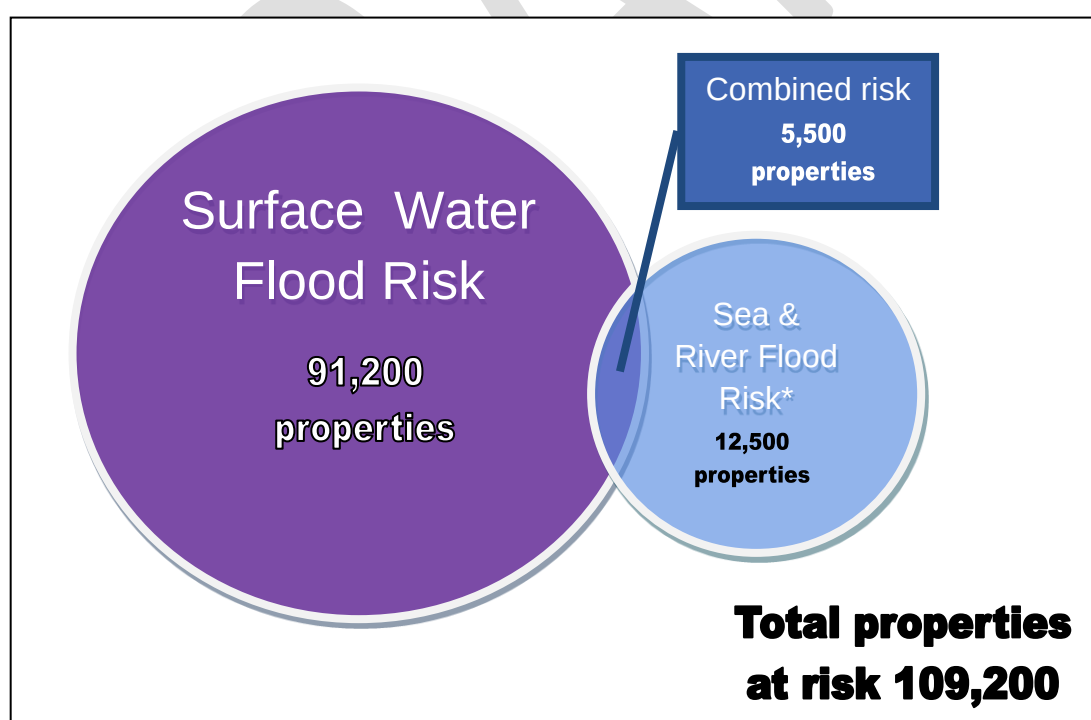


Figure 1: Properties at risk in the county by flooding source (these figures includes flats above ground floor level that would be indirectly affected, *counting properties and businesses at moderate and significant sea and river flood risk)

Reservoir Flooding

The Government recognises that a major reservoir flood event could have a significant impact on the downstream area. Reservoirs in the UK have an extremely good safety record with no incidents resulting in the loss of life since 1925. Reservoirs are carefully maintained to prevent flooding.

The Environment Agency oversees reservoir safety and enforces the Reservoirs Act 1975 and is responsible as an enforcement authority for some 2,000 reservoirs in England and Wales. All large reservoirs must be inspected and supervised. The Environment Agency ensures that reservoirs are regularly inspected and essential safety work is carried out.

The two largest reservoirs in West Sussex are at Ardingly and Weir Wood. Local Resilience Forums (LRFs) undertake the engagement with downstream communities to plan for emergencies. The Pitt Report recommended that communities be provided with reservoir flood maps to enable the emergency services and other responders to assess risks and plan for contingency, warning and evacuation.

Sewer Flooding

Foul sewers carry flows from business and domestic water use, for example kitchen and bathroom waste, to a wastewater (sewage) treatment works. Treated effluent is then discharged to the environment (a local watercourse or the sea) under a consent granted by the Environment Agency. Foul sewers can overflow due to groundwater entering the pipes (infiltration) entering the pipes or through surface water overflowing the system (inundation). This can cause flooding which is contaminated with foul effluent.

Surface water sewers carry rainwater to a suitable discharge point such as a local watercourse or the sea. These discharges do not generally require treatment or a licence from the Environment Agency. Sewer flooding occurs when an increase in the amount of water entering the system is greater than the capacity of the system causing surcharging, or if blockages occur. Flooding is most likely to occur where the sewer has a dual purpose, carrying both surface water run-off and foul sewerage, termed a combined sewer.

Flooding from sewers is the responsibility of the Water and Sewerage Utility companies (Thames and Southern Water). Investment to improve the sewer network happens as part of the periodic price review that sets aside an agreed amount to be spent on reducing flood risk. Areas previously known to have experienced regular sewer flooding are Worthing and Durrington, the Manhood Peninsula, Barnham, North Lancing, Shoreham and Burgess Hill. Problems can also occur along the base of the South Downs because, when groundwater levels are high, sewers can overspill into local watercourses. The water company price review in 2014 is being agreed by the economic regulator Ofwat. This will determine investment to the sewer infrastructure over 2015 - 2020. Water Companies can contribute to flood risk projects being proposed by the Lead Local Flood Authority and other partners.

Flood map for planning

Your reference
13599

Location (easting/northing)
533240/124592

Created
18 Oct 2024 19:17

Your selected location is in flood zone 1, an area with a low probability of flooding.

You will need to do a flood risk assessment if your site is **any of the following:**

- bigger than 1 hectare (ha)
- In an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

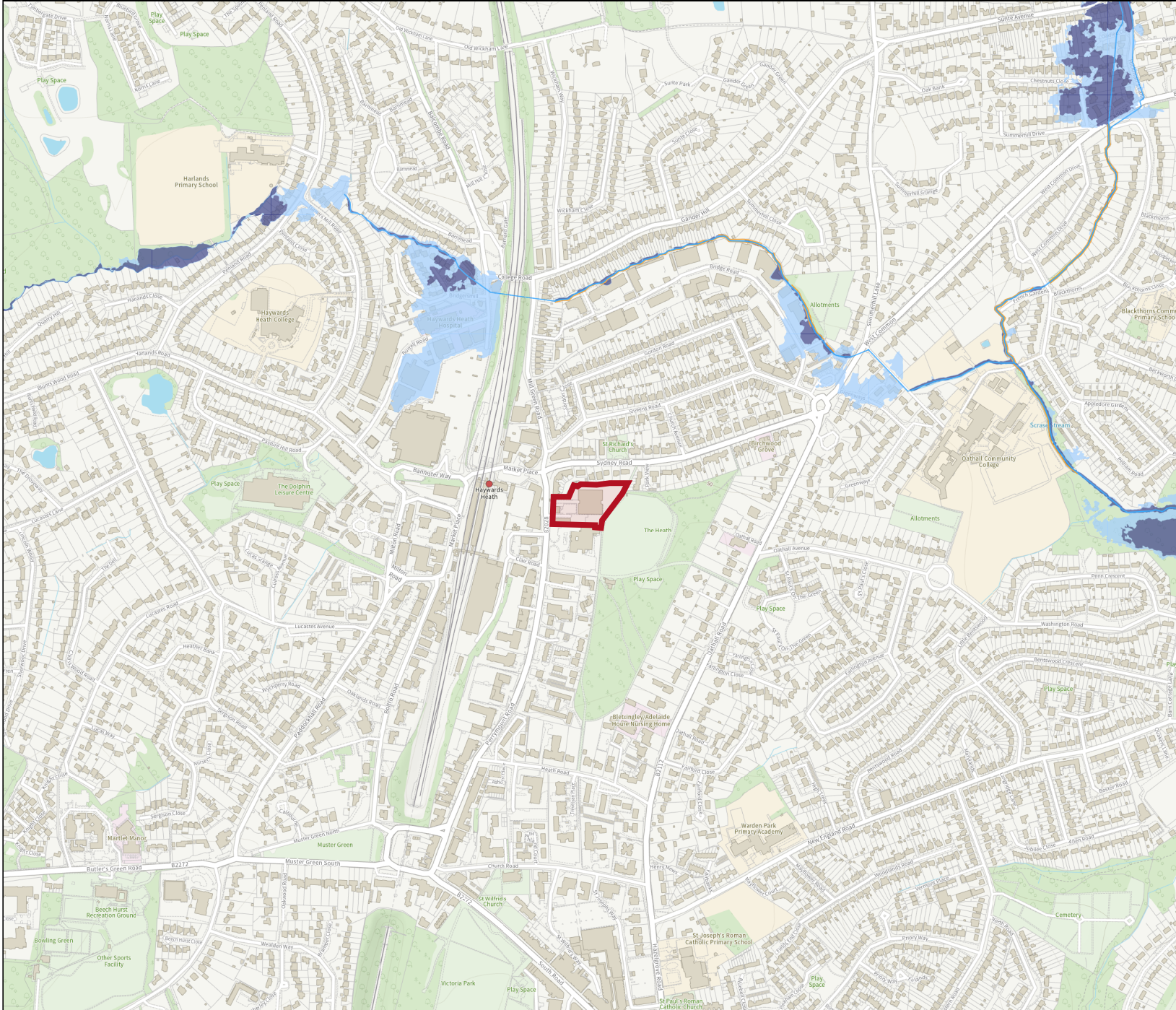
Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence **which** sets out the terms and conditions for using government data. <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2024 OS AC0000807064. <https://flood-map-for-planning.service.gov.uk/os-terms>



Flood map for planning

Your reference
13599

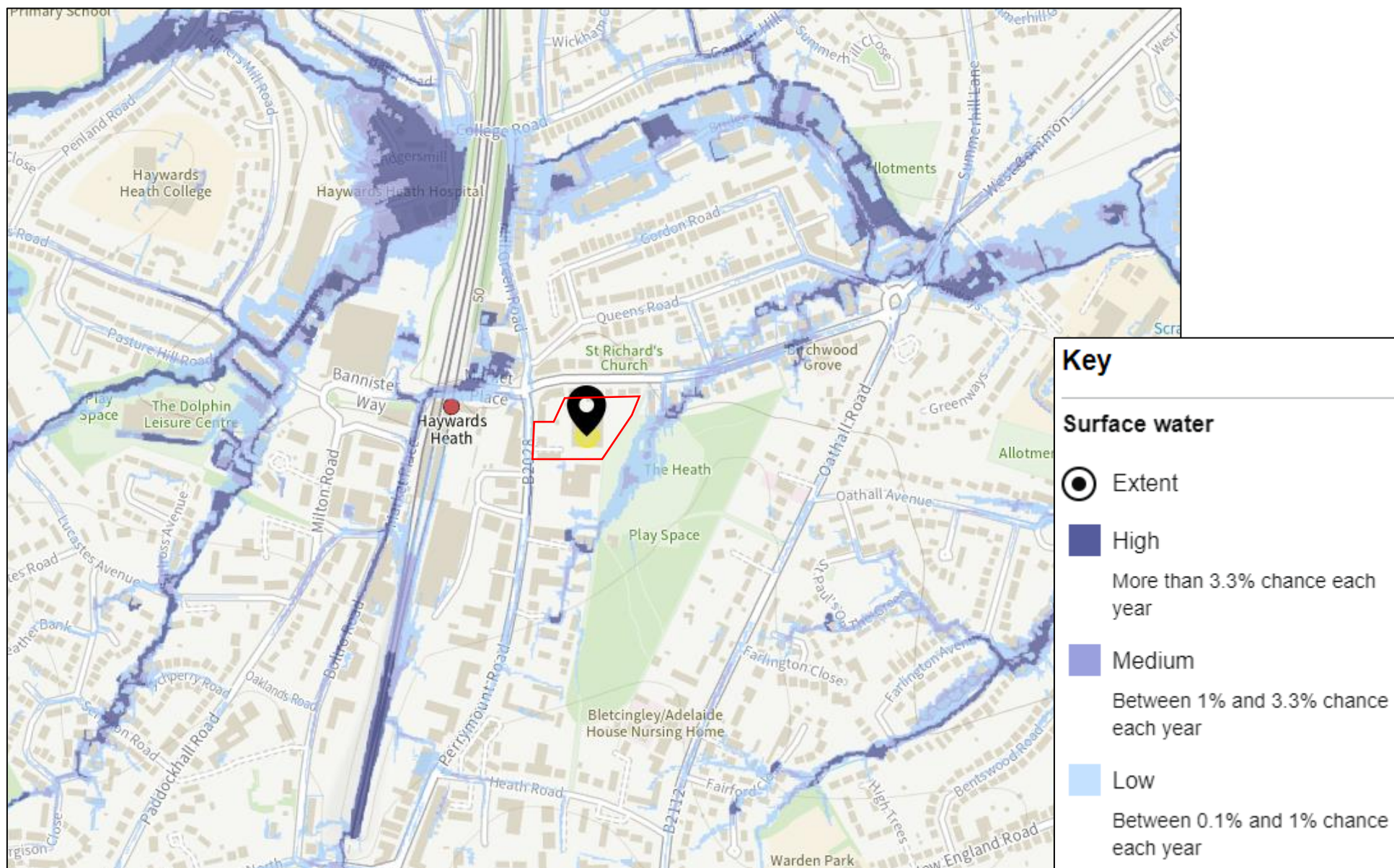
Location (easting/northing)
533240/124592

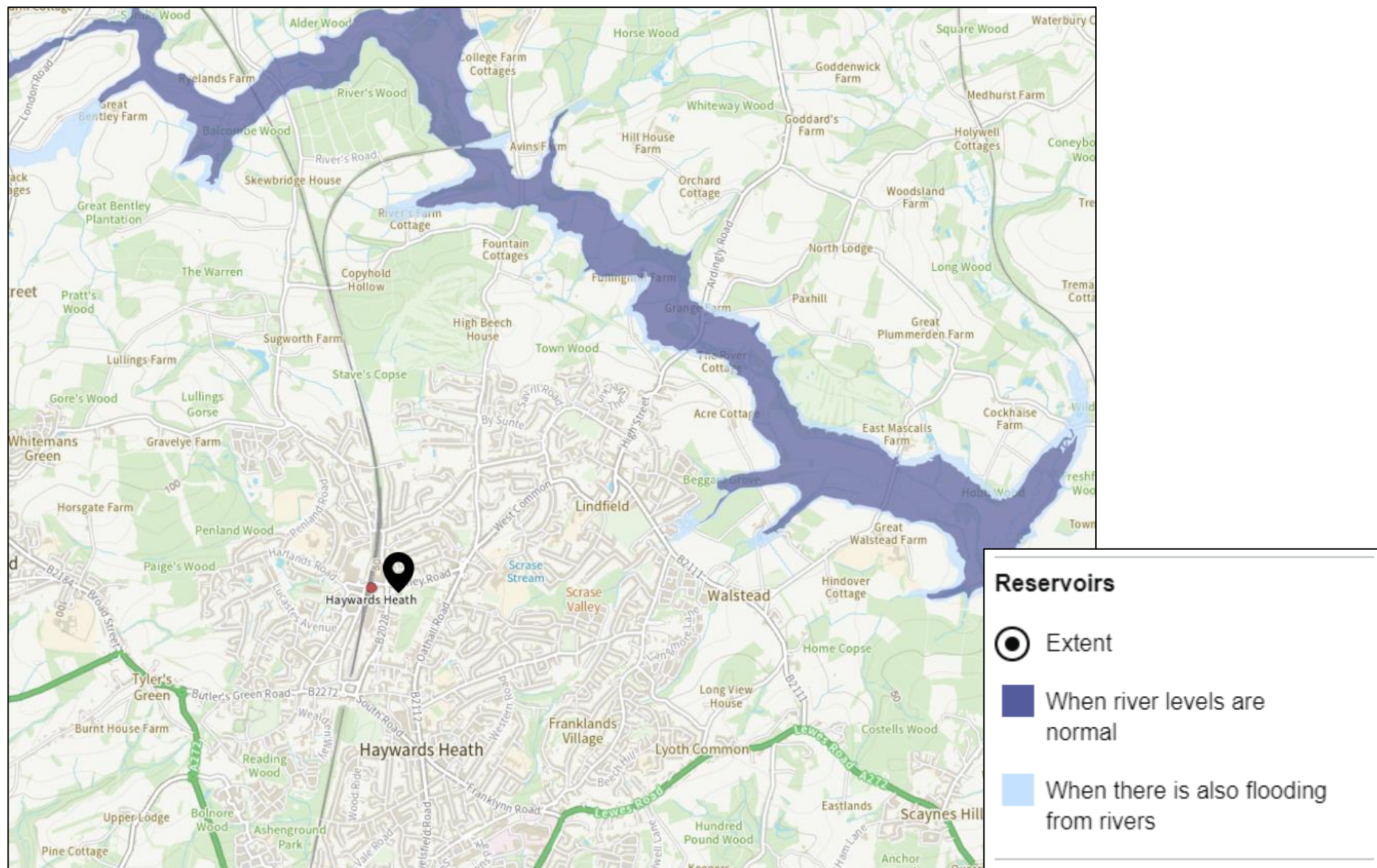
Scale
1:10000

Created
18 Oct 2024 19:17

-  Selected area
-  Flood zone 3
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Water storage area







[< Back to select an address](#)

GROUND FLOOR, SUSSEX HOUSE, PERRYMOUNT ROAD, HAYWARDS HEATH, WEST SUSSEX, RH16 1DN

Rivers and sea risk

Very low risk

Very low risk means that this area has a chance of flooding of less than 0.1% each year.

Surface water risk

Very low risk

Very low risk means that this area has a chance of flooding of less than 0.1% each year.

Lead local flood authorities (LLFA) manage the risk from surface water flooding and may hold more detailed information. Your LLFA is **West Sussex**.

Reservoir risk

Flooding from reservoirs is unlikely in this area

Groundwater risk

Flooding from groundwater is unlikely in this area

APPENDIX E

SITE INVESTIGATION EXTRACTS

Our Ref: CRM.1974.005.GE.L.001

Date 03rd October 2023
Email: gareth.hart@enzygo.com

Kevin Tilford
Weetwood
Suite C22 Joseph's Well
Hanover Walk
Leeds
LS3 1AB.

By Email: Kevin.Tilford@weetwood.net

Dear Kevin

RE: Sussex House, Perrymount Road, Haywards Heath, RH16 1DN

A site investigation was undertaken at the above-named site on 22nd September and 3rd October 2023, comprising Jetting of existing soakaway chambers prior to testing and BRE soakaway testing of existing soakaway drainage chambers.

Proposed Development

It is understood that the proposed development will comprise a residential and mixed use block with associated hardstanding and soft landscaping.

Site Investigation

A site investigation was undertaken on Monday 21st and Tuesday 22nd November 2022, comprising one BRE Soakaway Test location and testing of three existing soakaway chambers.

The location of the existing chambers is presented on Drawing ref DT7957/SWDrainage/001 and a location for the BRE test has been specified.

Soakaway tests were undertaken within three number existing soakaway chambers (MH06, MH07 and MH08).

Prior to soakaway testing, the soakaway chambers were cleared of debris and jetted to allow for testing to be undertaken on the natural base of the chamber.

The chambers comprised a manhole cover flush with ground level, set in a concrete slab. Below the manholes, the chambers comprise large diameter concrete rings, with inlet pipes at a shallow invert depth and open natural soil bases.

A HGV water road tanker was used as the water supply, utilising a large diameter outlet to allow for water to accumulate within the chambers. Given the significant dimensions of the chambers, a full bowser was used for the testing.

Soakaway tests were undertaken within the existing chambers, assuming impermeable chamber sides with an open base and therefore assuming a wetted area across the base of the chamber only. Where water is present within the chamber, a head of water is applied and the results are calculated using the drop in level of the applied head. One cycle of testing was undertaken within each soakaway chamber and the results are provided as indicative infiltration rates.

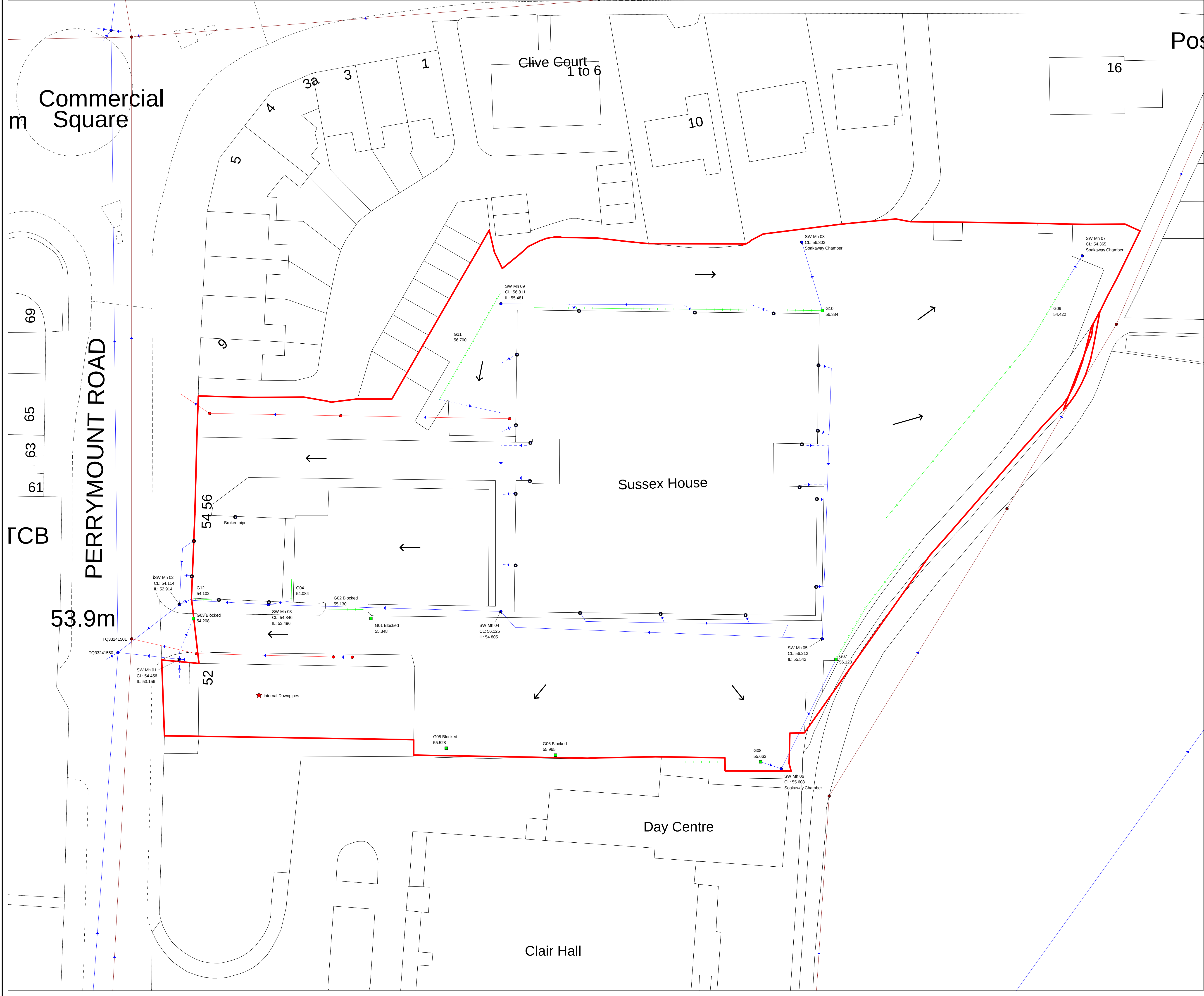
The soakaway results are summarised in Table 1 below. Soakaway results sheets and exploratory hole logs are included in the appendices.

Exploratory Hole	Depth (m bgl)	Test No.	Soil Infiltration rate (m/s)	Infiltration rate (m/s)
MH06	4.0	1	-4.79E-05	n/a
MH07	4.0	1	-4.76E-05	n/a
MH08	4.0	1	5.56E-05	n/a

We hope we have correctly interpreted your requirements.

Yours sincerely,
For and on behalf of Enzygo

Gareth Hart
Senior Engineer
Enzygo Geoenvironmental Ltd



Survey Legend

- SW Drainage Survey Area
- Surface Water Manhole
- Foul / Combined Manhole
- Surface Water Sewer
- Surface Water Sewer (Assumed Route)
- Foul / Combined Sewer
- Rainwater Downpipe
- Gully
- Strip Gully
- Gradient

Dene-Tech Services Ltd
Unit 10 Lymington Barn
Lymington Bottom Road
Medstead Alton
Hants
GU34 5EW (01420) 562569



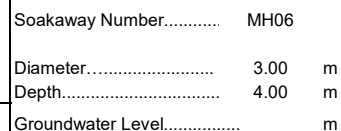
Client
Kevin Tilford
Weetwood
Suite C22 Joseph's Well
Hanover Walk
Leeds LS3 1AB

Project title
**DT7957
Perrymount Road
Haywards Heath RH16 1DN**

Drawing title
**Sussex House & 52-56 Perrymount Road
Haywards Heath
SW Drainage System Survey Layout**

Scale: 1:250	Drawn SM: Dene-Tech	Checked RN: Dene-Tech	Authorised AP: Dene-Tech	A1
	Date: Feb 2023	Date: Feb 2023	Date: Feb 2023	

Drawing Number	DT7957/SWDrainage/001
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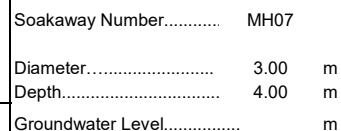


Remarks -		TEST 1		TEST 2		TEST 3	
		Time(min)	Depth to Water (m)	Time(min)	Depth to Water (m)	Time(min)	Depth to Water (m)
Manhole Chamber was jetted to clear debris from base prior to testing.							
		0.0	3.35				
		5.0	3.43				
		10.0	3.45				
		15.0	3.50				
		20.0	3.52				
		30.0	3.55				
		60.0	3.60				
		90.0	3.75				
		120.0	3.80				
180.0	3.90						
Effective Storage Depth	m		0.65				
75% Effective Storage Depth	m		0.49				
(i.e. depth below GL)	m		3.83				
25% Effective Storage Depth	m		0.16				
(i.e. depth below GL)	m		3.51				
Effective Storage Depth 75%-25%	m		0.33				
Time to fall to 75% effective depth	mins		130.00				
Time to fall to 25% effective depth	mins		17.00				
V (75%-25%)	m3		2.30				
a	m2		7.07				
t (75%-25%)	mins		-113.00				
SOIL INFILTRATION RATE	m/s		-4.79E-05				

The graph displays the depth to water (m) on the y-axis (0.00 to 4.00) against time (mins) on the x-axis (0.00 to 180.00). The data for TEST 1 is shown as a solid black line with square markers. Two reference lines are also plotted: a dashed red line for 'Test 1 - 75%' and a dashed yellow line for 'Test 1 - 25%'. The TEST 1 data points are approximately as follows:

Time (mins)	Depth to water (m)
0.00	3.35
10.00	3.40
20.00	3.45
30.00	3.55
60.00	3.65
90.00	3.75
120.00	3.85
180.00	3.90

Compiled By:	Date:	Checked By:	Date:
G. Hart 	05.10.23	M. Ward 	05.10.23



Remarks -		TEST 1		TEST 2		TEST 3	
		Time(min)	Depth to Water (m)	Time(min)	Depth to Water (m)	Time(min)	Depth to Water (m)
Manhole Chamber was jetted to clear debris from base prior to testing.							
		0.0	3.60				
		5.0	3.65				
		10.0	3.65				
		15.0	3.65				
		20.0	3.68				
		30.0	3.70				
		60.0	3.75				
		90.0	3.80				
		120.0	3.92				
	180.0	3.94					
Effective Storage Depth	m		0.40				
75% Effective Storage Depth	m		0.30				
(i.e. depth below GL)	m		3.90				
25% Effective Storage Depth	m		0.10				
(i.e. depth below GL)	m		3.70				
Effective Storage Depth 75%-25%	m		0.20				
Time to fall to 75% effective depth	mins		100.00				
Time to fall to 25% effective depth	mins		30.00				
V (75%-25%)	m3		1.41				
a	m2		7.07				
t (75%-25%)	mins		-70.00				
SOIL INFILTRATION RATE	m/s		-4.76E-05				

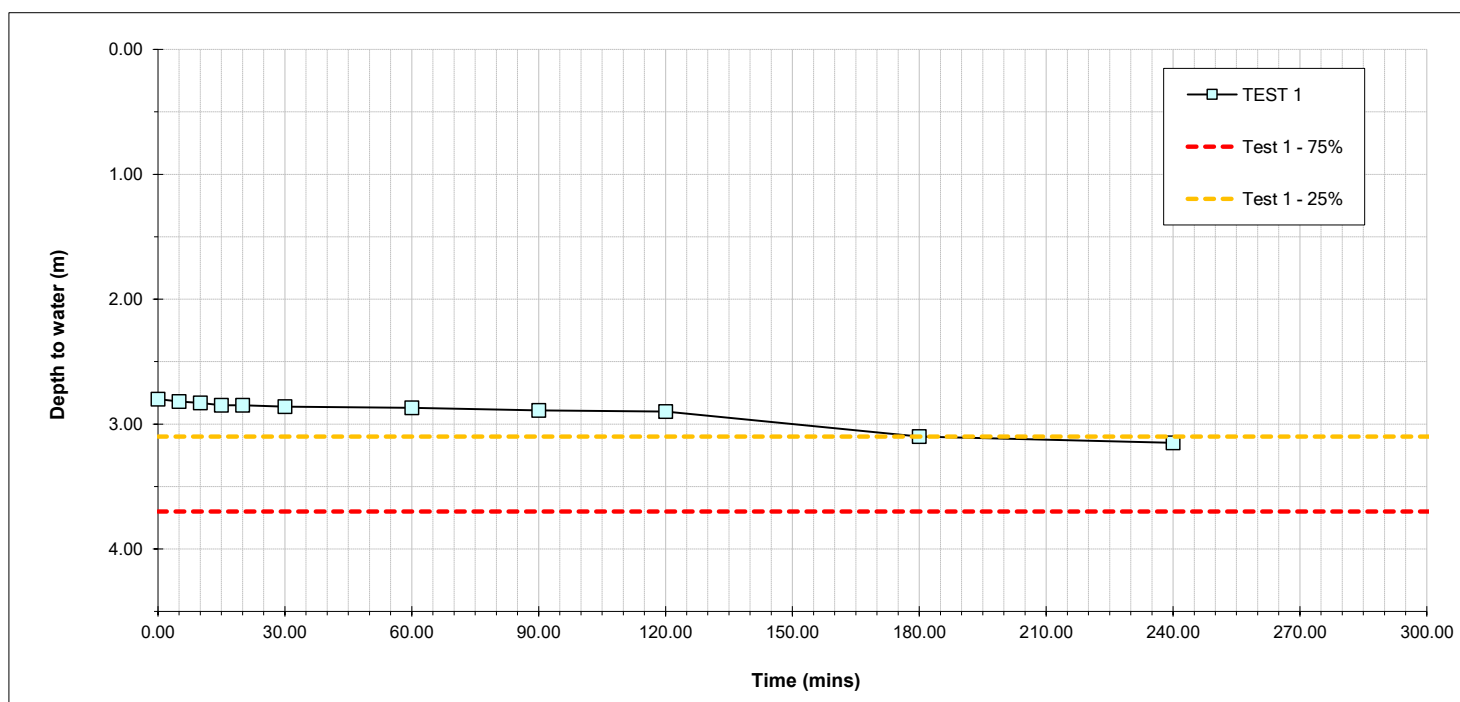
The graph displays the depth to water in meters over a period of 180 minutes for three different test scenarios. The y-axis, labeled 'Depth to water (m)', is inverted, with 0.00 at the top and 4.00 at the bottom. The x-axis, labeled 'Time (mins)', ranges from 0.00 to 180.00. The legend indicates three series: 'TEST 1' (solid black line with square markers), 'Test 1 - 75%' (dashed red line), and 'Test 1 - 25%' (dashed yellow line). The 'TEST 1' series starts at approximately 3.6m and gradually decreases to about 3.9m. The 'Test 1 - 75%' series is a constant horizontal line at 4.0m. The 'Test 1 - 25%' series is a constant horizontal line at approximately 3.7m.

Time (mins)	TEST 1 (m)	Test 1 - 75% (m)	Test 1 - 25% (m)
0.00	3.60	4.00	3.70
10.00	3.65	4.00	3.70
20.00	3.68	4.00	3.70
30.00	3.70	4.00	3.70
60.00	3.75	4.00	3.70
90.00	3.80	4.00	3.70
120.00	3.90	4.00	3.70
180.00	3.95	4.00	3.70

Compiled By:	Date:	Checked By:	Date:
G. Hart	05.10.23	M. Ward	05.10.23
			

		Site..... Sussex House, Perrymount Road Job Number..... CRM.1974.005 Date of Test..... 02.10.23	Soakaway Number..... MH08 Diameter..... 3.00 m Depth..... 4.00 m Groundwater Level..... m
		INDICATIVE SOIL INFILTRATION RATE TEST Existing Soakaway Chamber	
Remarks - Manhole Chamber was jetted to clear debris from base prior to testing.	TEST 1		TEST 2
	Time(min)	Depth to Water (m)	Time(min) Depth to Water (m)
	0.0	2.80	
	5.0	2.82	
	10.0	2.83	
	15.0	2.85	
	20.0	2.85	
	30.0	2.86	
	60.0	2.87	
	90.0	2.89	
	120.0	2.90	
	180.0	3.10	
	240.0	3.15	
Effective Storage Depth m 1.20 75% Effective Storage Depth m 0.90 (i.e. depth below GL) m 3.70 25% Effective Storage Depth m 0.30 (i.e. depth below GL) m 3.10 Effective Storage Depth 75%-25% m 0.60 Time to fall to 75% effective depth mins Time to fall to 25% effective depth mins 180.00 V (75%-25%) m3 4.24 a m2 7.07 t (75%-25%) mins 180.00			
SOIL INFILTRATION RATE m/s		5.56E-05	

DESIGN SOIL INFILTRATION RATE, f	5.56E-05	m/s
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Compiled By:	Date:	Checked By:	Date:
G. Hart	05.10.23	M. Ward	05.10.23
			

3.0 SITE INVESTIGATION

3.1 Exploratory Fieldwork

The fieldwork was carried out by EEGSL between the 27th July 2024 and the 3rd August 2024 and comprised:

- 1 No. Cable Percussion Boreholes (CP01) was sunk to a depth of 7.50m below existing ground level. Borehole logs are included in Appendix 1.
- 5 No. Window Sample Boreholes (WS01 to WS05 inclusive) were sunk to a maximum depth of 1.90m below existing ground level. Borehole logs are included in Appendix 1.
- Insitu strength testing was completed every 1m up to 5mbgl and then every 1.5m thereafter (SPTs) in all borehole locations.
- 4 No. In-situ DCP tests in car park areas to obtain CBR readings using TRL probe, the results of which are presented in Appendix 2.
- A 50mm diameter standpipe was installed into CP01 and WS04. EEGSL carried out four rounds of groundwater/ground gas monitoring from the standpipe after the fieldwork period, the results of which are presented in Appendix 3.

The fieldwork was carried out generally in accordance with BS 5930:2015+A1:2020 Code of Practice for Site Investigations unless otherwise stated.

The exploratory hole locations were determined by EEGSL and considered site logistics and working around the current tenant present at the time of investigation. The investigation locations completed are shown approximately on the Exploratory Hole Location Plan (Figure 2).

Figure 2: Exploratory Hole Location Plan



**EARTH ENVIRONMENTAL
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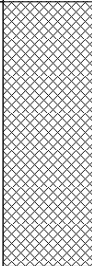
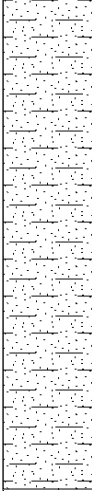
Window Sample Log

Project Name: ALDI Haywards Heath		Client: Craddys		Date: 27/07/2024	
Location: Perrymount Road, Haywards Heath, RH16 1DN		Contractor: PM Sampling		Co-ords: E533213.00 N124613.00	
Project No. : R3971		Crew Name: AF		Drilling Equipment:	
Borehole Number WS01	Hole Type WS	Level	Logged By AJ	Scale 1:10	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10 - 0.30	ES		0.09			MADE GROUND: Macadam.	
								MADE GROUND: Brown very gravelly slightly clayey fine to coarse fine to coarse SAND with low cobble content. Gravel is subangular to rounded fine to coarse flint and brick. Cobbles are angular brick.	
		0.50 - 0.60	ES		0.44			Interbedded Sands and Clays recovered as: Soft yellowish brown mottled grey slightly sandy CLAY. Sand is fine to coarse. (WEATHERED UPPER TUNBRIDGE WELLS SAND FORMATION)	
		0.70 - 1.00	D		0.60			Interbedded Sands and Clays recovered as: Grey and yellow slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of flint. (WEATHERED UPPER TUNBRIDGE WELLS SAND FORMATION)	
		1.00 - 1.45 1.00 - 1.95 1.00	SPT B SPT	N=22 (3,4/5,5,6,6)	1.00			Interbedded Sands and Clays recovered as: Grey and yellow SAND. Sand is fine to coarse. (WEATHERED UPPER TUNBRIDGE WELLS SAND FORMATION)	1
		1.50	SPT	N=50 (8,10/50 for 280mm)					
					1.90				
								End of Borehole at 1.910m	2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks 1. Hole location scanned with CAT. 2. Hole terminated due to refusing on hard strata at 1.91mbgl. 3. Borehole was backfilled with arisings 4. Groundwater was not encountered. 5. The Weathered Tunbridge Wells Sand Formation was present as interbedded sands and clays but in the field was predominantly described as a sand.										 EARTH ENVIRONMENTAL & GEOTECHNICAL
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		Window Sample Log									
Project Name: ALDI Haywards Heath				Client: Craddys				Date: 27/07/2024			
Location: Perrymount Road, Haywards Heath, RH16 1DN				Contractor: PM Sampling				Co-ords: E533237.00 N124628.00			
Project No. : R3971				Crew Name: AF				Drilling Equipment:			
Borehole Number WS02		Hole Type WS		Level		Logged By AJ		Scale 1:10		Page Number Sheet 1 of 1	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		0.10 - 0.30	ES		0.03			MADE GROUND: Macadam.		1	
					0.10			MADE GROUND: Brown very gravelly slightly clayey fine to coarse SAND. Gravel is subangular to rounded fine to coarse of flint and brick.			
								MADE GROUND: Brown very gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of flint and brick.			
		0.40 - 0.60	ES		0.35			Interbedded Sands and Clays recovered as: Yellow and grey slightly clayey SAND. Sand is fine to coarse. (WEATHERED UPPER TUNBRIDGE WELLS SAND FORMATION)			
		0.80 - 1.00	D								
		1.00 - 1.45 1.00	SPT SPT	N=50 (5,7/50 for 275mm)	1.00			End of Borehole at 1.000m		2	
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
Remarks											
1. Hole location scanned with CAT. 2. Hole terminated due to refusing on hard strata at 1.0mbgl. 3. Borehole was backfilled with arisings. 4. Groundwater was not encountered. 5. The Weathered Tunbridge Wells Sand Formation was present as interbedded sands and clays but in the field was predominantly described as a sand.											



EARTH ENVIRONMENTAL
& GEOTECHNICAL

Window Sample Log

Project Name: ALDI Haywards Heath				Client: Craddys				Date: 27/07/2024			
Location: Perrymount Road, Haywards Heath, RH16 1DN				Contractor: PM Sampling				Co-ords: E533265.00 N124605.00			
Project No. : R3971				Crew Name: AF				Drilling Equipment:			
Borehole Number WS03		Hole Type WS		Level		Logged By AJ		Scale 1:10		Page Number Sheet 1 of 1	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10 - 0.30	ES		0.05			MADE GROUND: Macadam.	1
					0.10			MADE GROUND: Light brown very gravelly fine to coarse SAND. Gravel is subangular to rounded fine to coarse of flint and brick. MADE GROUND: Multicoloured slightly gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of brick and macadam. Frequent cobbles of angular brick.	
		0.80 - 1.00	ES		0.50			Interbedded Sands and Clays recovered as: Grey and yellow very clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of flint. (WEATHERED UPPER TUNBRIDGE WELLS SAND FORMATION)	
					0.80			Interbedded Sands and Clays recovered as: Grey and yellow slightly clayey SAND. Sand is fine to coarse. (WEATHERED UPPER TUNBRIDGE WELLS SAND FORMATION)	
		1.00 - 1.45 1.00	SPT SPT	N=23 (4,4/5,5,6,7)					
1.50	SPT	N=50 (7,9/50 for 275mm)	1.50			End of Borehole at 1.500m	2		

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

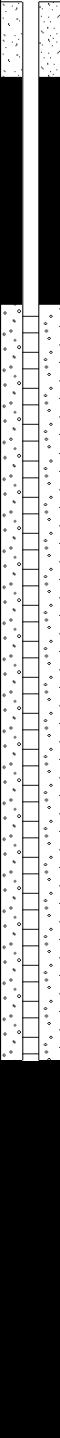
Remarks

1. Hole location scanned with CAT. 2. Hole terminated due to refusing on hard strata at 1.50mbgl. 3. Borehole was backfilled with arisings. 4. Groundwater was not encountered. 5. The Weathered Tunbridge Wells Sand Formation was present as interbedded sands and clays but in the field was predominantly described as a sand.


EARTH ENVIRONMENTAL
& GEOTECHNICAL

Window Sample Log

Project Name: ALDI Haywards Heath		Client: Craddys		Date: 27/07/2024	
Location: Perrymount Road, Haywards Heath, RH16 1DN		Contractor: PM Sampling		Co-ords: E533254.00 N124563.00	
Project No. : R3971		Crew Name: AF		Drilling Equipment:	
Borehole Number WS04	Hole Type WS	Level	Logged By AJ	Scale 1:10	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.05			MADE GROUND: Macadam.	
								MADE GROUND: Brown very gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of flint and brick.	
		0.60 - 0.80	ES		0.57			MADE GROUND: Firm green slightly gravelly slightly sandy CLAY with strong organic odour. Gravel is subangular to subrounded fine to coarse flint. Sand is fine to coarse.	
		0.90 - 1.10	ES						
		1.00	SPT	N=18 (3,5/4,5,5,4)					1
		1.40 - 1.60	ES		1.40			Interbedded Sands and Clays recovered as: Light brown and yellow slightly clayey SAND. Sand is fine to coarse. (WEATHERED UPPER TUNBRIDGE WELLS SAND FORMATION)	
		1.60 - 1.90	D						
		1.90	SPT	50 (50 for 1mm/0 for 0mm)	1.90			End of Borehole at 1.900m	2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks 1. Hole location scanned with CAT. 2. Hole terminated due to refusing on hard strata at 1.90mbgl. 3. Borehole was installed to 1.40mbgl with 50mm HDPE standpipe. 4. Groundwater was not encountered. 5. The Weathered Tunbridge Wells Sand Formation was present as interbedded sands and clays but in the field was predominantly described as a sand.										 EARTH ENVIRONMENTAL & GEOTECHNICAL
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Window Sample Log

Project Name: ALDI Haywards Heath		Client: Craddys		Date: 27/07/2024	
Location: Perrymount Road, Haywards Heath, RH16 1DN		Contractor: PM Sampling		Co-ords: E533215.00 N124580.00	
Project No. : R3971		Crew Name: AF		Drilling Equipment:	
Borehole Number WS05	Hole Type WS	Level	Logged By AJ	Scale 1:10	Page Number Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.05	ES		0.05			MADE GROUND: Macadam.	1
		0.10 - 0.30						MADE GROUND: Brown gravelly fine to coarse SAND. Gravel is subangular to round fine to coarse of flint and brick.	
					0.34			Interbedded Sands and Clays recovered as: Brown very gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse flint. (WEATHERED UPPER TUNBRIDGE WELLS SAND FORMATION)	
					0.48			Interbedded Sands and Clays recovered as: Yellowish brown and grey slightly clayey SAND. Sand is fine to coarse. (WEATHERED UPPER TUNBRIDGE WELLS SAND FORMATION)	
		0.80 - 1.30	B						
		1.00	SPT	50 (50 for 1mm/0 for 0mm)					
					1.30			End of Borehole at 1.300m	2

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks 1. Hole location scanned with CAT. 2. Hole terminated due to refusing on hard strata at 1.30mbgl. 3. Borehole was backfilled with arisings. 4. Groundwater was not encountered. 5. The Weathered Tunbridge Wells Sand Formation was present as interbedded sands and clays but in the field was predominantly described as a sand.										 EARTH ENVIRONMENTAL & GEOTECHNICAL
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APPENDIX F

DRAINAGE INFORMATION

Project
Section13599 Aldi Haywards Heath
Non-potable water yield vs. demandSheet 1 of 1
By WAH

Checked RJH

Rev A
Date 21/05/2025**Assess potential for rainwater harvesting as part of SuDS scheme**From **CIRIA C753 The SuDS Manual**, Box 11.2:Average annual runoff, $Y_R = A.e.AAR.\eta$

Where:

A = collecting runoff area $\approx$	2025	m ²	
e = runoff (yield) coefficient =	0.95		for pitched metal roof - BS5815 Table 1
AAR = Average Annual Rainfall =	1300	mm	CIRIA C753 Fig 11.6
η = Hydraulic filter efficiency =	0.90		0.9 typically - CIRIA C753 p217

 $\therefore Y_R = 2025 \times 0.95 \times 1300 \times 0.9 = 2250788$ litresFrom **CIRIA C753 The SuDS Manual**, Box 11.3:Non-potable water demand, $D_N = P_d.n \times 365$

Where:

P_d = daily demand per person =	10	litres
n = number of occupants =	30	

 $\therefore D_N = 10 \times 30 \times 365 = 109500$ litres**CIRIA 753** Sec. 11.3.5 states of rainwater harvesting systems:*"Where Y_R/D_N is significantly more than a ratio of 1.0 (and the system is not actively managed), then it will be ineffective for surface water management"*Here, $Y_R/D_N = 20.6$

20.6 is significantly greater than 1.0 , therefore rainwater harvesting will be ineffective

Considering an actively managed system:

Standard volumetric supply rate = £ 2.74 per m³ from southeastwater.co.uk

At this rate, the potential saving offered by an actively managed rainwater harvesting system is in the order of £300 per year. Given the cost of such a system, the potential return on investment would therefore be extremely long term.

With the above considerations taken into account, a rainwater harvesting system is deemed to be inappropriate for this development.

REV	DATE	DESCRIPTION	DRW	CHK
P01	07.06.24	FIRST ISSUE	JPH	AST
P02	14.11.24	DRAFT PLANNING ISSUE	CAP	AST
P03	21.11.24	PLANNING ISSUE	CAP	AST
P04	22.05.25	UPDATES BASED ON LLFA COMMENTS	CAP	AST

2No. manhole soakaways to discharge foul drain around rear of building. Exact size and number of soakaways to be confirmed at detailed design.

KEY

- Existing storm sewer / drain
- Existing foul sewer / drain
- Existing drainage to be removed (subject to CCTV)(not all shown)
- Proposed private storm drain
- Proposed private storm channel
- Proposed private road gully
- Proposed private storm rodding eye
- Proposed private foul rodding eye
- Proposed private foul drain
- Proposed private storm access chamber/ silt trap (ST)
- Proposed private foul access chamber
- Proposed geocellular soakaway
- Proposed permeable paving (with infiltration)
- Proposed land drainage discharging to manhole soakaway

C D M : SIGNIFICANT HAZARDS

THE FOLLOWING HEALTH AND SAFETY HAZARDS ARE IDENTIFIED BY THE DESIGNER AS ABNORMAL IN PURSUANCE OF THE CURRENT CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS.

RISKS DURING CONSTRUCTION:

- DEEP EXCAVATIONS - Adequate shoring of deep excavations to be provided.
- EXISTING SERVICES - Refer to utility and subcan drawings prior to excavation.
- WORKS WITHIN HIGHWAY - Adequate signage and protection to be used when working within highway.

OPERATION / MAINTENANCE RISKS:

- No abnormal risks have been identified relating to this design element.
- No abnormal risks have been identified relating to this design element.

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY COMPETENT & ADEQUATELY RESOURCED CONTRACTOR(S) TO SAFE SYSTEMS OF WORK.

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Client

ALDI - Aldi Stores Ltd.

Project Title

ALDI STORE

Project Address

PERRYMOUNT ROAD
HAYWARDS HEATH

Drawing Title

PROPOSED DRAINAGE LAYOUT

Job No.	Originator	Zone	Level	Type	Role
13599	CDY	XX	XX	DR	C

System Classification	Drawing No.	Suitability	Revision
Ss_15_10_00	0050	S2	P04

Drawn	Checked	Date	Scale	Size
CAP	AST	07.06.24	1:200	A1

Approved	Craddys Job No.	IF YOU HAVE A QUERY CALL US SCALING FROM THIS DRAWING OR OBTAINING DIMENSIONS ELECTRONICALLY MAY NOT PROVIDE ACCURATE INFORMATION & SHOULD BE AVOIDED. WORK ONLY FROM INSURED DIMENSIONS.
RAG	13599	

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GENERAL NOTES

DRAWINGS AND SPECIFICATIONS: This drawing is to be read in conjunction with all relevant Architects, Engineers and Specialists drawings together with the specification.

SITE LAYOUT: The background layout shown in this drawing is based on THP's drawing 19971-THPK-00-XX-DR-A-0120. Reference must be made to the Architect's drawings for current information.

DRAINAGE NOTES

DRAINAGE STANDARDS: All private drainage works shall be in accordance with Building Regulations Document Part H. All adoptable drainage works shall be in accordance with Sewerage Sector Guidance Appendix C : Design and Construction Guidance and statutory undertaker's requirements.

ABOVE GROUND DRAINAGE: RWP/SVP drainage positions shown on Craddys drawings, upon which the below ground drainage is designed, are based upon the positions provided to us by the Architect and these are to be set out on the Architect's floor plans unless agreed otherwise. If above ground drainage positions change then Craddys will need to be informed of these changes in writing and the changes in position clearly noted or highlighted on a drawing, i.e. using revision clouds, with relevant CAD files provided to Craddys below ground drainage drawings to be updated. Note that should these changes occur following Craddys issue of Construction status drawings then there is a risk of the contractor undertaking abortive works.

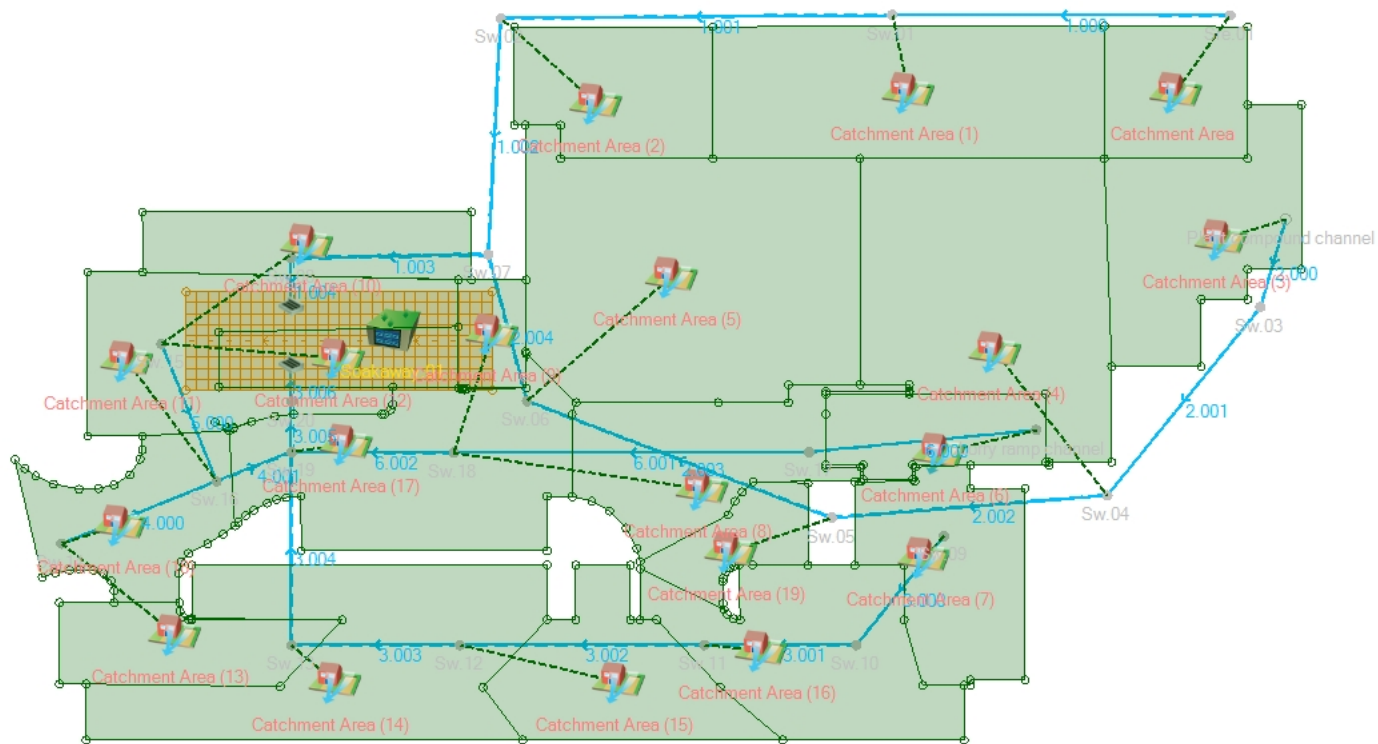
LAYING DRAINAGE: It is recommended that all drains be laid starting from the downstream connection to the existing network and working upstream to and through the new development.

DRAINAGE PIPE SIZES: All foul water drains to be 100mm diameter unless noted otherwise. All surface water drains to be 150mm U.N.O.

MANHOLE COVER LEVELS: All manhole & inspection chamber cover levels are to be adjusted to suit the Architect's proposed finished surface levels. If the cover levels proposed in the drainage schedules vary from proposed surface level by more than 100mm, Contractor to notify Craddys.

Soakaway.01
28.0m x 9.0m x 1.5m deep geocellular soakaway providing 359.1m³ storage @ 95% porosity. Design infiltration rate = 4.76 x 10⁻⁴ m/s with a factor of safety of 2.0 applied CL 54.18 (Min.) SL 52.50 (1.68 min. cover) IL 51.00

Class 1 bypass oil interceptor/separator. SUDS-compliant 3200 LIESR by SPEL, complete with alarm system and vent. Invert falls 100mm between inlet and outlet. Vent location to be agreed with architect, alarm to sound in manager's office - refer to M&E engineer.



ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH	Date: 20/11/2024		
	Designed by: CAP	Checked by:	Approved By:
Report Details: Type: Junctions Storm Phase: Proposed storm	63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN		



Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
Sw.01	Inlet	1.000	(None)	No Restriction
	Inlet (1)	Catchment Area (1)	(None)	No Restriction
Sw.07	Inlet	1.002	(None)	No Restriction
	Inlet (1)	2.004	(None)	No Restriction
Sw.06	Inlet	2.003	(None)	No Restriction
	Inlet (1)	Catchment Area (5)	(None)	No Restriction
Sw.10	Inlet	3.000	(None)	No Restriction
Sw.17	Inlet	6.000	(None)	No Restriction
Sw.03	Inlet	2.000	(None)	No Restriction
Sre.01	Inlet	Catchment Area	(None)	No Restriction
Sw.02	Inlet	1.001	(None)	No Restriction
	Inlet (1)	Catchment Area (2)	(None)	No Restriction
Sw.11	Inlet	3.001	(None)	No Restriction
	Inlet (1)	Catchment Area (16)	(None)	No Restriction
Sw.05	Inlet	2.002	(None)	No Restriction
	Inlet (1)	Catchment Area (19)	(None)	No Restriction
Sw.18	Inlet	6.001	(None)	No Restriction
	Inlet (1)	Catchment Area (9)	(None)	No Restriction
	Inlet (3)	Catchment Area (8)	(None)	No Restriction
Sw.09	Inlet	Catchment Area (7)	(None)	No Restriction
Sw.12	Inlet	3.002	(None)	No Restriction
	Inlet (2)	Catchment Area (15)	(None)	No Restriction
Sw.08	Inlet	1.003	(None)	No Restriction
Sw.20	Inlet	3.005	(None)	No Restriction
Sw.13	Inlet	3.003	(None)	No Restriction
	Inlet (2)	Catchment Area (14)	(None)	No Restriction
Sw.19	Inlet	6.002	(None)	No Restriction
	Inlet (1)	3.004	(None)	No Restriction
	Inlet (2)	4.001	(None)	No Restriction
	Inlet (3)	Catchment Area (17)	(None)	No Restriction
Sw.04	Inlet	2.001	(None)	No Restriction
	Inlet (1)	Catchment Area (4)	(None)	No Restriction
Sw.16	Inlet	4.000	(None)	No Restriction
	Inlet (1)	5.000	(None)	No Restriction
	Inlet (2)	Catchment Area (11)	(None)	No Restriction
Sw.15	Inlet	Catchment Area (10)	(None)	No Restriction
	Inlet (2)	Catchment Area (12)	(None)	No Restriction
Lorry ramp channel	Inlet	Catchment Area (6)	(None)	No Restriction
Sw.14	Inlet	Catchment Area (13)	(None)	No Restriction
	Inlet (1)	Catchment Area (18)	(None)	No Restriction
Plant compound channel	Inlet	Catchment Area (3)	(None)	No Restriction

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH	Date: 20/11/2024		
	Designed by: CAP	Checked by:	Approved By:
Report Details: Type: Junctions Storm Phase: Proposed storm	63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN		



Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
Sw.01	Outlet	1.001	Free Discharge
Sw.07	Outlet	1.003	Free Discharge
Sw.06	Outlet	2.004	Free Discharge
Sw.10	Outlet	3.001	Free Discharge
Sw.17	Outlet	6.001	Free Discharge
Sw.03	Outlet	2.001	Free Discharge
Sre.01	Outlet	1.000	Free Discharge
Sw.02	Outlet	1.002	Free Discharge
Sw.11	Outlet	3.002	Free Discharge
Sw.05	Outlet	2.003	Free Discharge
Sw.18	Outlet	6.002	Free Discharge
Sw.09	Outlet	3.000	Free Discharge
Sw.12	Outlet	3.003	Free Discharge
Sw.08	Outlet	1.004	Free Discharge
Sw.20	Outlet	3.006	Free Discharge
Sw.13	Outlet	3.004	Free Discharge
Sw.19	Outlet	3.005	Free Discharge
Sw.04	Outlet	2.002	Free Discharge
Sw.16	Outlet	4.001	Free Discharge
Sw.15	Outlet	5.000	Free Discharge
Lorry ramp channel	Outlet	6.000	Free Discharge
Sw.14	Outlet	4.000	Free Discharge
Plant compound channel	Outlet	2.000	Free Discharge

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH	Date: 20/11/2024		
	Designed by: CAP	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Proposed storm	63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN		



Soakaway.01

Type : Cellular Storage

Dimensions

Exceedance Level (m)	53.500
Depth (m)	1.500
Base Level (m)	51.000
Number of Crates Long	28
Number of Crates Wide	9
Number of Crates High	3
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	1
Crate Height (m)	0.5
Total Volume (m³)	360.100

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	3.006
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	1.004
Bypass Destination	(None)
Capacity Type	No Restriction

Advanced

Base Infiltration Rate (m/hr)	0.171
Side Infiltration Rate (m/hr)	0.171
Safety Factor	2.0

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH		Date: 20/11/2024			
		Designed by: CAP	Checked by:		Approved By:
Report Details: Type: Connections Storm Phase: Proposed storm		63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN			

Name	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)	Upstream Cover Level (m)	Upstream Invert Level (m)
2.001	22.199	Pipe	98.660		0.6	150	54.708	53.950
2.002	25.305	Pipe	59.541		0.6	225	54.660	53.725
1.000	30.948	Pipe	72.308		0.6	150	54.800	54.100
1.001	35.822	Pipe	219.122		0.6	225	55.045	53.672
1.002	21.615	Pipe	31.394		0.6	225	55.464	53.509
1.003	18.000	Pipe	9.890		0.6	300	54.730	52.820
6.000	20.823	Pipe	148.733		0.6	150	53.550	52.950
6.001	32.536	Pipe	110.293		0.6	150	54.726	52.810
6.002	14.844	Pipe	43.660		0.6	225	54.615	52.515
3.005	4.620	Pipe	4.107		0.6	300	54.369	52.175
3.000	12.815	Pipe	85.434		0.6	225	54.589	52.900
3.004	17.653	Pipe	72.052		0.6	225	54.371	52.420
3.001	13.906	Pipe	139.065		0.6	225	54.729	52.750
4.000	15.287	Pipe	89.926		0.6	150	53.950	52.570
2.004	13.879	Pipe	89.542		0.6	225	54.730	53.050
2.003	29.822	Pipe	119.287		0.6	225	54.628	53.300
4.001	7.373	Pipe	49.151		0.6	225	54.257	52.325
5.000	13.546	Pipe	30.441		0.6	150	54.119	52.770
3.002	22.346	Pipe	148.970		0.6	225	54.641	52.650
3.003	15.414	Pipe	192.679		0.6	225	54.511	52.500
2.000	8.367	Pipe	49.215		0.6	150	54.758	54.120
3.006	3.443	Pipe	68.859		0.6	300	54.383	51.050
1.004	4.358	Pipe	87.160		0.6	300	54.545	51.050

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH		Date: 20/11/2024			
		Designed by: CAP	Checked by:		Approved By:
Report Details: Type: Connections Storm Phase: Proposed storm		63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN			

Name	Downstream Cover Level (m)	Downstream Invert Level (m)	Part Family	Lock	Culvert Type	Culvert Entrance
2.001	54.660	53.725	PVC Pipe SI	None	(None)	(None)
2.002	54.628	53.300	PVC Pipe SI	None	(None)	(None)
1.000	55.045	53.672	PVC Pipe SI	None	(None)	(None)
1.001	55.464	53.509	PVC Pipe SI	None	(None)	(None)
1.002	54.730	52.820	PVC Pipe SI	None	(None)	(None)
1.003	54.545	51.000	PVC Pipe SI	None	(None)	(None)
6.000	54.726	52.810	PVC Pipe SI	None	(None)	(None)
6.001	54.615	52.515	PVC Pipe SI	None	(None)	(None)
6.002	54.369	52.175	PVC Pipe SI	None	(None)	(None)
3.005	54.383	51.050	PVC Pipe SI	None	(None)	(None)
3.000	54.729	52.750	PVC Pipe SI	None	(None)	(None)
3.004	54.369	52.175	PVC Pipe SI	None	(None)	(None)
3.001	54.641	52.650	PVC Pipe SI	None	(None)	(None)
4.000	54.257	52.400	PVC Pipe SI	None	(None)	(None)
2.004	54.730	52.895	PVC Pipe SI	None	(None)	(None)
2.003	54.730	53.050	PVC Pipe SI	None	(None)	(None)
4.001	54.369	52.175	PVC Pipe SI	None	(None)	(None)
5.000	54.257	52.325	PVC Pipe SI	None	(None)	(None)
3.002	54.511	52.500	PVC Pipe SI	None	(None)	(None)
3.003	54.371	52.420	PVC Pipe SI	None	(None)	(None)
2.000	54.708	53.950	PVC Pipe SI	None	(None)	(None)
3.006	54.394	51.000	PVC Pipe SI	None	(None)	(None)
1.004	54.411	51.000	PVC Pipe SI	None	(None)	(None)

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH		Date: 20/11/2024			
		Designed by: CAP	Checked by:		Approved By:
Report Details: Type: Inflow Summary Storm Phase: Proposed storm		63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN			

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	Sre.01		Time of Concentration	0.016	100	0	100	0.016
Catchment Area (1)	Sw.01		Time of Concentration	0.043	100	0	100	0.043
Catchment Area (2)	Sw.02		Time of Concentration	0.021	100	0	100	0.021
Catchment Area (3)	Plant compound channel		Time of Concentration	0.029	100	0	100	0.029
Catchment Area (4)	Sw.04		Time of Concentration	0.052	100	0	100	0.052
Catchment Area (5)	Sw.06		Time of Concentration	0.067	100	0	100	0.067
Catchment Area (6)	Lorry ramp channel		Time of Concentration	0.014	100	0	100	0.014
Catchment Area (7)	Sw.09		Time of Concentration	0.024	100	0	100	0.024
Catchment Area (8)	Sw.18		Time of Concentration	0.025	100	0	100	0.025
Catchment Area (9)	Sw.18		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (10)	Sw.15		Time of Concentration	0.018	100	0	100	0.018
Catchment Area (11)	Sw.16		Time of Concentration	0.033	100	0	100	0.033
Catchment Area (12)	Sw.15		Time of Concentration	0.012	100	0	100	0.012
Catchment Area (13)	Sw.14		Time of Concentration	0.016	100	0	100	0.016
Catchment Area (14)	Sw.13		Time of Concentration	0.046	100	0	100	0.046
Catchment Area (15)	Sw.12		Time of Concentration	0.023	100	0	100	0.023
Catchment Area (16)	Sw.11		Time of Concentration	0.032	100	0	100	0.032
Catchment Area (17)	Sw.19		Time of Concentration	0.039	100	0	100	0.039
Catchment Area (18)	Sw.14		Time of Concentration	0.020	100	0	100	0.020
Catchment Area (19)	Sw.05		Time of Concentration	0.009	100	0	100	0.009
TOTAL		0.0		0.543				0.543

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH	Date: 20/11/2024		
	Designed by: CAP	Checked by:	Approved By:
Report Details: Type: Network Design Criteria Storm Phase: Proposed storm	63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN		



Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (mins)	5
Max. Travel Time (mins)	30

Pipe Options

Lock Slope Options	None
Design Options	Minimise Excavation
Design Level	Level Soffits
Min. Cover Depth (m)	1.200
Min. Slope (1:X)	500.00
Max. Slope (1:X)	40.00
Min. Velocity (m/s)	1.0
Max. Velocity (m/s)	3.0
Use Flow Restriction	☐
Reduce Channel Depths	☐

Pipe Size Library

Default

Add. Increment (mm)	75
Max. Diameter (mm)	0

Diameter (mm)	Min. Slope (1:X)	Max. Slope (1:X)
100	0.00	0.00
150	0.00	0.00

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH	Date: 20/11/2024		
	Designed by: CAP	Checked by:	Approved By:
Report Details: Type: Network Design Criteria Storm Phase: Proposed storm	63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN		



Manhole Options

Apply Offset ☐

Manhole Size Library

Default

Diameter / Width

Connection (mm)	Diameter / Length (m)	Width (m)
0	1.200	0.000
375	1.350	0.000
500	1.500	0.000
750	1.800	0.000

Additional Sizing

Connection (mm)	900
Diameter / Length (m)	0.900
Width (m)	0.000

Depth

Depth (m)	Diameter / Length (m)	Width (m)
0.000	1.050	0.000
1.500	1.200	0.000

Access

Depth (m)	Ladder Protrusion (mm)
0.000	130
3.000	230

Benching Requirements

Landing Width (mm)	500
Benching Width (mm)	225

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH	Date: 20/11/2024		
	Designed by: CAP	Checked by:	Approved By:
	Report Details: Type: Rainfall Analysis Criteria		
63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN			

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Shortest
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH		Date: 20/11/2024			
		Designed by: CAP	Checked by:		Approved By:
Report Details: Type: Junctions Summary Storm Phase: Proposed storm		63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN			



FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flooded Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Sw.01	FEH: 2 years: +0 %: 15 mins: Summer	55.04 5	53.67 2	53.765	0.093	12.3	0.026	0.000	11.4	5.405	OK
Sw.07	FEH: 2 years: +0 %: 15 mins: Summer	54.73 0	52.82 0	52.891	0.071	44.5	0.080	0.000	43.9	21.700	OK
Sw.06	FEH: 2 years: +0 %: 15 mins: Summer	54.73 0	53.05 0	53.179	0.129	31.3	0.146	0.000	29.4	14.402	OK
Sw.10	FEH: 2 years: +0 %: 15 mins: Summer	54.72 9	52.75 0	52.799	0.049	4.9	0.055	0.000	4.6	2.167	OK
Sw.17	FEH: 2 years: +0 %: 15 mins: Summer	54.72 6	52.81 0	52.849	0.039	2.8	0.044	0.000	2.5	1.239	OK
Sw.03	FEH: 2 years: +0 %: 15 mins: Summer	54.70 8	53.95 0	54.010	0.060	6.0	0.009	0.000	5.8	2.663	OK
Sre.01	FEH: 2 years: +0 %: 15 mins: Summer	54.80 0	54.10 0	54.139	0.039	3.3	0.003	0.000	3.2	1.449	OK
Sw.02	FEH: 2 years: +0 %: 15 mins: Summer	55.46 4	53.50 9	53.570	0.062	15.8	0.018	0.000	15.2	7.288	OK
Sw.11	FEH: 2 years: +0 %: 15 mins: Summer	54.64 1	52.65 0	52.727	0.077	11.3	0.087	0.000	10.7	5.085	OK
Sw.05	FEH: 2 years: +0 %: 15 mins: Summer	54.62 8	53.30 0	53.395	0.095	18.2	0.107	0.000	17.1	8.259	OK
Sw.18	FEH: 2 years: +0 %: 15 mins: Summer	54.61 5	52.51 5	52.565	0.050	9.0	0.057	0.000	8.6	4.049	OK
Sw.09	FEH: 2 years: +0 %: 15 mins: Summer	54.58 9	52.90 0	52.946	0.046	5.0	0.052	0.000	4.9	2.172	OK
Sw.12	FEH: 2 years: +0 %: 15 mins: Summer	54.51 1	52.50 0	52.606	0.106	15.6	0.120	0.000	14.6	7.203	OK
Sw.08	FEH: 2 years: +0 %: 15 mins: Summer	54.54 5	51.00 0	51.181	0.181	43.9	0.205	0.000	42.7	21.140	OK
Sw.20	FEH: 2 years: +0 %: 15 mins: Summer	54.38 3	51.05 0	51.199	0.149	59.3	0.168	0.000	58.6	27.765	OK
Sw.13	FEH: 2 years: +0 %: 15 mins: Summer	54.37 1	52.42 0	52.525	0.105	24.4	0.119	0.000	23.5	11.441	OK
Sw.19	FEH: 2 years: +0 %: 15 mins: Summer	54.36 9	52.17 5	52.245	0.070	60.0	0.079	0.000	59.3	27.977	OK
Sw.04	FEH: 2 years: +0 %: 15 mins: Summer	54.66 0	53.72 5	53.801	0.076	16.9	0.022	0.000	16.3	7.455	OK
Sw.16	FEH: 2 years: +0 %: 15 mins: Summer	54.25 7	52.32 5	52.412	0.087	20.0	0.099	0.000	19.6	8.891	OK
Sw.15	FEH: 2 years: +0 %: 15 mins: Summer	54.11 9	52.77 0	52.814	0.044	6.2	0.050	0.000	6.0	2.682	OK
Lorry ramp channel	FEH: 2 years: +0 %: 15 mins: Summer	53.55 0	52.95 0	52.996	0.046	2.9	0.003	0.000	2.8	1.250	OK
Sw.14	FEH: 2 years: +0 %: 15 mins: Summer	53.95 0	52.57 0	52.637	0.067	7.4	0.076	0.000	7.0	3.211	OK
Plant compound channel	FEH: 2 years: +0 %: 15 mins: Summer		54.12 0	54.172	0.052	6.1			6.0	2.666	OK

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH	Date: 20/11/2024			
	Designed by:	Checked by:	Approved By:	
Report Details: Type: Junctions Summary Storm Phase: Proposed storm	CAP			
63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN				



FEH: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Flooded Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Sw.01	FEH: 30 years: +40 %: 15 mins: Summer	55.045	53.672	53.867	0.195	38.6	0.055	0.000	36.5	16.865	OK
Sw.07	FEH: 30 years: +40 %: 15 mins: Summer	54.730	52.820	52.947	0.127	134.3	0.144	0.000	133.3	67.584	OK
Sw.06	FEH: 30 years: +40 %: 15 mins: Summer	54.730	53.050	53.611	0.561	88.9	0.634	0.000	85.8	44.971	Surcharged
Sw.10	FEH: 30 years: +40 %: 15 mins: Summer	54.729	52.750	52.862	0.112	15.1	0.127	0.000	7.8	6.770	OK
Sw.17	FEH: 30 years: +40 %: 15 mins: Summer	54.726	52.810	52.883	0.073	8.8	0.083	0.000	8.1	3.889	OK
Sw.03	FEH: 30 years: +40 %: 15 mins: Summer	54.708	53.950	54.183	0.233	15.6	0.037	0.000	12.6	8.319	Surcharged
Sre.01	FEH: 30 years: +40 %: 15 mins: Summer	54.800	54.100	54.173	0.073	10.4	0.005	0.000	10.2	4.524	OK
Sw.02	FEH: 30 years: +40 %: 15 mins: Summer	55.464	53.509	53.631	0.123	50.0	0.035	0.000	48.5	22.735	OK
Sw.11	FEH: 30 years: +40 %: 15 mins: Summer	54.641	52.650	52.858	0.208	28.8	0.235	0.000	25.1	15.883	OK
Sw.05	FEH: 30 years: +40 %: 15 mins: Summer	54.628	53.300	53.862	0.562	48.3	0.636	0.000	44.7	25.810	Surcharged
Sw.18	FEH: 30 years: +40 %: 15 mins: Summer	54.615	52.515	52.612	0.097	28.3	0.110	0.000	27.2	12.649	OK
Sw.09	FEH: 30 years: +40 %: 15 mins: Summer	54.589	52.900	52.986	0.086	15.6	0.098	0.000	15.1	6.777	OK
Sw.12	FEH: 30 years: +40 %: 15 mins: Summer	54.511	52.500	52.798	0.298	40.4	0.337	0.000	38.9	22.509	Surcharged
Sw.08	FEH: 30 years: +40 %: 15 mins: Summer	54.545	51.000	51.600	0.600	133.3	0.679	0.000	121.5	65.888	Surcharged
Sw.20	FEH: 30 years: +40 %: 15 mins: Summer	54.383	51.050	51.600	0.550	180.7	0.622	0.000	181.6	86.333	Surcharged
Sw.13	FEH: 30 years: +40 %: 15 mins: Summer	54.371	52.420	52.689	0.269	69.5	0.305	0.000	68.3	35.754	Surcharged
Sw.19	FEH: 30 years: +40 %: 15 mins: Summer	54.369	52.175	52.291	0.116	181.3	0.131	0.000	180.7	87.268	OK
Sw.04	FEH: 30 years: +40 %: 15 mins: Summer	54.660	53.725	54.061	0.336	47.1	0.095	0.000	42.4	23.215	Surcharged
Sw.16	FEH: 30 years: +40 %: 15 mins: Summer	54.257	52.325	52.503	0.178	61.0	0.202	0.000	59.9	27.703	OK
Sw.15	FEH: 30 years: +40 %: 15 mins: Summer	54.119	52.770	52.853	0.083	19.2	0.094	0.000	19.0	8.350	OK

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH				Date: 20/11/2024								
				Designed by: CAP		Checked by:		Approved By:				
Report Details: Type: Junctions Summary Storm Phase: Proposed storm				63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN								
Lorry ramp channel	FEH: 30 years: +40 %: 15 mins: Summer	53.55 0	52.95 0	53.038	0.088	9.0	0.006	0.000	8.8	3.903	OK	
Sw.14	FEH: 30 years: +40 %: 15 mins: Summer	53.95 0	52.57 0	52.779	0.209	23.1	0.236	0.000	20.5	10.005	Surcharged	
Plant compound channel	FEH: 30 years: +40 %: 15 mins: Summer		54.12 0	54.243	0.123	19.1			15.6	8.310	OK	

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH	Date: 20/11/2024		
	Designed by: CAP	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Proposed storm	63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN		



FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Flooded Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
Sw.01	FEH: 100 years: +45 %: 15 mins: Summer	55.045	53.672	54.027	0.355	50.2	0.100	0.000	46.8	21.984	Surcharged
Sw.07	FEH: 100 years: +45 %: 15 mins: Summer	54.730	52.820	52.965	0.145	168.2	0.164	0.000	167.2	88.102	OK
Sw.06	FEH: 100 years: +45 %: 15 mins: Summer	54.730	53.050	53.849	0.799	109.3	0.903	0.000	105.4	58.622	Surcharged
Sw.10	FEH: 100 years: +45 %: 15 mins: Summer	54.729	52.750	53.127	0.377	11.2	0.426	0.000	13.2	8.840	Surcharged
Sw.17	FEH: 100 years: +45 %: 15 mins: Summer	54.726	52.810	52.896	0.086	11.4	0.098	0.000	10.6	5.074	OK
Sw.03	FEH: 100 years: +45 %: 15 mins: Summer	54.708	53.950	54.531	0.581	17.8	0.092	0.000	18.9	10.875	Flood Risk
Sre.01	FEH: 100 years: +45 %: 15 mins: Summer	54.800	54.100	54.189	0.089	13.6	0.006	0.000	13.2	5.892	OK
Sw.02	FEH: 100 years: +45 %: 15 mins: Summer	55.464	53.509	53.656	0.147	64.4	0.042	0.000	62.7	29.631	OK
Sw.11	FEH: 100 years: +45 %: 15 mins: Summer	54.641	52.650	53.120	0.470	31.7	0.531	0.000	31.3	20.723	Surcharged
Sw.05	FEH: 100 years: +45 %: 15 mins: Summer	54.628	53.300	54.175	0.875	57.1	0.990	0.000	51.8	33.653	Surcharged
Sw.18	FEH: 100 years: +45 %: 15 mins: Summer	54.615	52.515	52.630	0.115	36.9	0.131	0.000	35.8	16.491	OK
Sw.09	FEH: 100 years: +45 %: 15 mins: Summer	54.589	52.900	53.152	0.252	20.3	0.285	0.000	11.2	8.836	Surcharged
Sw.12	FEH: 100 years: +45 %: 15 mins: Summer	54.511	52.500	53.046	0.546	45.0	0.618	0.000	40.8	29.365	Surcharged
Sw.08	FEH: 100 years: +45 %: 15 mins: Summer	54.545	51.000	51.793	0.793	167.2	0.897	0.000	163.8	86.175	Surcharged
Sw.20	FEH: 100 years: +45 %: 15 mins: Summer	54.383	51.050	51.793	0.743	224.0	0.840	0.000	219.6	112.600	Surcharged
Sw.13	FEH: 100 years: +45 %: 15 mins: Summer	54.371	52.420	52.925	0.505	80.6	0.571	0.000	77.6	46.643	Surcharged
Sw.19	FEH: 100 years: +45 %: 15 mins: Summer	54.369	52.175	52.306	0.131	224.9	0.148	0.000	224.0	113.752	OK
Sw.04	FEH: 100 years: +45 %: 15 mins: Summer	54.660	53.725	54.437	0.712	55.9	0.201	0.000	49.5	30.276	Flood Risk
Sw.16	FEH: 100 years: +45 %: 15 mins: Summer	54.257	52.325	52.579	0.254	79.3	0.287	0.000	77.7	36.100	Surcharged
Sw.15	FEH: 100 years: +45 %: 15 mins: Summer	54.119	52.770	52.870	0.100	25.0	0.114	0.000	24.7	10.879	OK

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH				Date: 20/11/2024								
				Designed by: CAP		Checked by:		Approved By:				
Report Details: Type: Junctions Summary Storm Phase: Proposed storm				63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN								
Lorry ramp channel	FEH: 100 years: +45 %: 15 mins: Summer	53.55 0	52.95 0	53.056	0.106	11.7	0.008	0.000	11.4	5.089	OK	
Sw.14	FEH: 100 years: +45 %: 15 mins: Summer	53.95 0	52.57 0	52.973	0.403	30.0	0.456	0.000	26.5	13.041	Surcharged	
Plant compound channel	FEH: 100 years: +45 %: 15 mins: Summer		54.12 0	54.636	0.516	24.9			17.8	10.829	Surcharged	

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH		Date: 20/11/2024			
		Designed by: CAP	Checked by:		Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Proposed storm		63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN			



FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Soakaway .01	FEH: 2 years: +0 %: 240 mins: Summer	51.295	51.295	0.295	0.295	37.0	70.654	0.000	145.430	0.0	0.000	107	80.379

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH	Date: 20/11/2024			
	Designed by: CAP	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Proposed storm			
63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN				

Status

OK

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH	Date: 20/11/2024		
	Designed by: CAP	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Proposed storm	63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN		





FEH: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Soakaway .01	FEH: 30 years: +40 %: 240 mins: Winter	52.163	52.163	1.163	1.163	65.7	278.368	0.000	207.516	0.0	0.000	326	22.697

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH	Date: 20/11/2024			
	Designed by: CAP	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Proposed storm			
63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN				

Status

OK

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH	Date: 20/11/2024		
	Designed by: CAP	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Proposed storm	63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN		



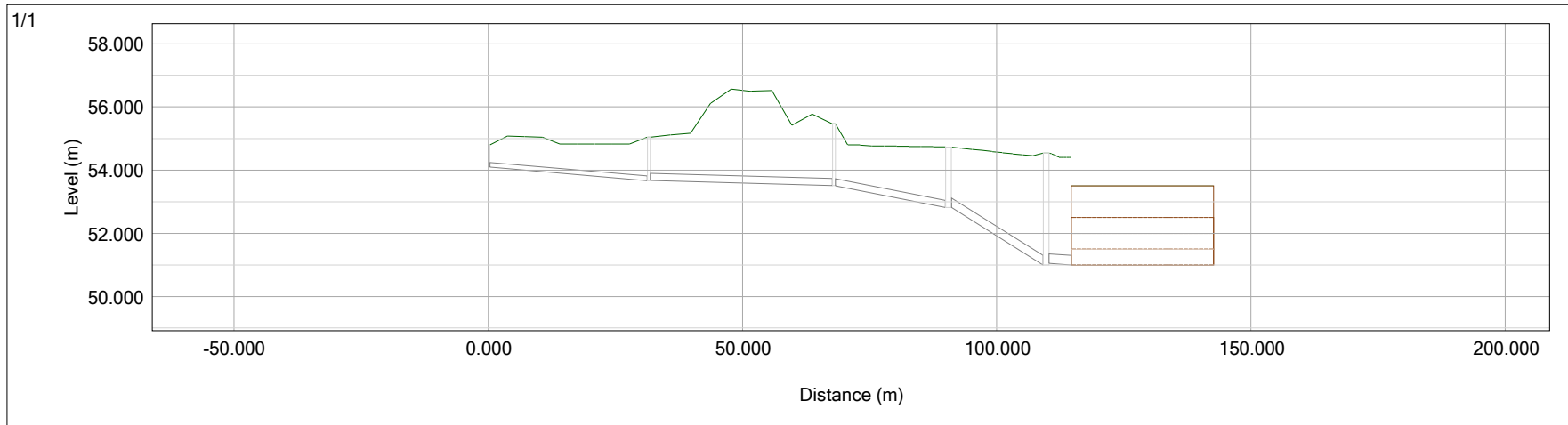
FEH: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Soakaway .01	FEH: 100 years: +45 %: 240 mins: Winter	53.222	53.222	2.222	2.222	84.4	359.870	0.000	226.488	0.0	0.288	394	0.064

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH	Date: 20/11/2024			
	Designed by: CAP	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Summary Storm Phase: Proposed storm			
63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN				

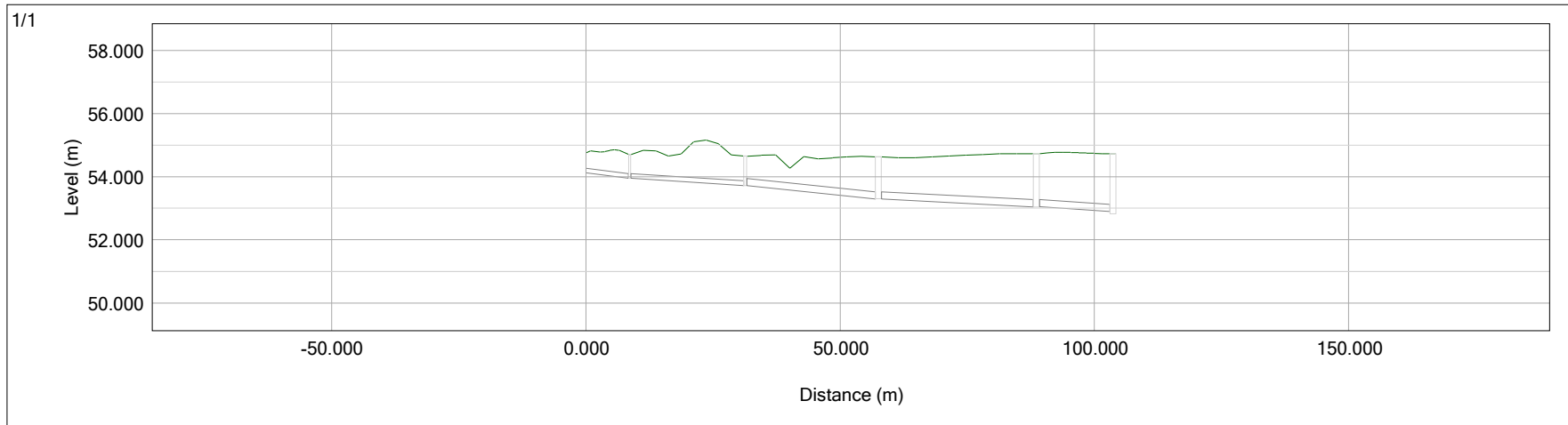
Status
OK

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH		63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN	I DRN
Modified date 20/11/2024 File 20250521 Proposed Storm.iddx		Designed by CAP Checked by	
		InfoDrainage 2025.5	
Profile - Flow Path 1		Horizontal Scale 1:1200, Vertical Scale 1:200	



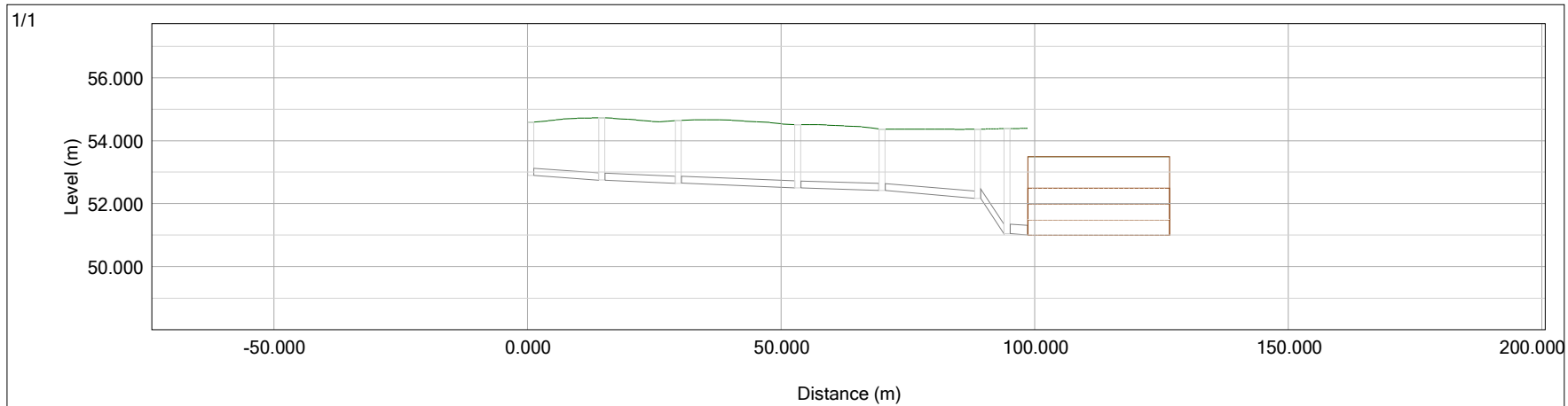
Junction		Sre.01	Sw.01	Sw.02	Sw.07	Sw.08	
Type		Manhole	Manhole	Manhole	Manhole	Manhole	
CL (m)		54.800	55.045	55.464	54.730	54.545	
IL (m)		54.100	53.672	53.509	52.820	51.000	
Connection		1.000	1.001	1.002	1.003	1.004	
Type		Pipe	Pipe	Pipe	Pipe	Pipe	
Curved		No	No	No	No	No	
Length (m)		30.948	35.822	21.615	18.000	4.358	
Diam (mm)		150	225	225	300	300	
Height (mm)							
U/S IL (m)		54.100	53.672	53.509	52.820	51.050	
D/S IL (m)		53.672	53.509	52.820	51.000	51.000	
C. Splay (mm)							
SWC							
Type							Soakaway.01
EL (m)							Cellular Storage
BL (m)							53.500
							51.000

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH		63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN	I DRN
Modified date 20/11/2024 File 20250521 Proposed Storm.iddx		Designed by CAP Checked by	
		InfoDrainage 2025.5	
Profile - Flow Path 2		Horizontal Scale 1:1200, Vertical Scale 1:200	



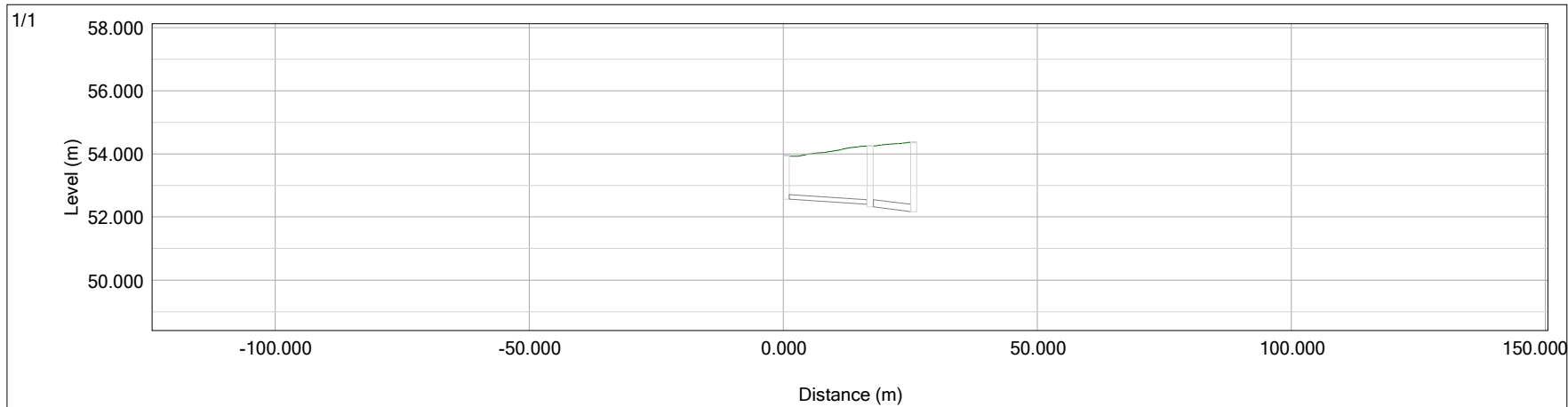
Junction	Plant compound channel		Sw.04	Sw.05	Sw.06	Sw.07
Type	Simple Junction		Manhole	Manhole	Manhole	Manhole
CL (m)			54.660	54.628	54.730	54.730
IL (m)			53.725	53.300	53.050	52.820
Connection	2.000	2.001	2.002	2.003	2.004	
Type	Pipe	Pipe	Pipe	Pipe	Pipe	
Curved	No	No	No	No	No	
Length (m)	8.367	22.199	25.305	29.822	13.879	
Diam (mm)	150	150	225	225	225	
Height (mm)						
U/S IL (m)	54.120	53.950	53.725	53.300	53.050	
D/S IL (m)	53.950	53.725	53.300	53.050	52.895	
C. Splay (mm)						
SWC						
Type						
EL (m)						
BL (m)						

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH	63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN	Page 3
Modified date 20/11/2024 File 20250521 Proposed Storm.iddx	Designed by CAP Checked by InfoDrainage 2025.5	
Profile - Flow Path 3	Horizontal Scale 1:1200, Vertical Scale 1:200	



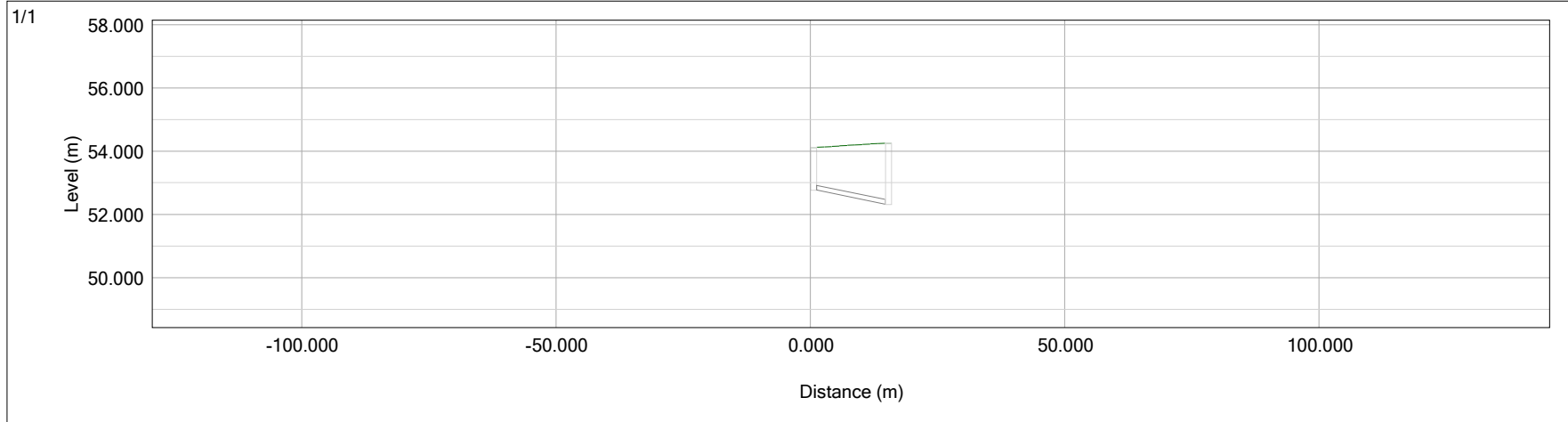
Junction	Sw.09	Sw.10	Sw.11	Sw.12	Sw.13	Sw.19	
Type	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	
CL (m)	54.589	54.729	54.641	54.511	54.371	54.369	
IL (m)	52.900	52.750	52.650	52.500	52.420	52.175	
Connection	3.000	3.001	3.002	3.003	3.004	3.005	
Type	Pipe	Pipe	Pipe	Pipe	Pipe	Pipe	
Curved	No	No	No	No	No	No	
Length (m)	12.815	13.906	22.346	15.414	17.653	4.620	
Diam (mm)	225	225	225	225	225	300	
Height (mm)							
U/S IL (m)	52.900	52.750	52.650	52.500	52.420	52.175	
D/S IL (m)	52.750	52.650	52.500	52.420	52.175	51.050	
C. Splay (mm)							
SWC							Soakaway.01
Type							Cellular Storage
EL (m)							53.500
BL (m)							51.000

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH		63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN	I DRN	Page 4
Modified date 20/11/2024 File 20250521 Proposed Storm.iddx		Designed by CAP Checked by		
		InfoDrainage 2025.5		
Profile - Flow Path 4		Horizontal Scale 1:1200, Vertical Scale 1:200		



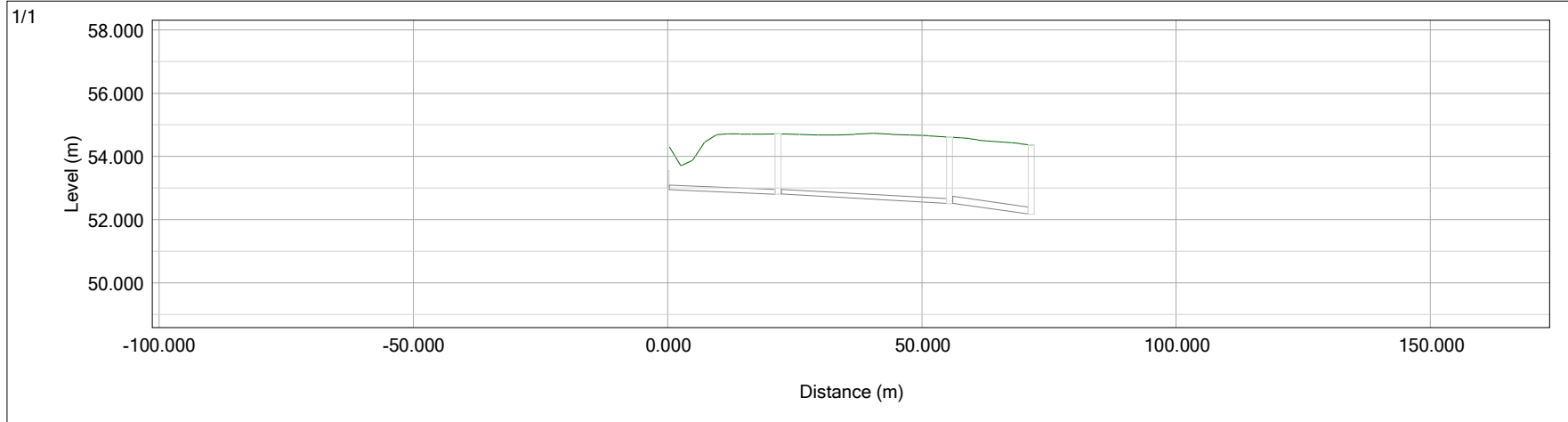
Junction	Sw.14	Sw.16
Type	Manhole	Manhole
CL (m)	53.950	54.257
IL (m)	52.570	52.325
Connection	4.000	4.001
Type	Pipe	Pipe
Curved	No	No
Length (m)	15.287	7.373
Diam (mm)	150	225
Height (mm)		
U/S IL (m)	52.570	52.325
D/S IL (m)	52.400	52.175
C. Splay (mm)		
SWC		
Type		
EL (m)		
BL (m)		

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH		63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN	I DRN
Modified date 20/11/2024 File 20250521 Proposed Storm.iddx		Designed by CAP Checked by InfoDrainage 2025.5	
Profile - Flow Path 5		Horizontal Scale 1:1200, Vertical Scale 1:200	

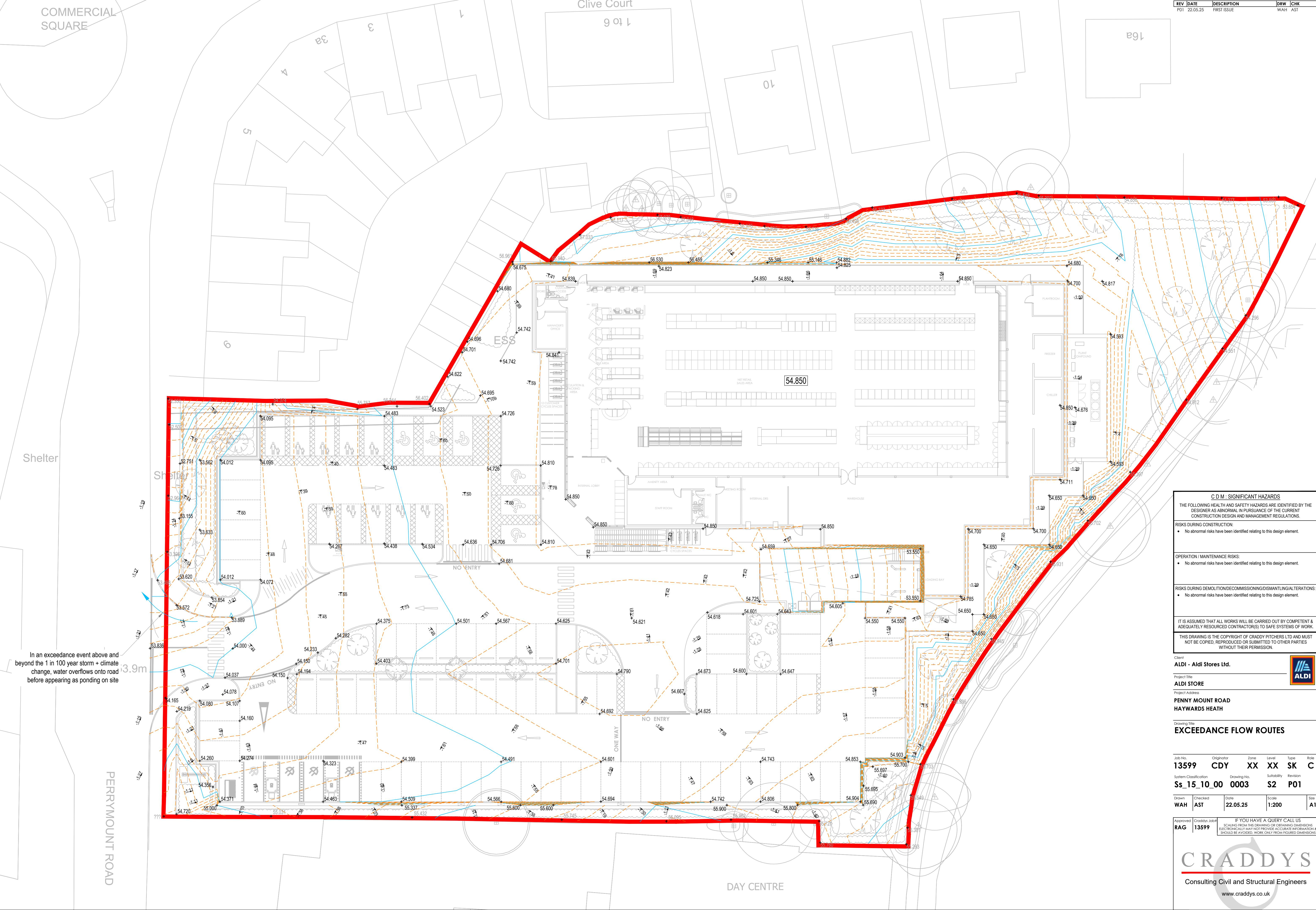


Junction	Sw.15 Sw.16	
Type	Manhole Manhole	
CL (m)	54.119	54.257
IL (m)	52.770	52.325
Connection	5.000	
Type	Pipe	
Curved	No	
Length (m)	13.546	
Diam (mm)	150	
Height (mm)		
U/S IL (m)	52.770	
D/S IL (m)	52.325	
C. Splay (mm)		
SWC		
Type		
EL (m)		
BL (m)		

ALDI FOOD STORE: PERRYMOUNT ROAD HAYWARDS HEATH		63 MACRAE ROAD: EDEN OFFICE PARK HAM GREEN	I DRN
Modified date 20/11/2024 File 20250521 Proposed Storm.iddx		Designed by CAP Checked by	
		InfoDrainage 2025.5	
Profile - Flow Path 6		Horizontal Scale 1:1200, Vertical Scale 1:200	



Junction	Lorry ramp channel		Sw.18	Sw.19
Type	Manhole		Manhole	Manhole
CL (m)	53.550		54.615	54.369
IL (m)	52.950		52.515	52.175
Connection	6.000	6.001	6.002	
Type	Pipe	Pipe	Pipe	
Curved	No	No	No	
Length (m)	20.823	32.536	14.844	
Diam (mm)	150	150	225	
Height (mm)				
U/S IL (m)	52.950	52.810	52.515	
D/S IL (m)	52.810	52.515	52.175	
C. Splay (mm)				
SWC				
Type				
EL (m)				
BL (m)				



C D M : SIGNIFICANT HAZARDS	
THE FOLLOWING HEALTH AND SAFETY HAZARDS ARE IDENTIFIED BY THE DESIGNER AS ABNORMAL IN PURSUANCE OF THE CURRENT CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS.	
RISKS DURING CONSTRUCTION:	
• No abnormal risks have been identified relating to this design element.	
OPERATION / MAINTENANCE RISKS:	
• No abnormal risks have been identified relating to this design element.	
RISKS DURING DEMOLITION/DECOMMISSIONING/DISMANTLING/ALTERATIONS:	
• No abnormal risks have been identified relating to this design element.	
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY COMPETENT & ADEQUATELY RESOURCED CONTRACTOR(S) TO SAFE SYSTEMS OF WORK.	
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Client	ALDI - Aldi Stores Ltd.
Project Title	ALDI STORE
Project Address	PENNY MOUNT ROAD HAYWARDS HEATH



Exceedance Flow Routes

Job No.	Originator	Zone	Level	Type	Role
13599	CDY	XX	XX	SK	C
System Classification	Drawing No.	Suitability	Revision		
Ss_15_10_00	0003	S2	P01		
Drawn	Checked	Date	Scale	Size	
WAH	AST	22.05.25	1:200	A1	

Approved	Craddys Job No.	IF YOU HAVE A QUERY CALL US SCALING FROM THIS DRAWING OR OBTAINING DIMENSIONS ELECTRONICALLY MAY NOT PROVIDE ACCURATE INFORMATION & SHOULD BE AVOIDED. WORK ONLY FROM FIGURED DIMENSIONS.
RAG	13599	

SUMMARY TABLE		DESIGN CONDITIONS			
13599 ALDI HAYWARDS HEATH - CATCHMENT NO. 1 - STORE ROOF		1	2	3	4
Land Use Type	Commercial/Industrial roofing: Inert materials				
Pollution Hazard Level	Very low				
Pollution Hazard Indices					
TSS	0.3				
Metals	0.2				
Hydrocarbons	0.05				
SuDS components proposed					
Component 1	None				
Component 2	None				
Component 3	None				
SuDS Pollution Mitigation Indices					
TSS	0				
Metals	0				
Hydrocarbons	0				
Groundwater protection type	300 mm minimum depth of soils with good contamination attenuation potential	All designs must include a minimum of 1 m unsaturated depth of subsoil or aquifer material between the infiltration surface and the maximum likely groundwater level. Infiltration components should always be preceded by upstream component(s) that trap(s) silt, or designed specifically to retain sediment in a separate lined zone, easily accessible for maintenance, such that the sediment will not be re-suspended in subsequent events	The underlying soils must provide good contaminant attenuation potential (eg as recommended in Sniffer 2008 (a) and (b) / Scott Wilson (2010) or other appropriate guidance). Alternative depth and soil combinations must provide equivalent protection to the underlying groundwater		
Groundwater protection Pollution Mitigation Indices					
TSS	0.4				
Metals	0.3				
Hydrocarbons	0.3				
Combined Pollution Mitigation Indices		0.4 Reference to local planning documents should also be made to identify any additional protection required for sites due to habitat conservation (see Chapter 7 The SuDS design process). The implications of developments on or within close proximity to an area with an environmental designation, such as a Site of Special Scientific Interest (SSSI), should be considered via consultation with relevant conservation bodies such as Natural England			
TSS	0.3				
Metals	0.3				
Hydrocarbons	0.3				
Acceptability of Pollution Mitigation					
TSS	Sufficient				
Metals	Sufficient				
Hydrocarbons	Sufficient				

SUMMARY TABLE		DESIGN CONDITIONS			
13599 ALDI HAYWARDS HEATH - CATCHMENT NO. 2 - CAR PARK 1		1	2	3	4
Land Use Type	Non-residential car parking with frequent change (eg hospitals, retail)				
Pollution Hazard Level	Medium				
Pollution Hazard Indices					
TSS	0.7				
Metals	0.6				
Hydrocarbons	0.7				
SuDS components proposed					
Component 1	None				
Component 2	None				
Component 3	None				
SuDS Pollution Mitigation Indices					
TSS	0				
Metals	0				
Hydrocarbons	0				
Groundwater protection type	Pervious pavement underlain by 300 mm minimum depth of soils with good contamination attenuation potential	All designs must include a minimum of 1 m unsaturated depth of subsoil or aquifer material between the infiltration surface and the maximum likely groundwater level. Infiltration components should always be preceded by upstream component(s) that trap(s) silt, or designed specifically to retain sediment in a separate lined zone, easily accessible for maintenance, such that the sediment will not be re-suspended in subsequent events	The permeable pavement must include a suitable filtration layer provides treatment and must include a geotextile at the base separating the foundation from the sub-grade. The underlying soils must provide good contaminant attenuation potential (eg as recommended in Sniffer 2008 (a) and (b) / Scott Wilson (2010) or other appropriate guidance). Alternative depth and soil combinations must provide equivalent protection to the underlying groundwater		
Groundwater protection Pollution Mitigation Indices					
TSS	0.7				
Metals	0.6				
Hydrocarbons	0.7				
Combined Pollution Mitigation Indices		0.7 Reference to local planning documents should also be made to identify any additional protection required for sites due to habitat conservation (see Chapter 7 The SuDS design process). The implications of developments on or within close proximity to an area with an environmental designation, such as a Site of Special Scientific Interest (SSSI), should be considered via consultation with relevant conservation bodies such as Natural England			
TSS	0.6				
Metals	0.7				
Hydrocarbons					
Acceptability of Pollution Mitigation					
TSS	Sufficient				
Metals	Sufficient				
Hydrocarbons	Sufficient				

SUMMARY TABLE		DESIGN CONDITIONS			
13599 ALDI HAYWARDS HEATH - CATCHMENT NO. 3 - CAR PARK 2		1	2	3	4
Land Use Type	Non-residential car parking with frequent change (eg hospitals, retail)				
Pollution Hazard Level	Medium				
Pollution Hazard Indices					
TSS	0.7				
Metals	0.6				
Hydrocarbons	0.7				
SuDS components proposed					
Component 1	SPEL Interceptor	Detailed assessment of performance of designed component in reducing inflow concentrations of each pollutant type required as evidence of adopted indices. Enter indices approved by the environmental regulator in appropriate 'User Defined Indices' row below	SEPA only considers proprietary treatment systems as appropriate in exceptional circumstances where other types of SuDS component are not practicable. Proprietary treatment systems may also be considered appropriate for existing sites that are causing pollution where there is a requirement to retrofit treatment. WAT-RM-08 (SEPA, 2014) also provides a flow chart with a summary of checks on suitability of a proprietary system	See Chapter 15 Proprietary treatment systems for approaches to demonstrate product performance. Note: a British Water/Environment Agency assessment Code of Practice is currently under development that will allow manufacturers to complete an agreed test protocol for systems intended to treat contaminated surface water runoff. Full details can be found at: http://www.britishwater.co.uk/Publications/codes-of-practise.aspx .	
Component 2	None				
Component 3	None				
SuDS Pollution Mitigation Indices					
TSS	0.8				
Metals	0.6				
Hydrocarbons	0.9				
Groundwater protection type	300 mm minimum depth of soils with good contamination attenuation potential	All designs must include a minimum of 1 m unsaturated depth of subsoil or aquifer material between the infiltration surface and the maximum likely groundwater level. Infiltration components should always be preceded by upstream component(s) that trap(s) silt, or designed specifically to retain sediment in a separate lined zone, easily accessible for maintenance, such that the sediment will not be re-suspended in subsequent events	The underlying soils must provide good contaminant attenuation potential (eg as recommended in Sniffer 2008 (a) and (b) / Scott Wilson (2010) or other appropriate guidance). Alternative depth and soil combinations must provide equivalent protection to the underlying groundwater		
Groundwater protection Pollution Mitigation Indices					
TSS	0.4				
Metals	0.3				
Hydrocarbons	0.3				
Combined Pollution Mitigation Indices					
TSS	>0.95				
Metals	0.75	Reference to local planning documents should also be made to identify any additional protection required for sites due to habitat conservation (see Chapter 7 The SuDS design process). The implications of developments on or within close proximity to an area with an environmental designation, such as a Site of Special Scientific Interest (SSSI), should be considered via consultation with relevant conservation bodies such as Natural England			
Hydrocarbons	>0.95				
Acceptability of Pollution Mitigation					
TSS	Sufficient				
Metals	Sufficient				
Hydrocarbons	Sufficient				

APPENDIX G

SAMPLE OPERATIONS AND MAINTENANCE SCHEDULE

ALDI STORE – PERRYMOUNT ROAD, HAYWARDS HEATH

SAMPLE OPERATION AND MAINTENANCE OF BELOW GROUND DRAINAGE SYSTEM

The following is a list of the drainage items which will require periodic maintenance, and sets out how often they should be maintained to achieve their maximum design life. A brief description of how the maintenance should be carried out is provided. All maintenance should be carried out by suitably trained individuals using the correct equipment. These recommendations apply to the private drainage items within the development site (maintenance and operation of adoptable drainage is the liability of the adopting authority).

The proposed stormwater and foulwater drainage systems are to remain private and the responsibility of Aldi Stores Ltd. The responsible person shall be the store manager, contactable via 0800 042 0800.

Gullies & Drainage Channels

Inspection and removal of debris from silt trap once a year (preferably in the winter after leaf fall in the autumn).

Drainage pipes, manholes & silt traps

Inspect manholes & silt traps for build-up of silt and general debris (once a year, preferably in the winter after leaf fall in the autumn). If silt/debris is building up then clean chamber with jetting lorry / gully sucker & inspect pipe – same may be required. If the pipes to be jetted are plastic then a high flow, low pressure setting should be used so that the pipes are not damaged. (NOTE: Manhole covers can be heavy and suitable lifting equipment / procedures should be used. Personnel should not enter manholes to carry out maintenance).

Permeable / pervious pavement

To maintain the permeability and operation of the permeable paving, all areas should be swept at least once a year using a mechanical road sweeper if practical. It is recommended that this be undertaken in the spring after autumnal leaf fall. In addition to this routine maintenance, it may be necessary to re-dress the surface with 2-6.3mm clean grit/stone. This will replace the grit removed during the cleaning process and reduce the ease with which fine particles can enter and potentially clog up the system.

In no circumstances should raw materials containing fine particles (eg. top soil) be delivered nor stored directly on the permeable paved area as this will impede the permeability of the system and reduce its design life.

If an area of permeable paving is defective or irreversibly contaminated, the area of paving should be lifted and the filtration membrane and laying course should be replaced (as per manufacturer's recommendations). The existing permeable paving blocks can then be re-laid.

O&M Requirements for pervious pavements (Based on table 20.15 of the CIRIA C753)		
Maintenance schedule	Required action	Typical frequency
Regular maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface)	Once a year after autumn leaf fall or reduced frequency as required, based on site-specific observations of clogging or manufacturers recommendations.
Occasional maintenance	Removal of weeds or management using glyphosphate applied directly into the weeds by an applicator rather than spraying.	As required
Remedial actions	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material	As required

Underground attenuation storage soakaway

This system is designed to be maintenance free. Silt traps on the up-stream end of the system should be inspected and maintained as above. If excessive silt is encountered then the pipes through the system should be cleaned using a jetting lorry. Access turrets are provided to the corners of the system through which the base of the tank can be reached.

Oil interceptor / separator

Every 6 months, experienced personnel should visually inspect the integrity of the interceptor and all visible mechanical parts, assess the depth of accumulated oil and silt, service electrical equipment such as alarms

and assess the condition of any coalescing device and replace if necessary. Keep detailed records of all inspections and servicing. When level of oil is such that emptying is required, employ a registered waste removal company to empty the separator. This will generally be when oil levels reach a maximum of 90% of the storage volume. Every 5 years, empty interceptor and undertake general inspection to test integrity and performance. Re-fill with clean water.

Unusual / unresolved problems

If the drainage system is still holding water following cleaning with high pressure water jetting, or the jetting of the system removes excessive amounts of debris this may indicate greater issues within the system, a CCTV survey is likely to be required and further advice should be sought from a drainage engineer.